IMPACT OF PHARMACIST SERVICES TARGETING MEDICATION SAFETY AND PATIENT EDUCATION IN A PERIOPERATIVE SETTING

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DISCLOSURE STATEMENT

- IRB status: Exempt
- Co-investigators:
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  - Channa Richardson, PharmD, BCPS
  - Erin Carpenter, PharmD, BCPS
  - Shayla Barraclough, PharmD, BCPS, BCPPS
- Conflicts of interest: None
- Project sponsorship: None

IRB: Institutional Review Board

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FACILITY

- About St. Peter's Health (SPH)
  - 123-bed hospital
  - Services to five county areas
  - Offers a variety of surgical services including:
    - Same day surgery (SDS)
    - Orthopedic surgery
    - Spinal surgery
    - Robotic-assisted surgery
  - Pharmacist ran Meds-to-Beds (M2B) program

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BACKGROUND[1,2,3]

- Perioperative pharmacists have the opportunity to make large impacts on patient care and are supported within the American Society of Health System Pharmacists (ASHP) guidelines.
- **Pharmacists are finding roles in the following perioperative settings:**
  - Promoting safe medication use
  - Encouraging medication cost-savings strategies
  - Providing postoperative medication education
  - Promoting antimicrobial stewardship in the perioperative setting
  - Assisting with protocol development
  - Improving pain management strategies

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OBJECTIVES

- **Primary objective**
  - Evaluate the impact of pharmacist services targeting medication safety and patient education in the perioperative setting
- **Secondary objectives**
  - Postoperative bedside medication delivery service expansion
  - Protocols and guideline development
  - High-cost medication use assessment
  - Antimicrobial surgical prophylaxis optimization
  - Post implementation satisfactory survey

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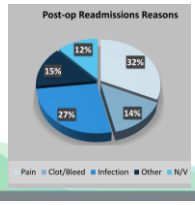
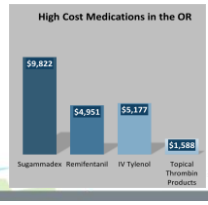
METHODS: PHASE I BASELINE DATA COLLECTION

Data was collected from September 2022 to October 2022 and included a total of 37 patients. Cases were assessed for readmission reason and potential impact an OR pharmacist could have on outcomes.



High cost medications used in the operating room at St. Peter's Hospital were evaluated. Data was collected from March 2022 to October 2022.



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METHODS: PHASE II PROJECT IMPLEMENTATION

- After collecting baseline data, an 8-week pilot phase took place where a pharmacist was embedded within the post anesthesia care unit (PACU) from January 2023 to March 2023.
- **During this pilot phase, the following was completed:**
  - Established pharmacist role in the PACU/SDS/OR areas
  - Collected medication safety, time saved, and therapy optimization data on interventions made
  - Developed protocols
  - Assessed for cost savings
  - Established relationships between pharmacy and PACU/OR/SDS staff

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METHODS: PHASE II PROJECT IMPLEMENTATION

During an 8-week pilot phase from January 2023-March 2023 a pharmacist was embedded into the perioperative setting. The following areas were targeted for impact:

Meds-to-Beds Program	Medication Cost Analysis	Pharmacist Involvement	Protocol Development
• Pre-existing bedside delivery program • Expand program to more surgeons	• Assess areas where cost savings could occur	• Identify areas for pharmacy to assist the perioperative healthcare team	• Develop and implement a variety of protocols related to the perioperative setting

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METHODS: PHASE III FINAL DATA ANALYSIS

1. Compile and analyze data collected from pilot phase
2. Cost-savings analysis
3. Finalization and obtaining approval of protocols
4. Present data compilation to hospital leadership

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RESULTS: PRIMARY OBJECTIVE

Interventions were collected throughout the 8-week pilot phase and placed into four categories:

- **Estimated operating room time saved through pharmacist interventions**
  - Simple: 5 minutes
  - Moderate: 10-15 minutes
  - Complex: 30-45 minutes
- **Optimization of medication therapy**
  - Prophylactic antibiotic optimization
  - Multimodal approaches to pain management in the perioperative setting
  - Post operative nausea and vomiting management
- **Medication safety interventions**
  - Medication dosing and allergy clarification
  - Pediatric medication safety sheets
- **Other**
  - Medication ordering and dispensing issues

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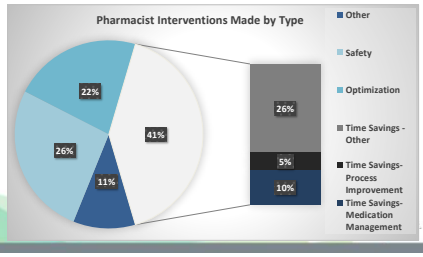
RESULTS: PRIMARY OBJECTIVE

A total of 125 pharmacist driven interventions were made during the 8-week pilot period.



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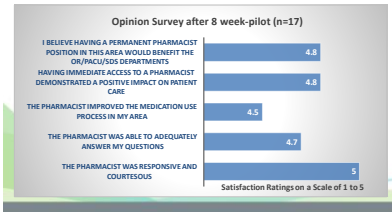
RESULTS: SECONDARY OBJECTIVES

Post implementation survey was provided to assess the benefit, impact, and improvement in medication use process throughout the pilot.



Increase in prescriptions filled after the addition of a single surgeon to M2B program from March 2022 & March 2023.

Rx volume March 2022	Rx volume March 2023
19	91

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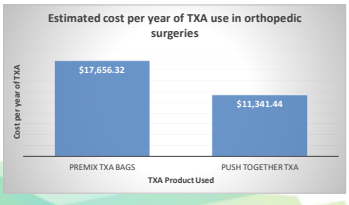
RESULTS: SECONDARY OBJECTIVES

Currently, SPH uses premix Tranexamic Acid (TXA) bags. TXA use in orthopedic surgeries was assessed throughout December 2022. If the TXA product currently used was switched to a push together, there is an estimated cost savings of ~ $6,300 per year.



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RESULTS: SECONDARY OBJECTIVES

Potential Areas for Clinical Improvements:

- **Protocol development**
  - Post Operative Nausea and Vomiting
  - Perioperative Blood Glucose Management
- **Antimicrobial allergy and prophylaxis**
  - Standardization of prophylactic antibiotic use
  - Education regarding allergies and safe alternatives
- **Continued assessment of cost savings**

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CONCLUSION

- Utilizing a clinical pharmacist in the perioperative setting positively impacts patients by offering:
  - Improved perioperative patient management
  - Assisted in therapy optimization in the following areas:
    - Antimicrobial surgical prophylaxis
    - Blood glucose management in diabetic patients
    - Postoperative nausea and vomiting management of patients
  - Expansion of Meds-to-Beds services
    - Service expanded to additional patients

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FUTURE DIRECTIONS

- Administrative discussion to evaluate a permanent pharmacist role in the perioperative setting
- Continue expanding Meds-to-Beds to additional patients
- Continue establishing the role of perioperative pharmacy services
  - Workflows
  - Protocols
  - Relationship building

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ACKNOWLEDGEMENTS

- **Co-investigators:**
  - Ceder Dorrington-Thacker, PharmD
  - Channa Richardson, PharmD, BCPS
  - Erin Carpenter, PharmD, BCPS
  - Shayla Barraclough, PharmD, BCPS, BCPPS
- **Other key stakeholders:**
  - Molly Litchfield, MBA-HM, RN, BSN, CNOR, HCL PeriOperative Services Director
  - Elyse Demaray, RN, BNS
  - Adreinne Verlanic, RNFA

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QUESTIONS?

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