Surgical Team Approach to Advanced Recovery Lumbar Spine: The Back Up Plan

Donna Mangruen, MSN, RN, APN, ACNS-BC, CMSRN
Orthopedic and Spine Institute
Advocate Condell Medical Center
National Association of Clinical Nurse Specialist Conference 2018

Disclaimer

No financial interest/affiliation or conflict of interest that would impact this presentation.

About Condell

- Condell, Level I Trauma
- 277 Beds
- Spine surgeries per year
  - T/L/S surgeries
  - ACDF/PCDF not included
- Magnet designation
- Blue Distinction

Objectives

- Define enhanced recovery after surgery (ERAS)
- Describe the components of the STAAR program
- Explore STAAR application to lumbar spine surgery

What is Enhanced Recovery?

- Enhanced Recovery After Surgery (ERAS) refers to multimodal programs or combination of interventions for patients undergoing surgery that when used together have proven to produce better outcomes such as:
  - Accelerated patient recovery
  - Promoting an early discharge
  - Increasing patient satisfaction

What is Enhanced Recovery?

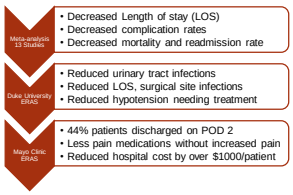
- The interventions or protocols included in ERAS are evidenced based best practices that impact patients' response to surgery by:
  - Decreasing the stress response
  - Decreasing postoperative pain
  - Decreasing postoperative complications

Enhanced Recovery Is…

- Standardized clinical pathways
- Comprised of a multidisciplinary team
- Focused on patient outcomes
- Better for patients and the healthcare system
- Everyone working together

Evidenced Based ERAS Outcomes

- Evidence supports positive outcomes when ERAS is implemented into practice.



What Is STAAR?

- Enhanced recovery after surgery (ERAS) is a term that describes the clinical pathway used to improve the outcome of surgery and to speed the recovery process.
- The Advocate version of this program is called STAAR.

Surgical Team Approach to Advanced Recovery

What Is STAAR

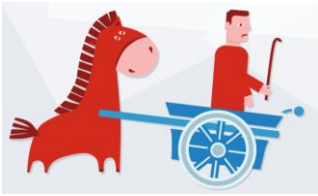
- Surgical team approach to advanced recovery
  - Enhanced recovery (1990)
  - Colorectal
  - Evidenced based
  - System initiative

Data Collection

- Retrospective chart audits
- Interviews staff, surgeons
- Patient feedback

Ah Ha Moment

Ooops



Evidence

- Literature Review

STAAR Key Elements

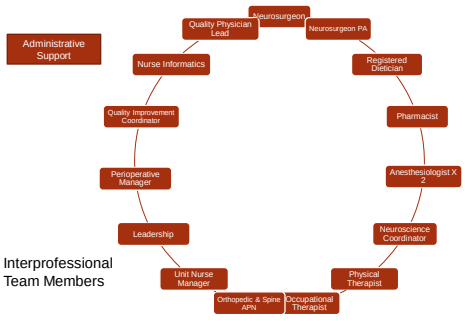
- Preoperative Counselling
- Optimization of Nutrition
- Standardized Analgesic
- Anesthetic Regimens
- Early Mobilization

Advocate STAAR Pathway

- The STAAR pathway involves the entire surgical, perioperative patient experience:
  - Preoperative
  - Intraoperative
  - Postoperative
  - Post discharge

