Before the Operating Room:
PRE-OPERATIVE MANAGEMENT FOR PEDIATRIC HOSPITALISTS

Presenters:
Anjna Melwani, MD
Sonaly McClymont, MD
David Rappaport, MD
Sarah Denniston, MD
David Pressel, MD
Amy Vinson, MD

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Objectives

- Describe the rationale for, and evidence supporting, pediatric preoperative clinics
- Provide examples of the structure and function of preoperative clinics
- Clarify possible roles of anesthesiology in a preoperative clinic
- Identify the key components of a preoperative evaluation for a pediatric patient, including the history, physical examination, selected diagnostic and screening tests
- Apply key concepts of preoperative management plans to specific patient case scenarios

Agenda

- Overview of Preoperative Clinics 10 min
- Review of Literature 10 min
- Preoperative Clinics: 20 min
  Structure and Function
  An Anesthesiologist Perspective
- Small group cases 30 min
- Discussion and Wrap-Up 5 min
Overview of Preoperative Clinics

Introduction

• The role of the Hospitalist in the evaluation and preparation of surgical patients is increasing
  • 2014 AAP Policy Statement
    • Optimizing medical conditions for patients prior to surgery
    • Improving communication and coordination to allow a safe transition in the perioperative period
  • Medical complexity is increasing
  • Literature to guide clinical management of these patients is limited
• Preoperative clinics provide a structured environment for hospitalists to perform assessments prior to surgery
Hospitalist Role in Perioperative Medicine

- Preoperative evaluation
- Intraoperative evaluation
- Postoperative evaluation
  - PHM 2016 Workshop (following this workshop): After the Operating Room: Postoperative Management for Pediatric Hospitalists

Systematic Approach

- Patient-Specific Risk Factors
- Risk of the Procedure
- Risk of Anesthesia

Risk to this patient undergoing this surgery
Overview of Pre-operative Clinics

- Gather a detailed medical history and physical exam with a focus on identifying potential pre- and post-operative risk factors (Risk to the Patient)
- Coordinate care with amongst various specialists including the Surgeon (Risk of the Procedure)
- Evaluate patient in conjunction with an Anesthesiologist (Risk of Anesthesia)
- Assist in management of postoperative care of surgical patients that were identified in POCC
- Building a “perioperative surgical home” - coordinated, organized care from the time of the decision for surgery through discharge

Review of Literature

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Review of Literature

- Pediatric hospitalist preoperative clinic
  - Melwani, et.al. 2016. – Patients have increased chronic conditions (e.g., BiPap/CPAP dependence, feeding tube dependence, seizure disorder, restrictive lung disease) seen in preop clinic, but no difference in median length of stay, PICU stay or 30-day readmissions postoperatively
  - Rappaport, et.al. 2013. – High rate of hospitalist recommendations in preop clinic with complex patients with neuromuscular scoliosis undergoing spinal surgery
  - Vazirani, et.al. 2012.(adult Hospitalist-run, Medical Preoperative Clinic) – Length of stay was reduced with patients with an ASA $\geq 3$

Structure and Function of Preoperative Clinics
Preoperative Clinic: Goals

• Optimize medical conditions for patients
• Decrease morbidity of surgery
• Create rapport with the patient and family prior to surgery
• Decrease surgical cancellations
• Coordinate care among surgeons, anesthesiologists, subspecialists, PMDs

Preoperative Clinic: Function

• Patient selection
  – Patients with medical complexity or special health care needs
  – Defining “medically complex”
• Financial implications
  – Ferschl, et.al. 2005. Evaluations in the preoperative clinic can significantly reduce operating room cancellations and delays
  – Ferrando, et.al. 2005. Preoperative guidelines can decrease laboratory testing and could reduce the cost of the hospital stay
Preoperative Clinic: Structure