Gap Analysis

- Current State
- Desired State

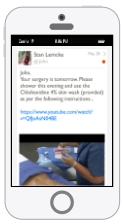


Key Elements of STAAR
Pre-operative

• Current State	**STAAR Implemented State**
Risk Assessment: occasional and last minute	❑ **Risk Assessment:** Formal risk assessment before surgery by Nurse Navigators for elective cases
Education: vague ideas and discussion with no standardized teaching materials	❑ **Education**: Engaged, empowered patients aware of steps in the process ❑ In-Person Spine Class utilizing standardized content and teaching materials (folder) ❑ Preop screening by Navigator ❑ Re-enforced by Staff Nurse ❑ Documented in Progress note and IPOC
Diet: NPO after midnight (whether the surgery is at 7am or 7pm)	❑ **Diet:** Regular meal day before surgery, ❑ Presurgery carbohydrate drink BID night before ❑ Clear liquids up to 8H before surgery ❑ Presurgery carbohydrate drink 3H before surgery just before the patient leaves home to go to the hospital

Electronic Communication

- HL is a messaging tool that the surgical care team use to communicate with the paient before and after your surgery.
- HL is available on iPhone and Android smartphones, tablets, and PCs.
- Patients are enrolled and create an account in HL when they are registered to attend the preoperative class.



Prescreening – Risk Reduction

- Anemia/blood count protocol
- Cardiac Risk tool-Cardiac Risk Calculator
- Chronic Pain/ Multi-modal pain and Narcotic use- McGill
- Depression Screening
- Delirium Screening (Mini Cog)
- DVT Risk Analysis
- Diabetes Assessment
- Frailty Assessment – John Hopkins
- Morse Tool for Falls
- Nutritional status Evaluation
- OSA screening (Stop Bang)
- Pacemaker and ICD management
- PONV screening tool- Apfel tool
- POP risk calculator-Post Operative Pneumonia Calculator
- Risk of readmission tool

Key Elements of STAAR
Intra-operative

Current State	STAAR Implemented State
Surgical Techniques • Open	**Surgical Techniques:** • Minimally invasive, as appropriate
Pain • Reactive • Narcotics: More is better	**Multimodal Pain management:** • Preop Celebrex, Tylenol and Neurontin • Local / intrathecal pain medication injections when appropriate
Fluid Management • Pre-op dehydration	**Fluid Management:** • "Goal directed therapy" per anesthesia
Postoperative nausea & vomiting (PONV) • Reactive	**PONV:** • Pre-screened for possible PONV • Zofran, Reglan, Protonix, • Scopolamine patch and/or Decadron depending on PONV risk assessment

Key Elements of STAAR
Post-Operative

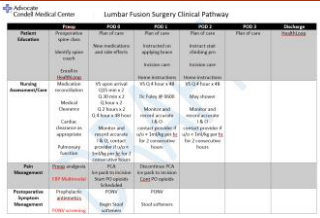
Current State	STAAR Implemented State
Diet: Start clear liquid and advance as tolerated	**Diet:** • Patient's 1st postop meal may start with solids if appropriate (no PONV). If PONV, clear liquid diet advancing to pre-hospital diet preferred on POD 0. If not then POD 1.
Ambulation: Bed rest	**Ambulation:** Walk on day of surgery regardless of arrival time on unit • Patients walk / chair transfer with *nursing staff* on **POD 0** • PT/OT will eval and treat thoracic and lumbar spine patients on **POD 1** • Progressive ambulation ***in hallway*** with patients' goal of 4 times a day, increasing distance and time each POD
IV Fluid Therapy: Liberal	**IV Fluid Therapy:** Saline lock when tolerating oral fluids and voiding a sufficient amount (or run at 20mL/hr to keep vein open for PCA)
Oral Pain Meds: Narcotics	**Oral Pain Meds:** Multimodal: Non-narcotics (gabapentin, acetaminophen), oral opioids - with **PCA. PCA Goal: discontinued POD 1**

Key Elements of STAAR
Post-Operative

Current State	STAAR Implemented State
DVT prophylaxis: inconsistent application of mechanical prophylaxis	**DVT prophylaxis:** • Patients wear sequential compression device (SCDs) at all times unless they are ambulating (min 18Hr/day) • High risk patients (Afib, CVA, stents…) with home meds anticoagulants discuss resuming with Surgeon/Medicine once drain discontinued.
Tubes: Foleys and drains for many patients	**Tubes:** Foley ***only*** for high risk Post-op Urinary Retention (POUR) patients when straight catheter nursing protocol fail; minimal drains
Foley: Discontinued inconsistently. Continued at patient request.	**Foley:** Discontinue POD 1 @ 0600 • Follow policy; "nurse driven protocol" for retention after removal
Discharge Planning: afterthought	**Discharge Planning:** Starts in Surgeon Office. Followed by care managers during hospital stay. Goal on white board = LOS 2 days

Education

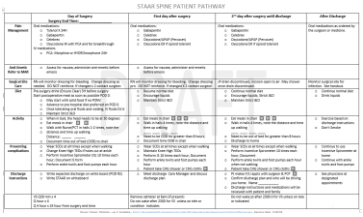
Spine Pathway



Advocate Condell Medical Center — Lumbar Fusion Surgery Clinical Pathway

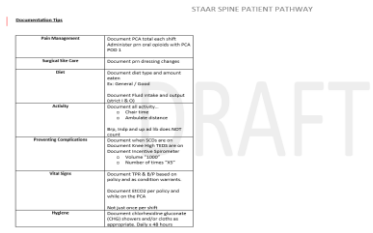
	Preop	POD 0	POD 1	POD 2	POD 3	Discharge
Patient Education	Preoperative spine class Identify spine coach Enrollfor HealthLinks	Plan of Care New medications and side effects	Plan of Care Instruction on applying brace Incision care Home instructions	Plan of Care Instruct stair climbing prn Incision care Home instructions	Plan of Care	HealthLinks
Nursing Assessment/Care	Medication reconciliation Medical Clearance Cardiac clearance as appropriate Pulmonary function	VS upon arrival Q15 min x 2 Q30 min x 2 Q1hour x 2 Q2 hours x 2 Q 4 hour x 30 hours Monitor and record accurate I & O, contact provider if u/o < 1ml/kg per hr for 2 consecutive hours	VS Q 4 hour x 48 Dc Foley @ 0600 Monitor and record accurate I & O contact provider if u/o < 1ml/kg per hr for 2 consecutive hours	VS Q 4 hour x 48 May shower Monitor and record accurate I & O contact provider if u/o < 1ml/kg per hr for 2 consecutive hours		
Pain Management	Triaxo analgesia EBP Multimodal	PCA Ice packs to incision Start PO opioids Scheduled	Discontinue PCA Ice pack to incision Cont PO opioids			
Postoperative Symptom Management	Prophylactic Antiemetics PONV screening	PONV Begin Stool softeners	PONV Stool softeners			

Tip Sheet



STAAR SPINE PATIENT PATHWAY

Tip Sheet



STAAR SPINE PATIENT PATHWAY

Documentation Tips

Pain Management	Document PCA total each shift Administer prn oral opioids with PCA PGD 5
Surgical Site Care	Document prn dressing changes
Diet	Document diet type and amount eaten Ex- General / Fasted Document Fluid intake and output (strict I & O)
Activity	Document all activity... o Chair time o Ambulatory distance Ex- Help and up ad lib does NOT count
Preventing Complications	Document when SCDs are on Document when TED hose are on Document Incentive Spirometer o Volume "1000" o Number of times "10"
Vital Signs	Document TPR & B/P based on policy and as condition warrants. Document RR/O2 sat policy and while on the PCA Not just once per shift
Hygiene	Document chlorhexidine gluconate (CHG) showers and/or cloths as appropriate. Daily x 48 hours

DRAFT

Pilot

- Lumbar fusions - elective
- Dr. STAAR Champion
- Evaluate
- Revise
- Implement

Metrics

Preliminary Outcome

Lessons Learned

"If you don't have a plan for what you want, then you will probably find yourself buying into someone else's plan and later find out that was not the direction you wanted to go. You've got to be the architect of your life."
- John Rohn

Questions

Thank You!

donna.mangruen@advocatehealth.com