- **Location of Clinic**
  - Accessible and convenient for the patient and team
  - Accessible to diagnostic and laboratory facilities
  - Outpatient clinic space to conduct full assessment and counseling
  - Tele-medicine opportunities

- **Staffing**
  - Administrators to manage appointments and clinic concerns
    - Appointments should be made based on medical conditions, type of procedure, availability of anesthesiologist/hospitalists
  - Nurse practitioners, Anesthesiologists, Hospitalists, Nurses/Techs

- **Documentation/Orders**
  - Ease to document and write orders in clinic
  - Area to discuss plans of care with anesthesiology and hospitalist team
  - Contact subspecialists

Structure of Preoperative Clinics:

1. **Patient evaluated by Surgical Team**
2. **Surgeons identify patients as Medically Complex and make referral to Preoperative Clinic**
3. **Patient evaluated in the Preoperative Clinic**
   - **Hospitalist Evaluation, if necessary**
   - **Anesthesiology Evaluation**
4. **Further assessment needed by specialist, review of laboratory/diagnostic testing, multidisciplinary plan made**
5. **Patient undergoes surgery or surgery is postponed/cancelled**
Role of Anesthesiology

Anesthesiologist’s Perspective

• Get to know us! Call us, page us, consult us.
• Specific **Risks of Anesthesia**
  – Airway issues
  – Recent illness, comorbidities
  – Induction issues (hemodynamic stability)
  – Anesthesia consent
• Only an anesthesiologist can “clear” a patient for anesthesia, but “optimization” is always welcome.
  – Recent URIs, asthma, CHD, pulmonary function, OSA
• What should you tell parents about anesthesia?

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Pre-Operative Evaluation

- **History**
  - Birth history, Past Medical History (detailed Review of Systems), Past Surgical History, Family History, Social History, Developmental History, Immunizations, Allergies
  - MEDICATIONS

- **Physical Exam**
  - Expand on information gathered on history
  - JCAHO requires documented H&P 30 days prior to surgery

- **Labs/Studies**
  - No evidence to suggest routine pre-op testing of *healthy children* before elective surgery is necessary
  - Consider the patient AND the procedure

- **Subspecialty Consultation/Clearance**
We anticipate & coordinate....

- Primary Service/Location (ICU vs Floor)
- Need for preadmission
- Subspecialty involvement
- Pulmonary Plans
- Bowel plans
- Nutrition consults/Feeding advancement precautions
- DVT prophylaxis
- Labs/Diagnostic studies
- Postoperative Inpatient Therapies
- Postoperative Equipment/Supplies, Case management needs
- Follow-up appointments

Resources for a Systematic Approach

- History Intake “Cheat” Sheet
- Preoperative “To-Do” List
- Coordination of care communication template
Small Group Cases

- Two Small Group Stations (12 min each)
  - One patient scenario per station with key objectives in the management of surgical patients
  - 1-2 facilitators per station
  - Scenario and Discussion led by facilitator
  - Handout with key points at each station

- Facilitators to Rotate Between Stations (3 minutes)

- Rules of Engagement
  - “Rule of Vegas”
    - Confidential
    - We are all learners
    - We are not experts but facilitators
Conclusions

• What did you learn in this workshop that will change YOUR CURRENT PRACTICE?
  – Conduct more preoperative evaluations, using the components discussed, for your patient population
  – Collaborate with surgeons and anesthesiologists to build a system or clinic for your surgical patients for preoperative evaluations

• Are there any tools provided here today that you will use to teach other colleagues or trainees?

• What additional tools or strategies are you still looking for?
Questions?

References

Contact Info

• Anjna Melwani, MD - amelwani@childrensnational.org

• Sonaly McClymont, MD - smcclymo@childrensnational.org

• David Rappaport, MD - David.Rappaport@nemours.org

• Amy Vinson, MD – Amy.Vinson@childrens.harvard.edu

• Sarah Denniston, MD - sarah.denniston@christushealth.org

• David Pressel, MD – David. Pressel@nemours.org