NewYork-Presbyterian | COLUMBIA | COLUMBIA UNIVERSITY DEPARTMENT OF ORTHOPEDIC SURGERY

Perioperative Orthopedic Quality & Safety Newsletter

A Quarterly Newsletter from the Columbia Orthopedics Quality Team

Happy Spring from the Columbia Orthopedics team! We are excited to continue sharing our perioperative quality updates and reading list. We hope this quarter's issue serves as a useful tool in helping you provide the highest quality of care.

- Columbia Orthopedics Quality Team
Dr. William N. Levine, Chairman, Orthopedic Surgery
Dr. Michael G. Vitale, Vice-Chair, Strategy & Quality
Melanie Brown, Quality & Performance Improvement Fellow

Meet Our Quality & Performance Improvement Fellows

The orthopedics team is fortunate to have a Quality & Performance Improvement (QPI) Fellow who works to support campus-wide perioperative quality initiatives. Our current QPI Fellow, Melanie Brown (2023 – 2024), has been leading several initiatives across the hospital, including projects related to pre-operative antibiotic compliance, blood ordering and testing, and perioperative efficiency improvement for total hip and knee arthroplasty procedures.

Melanie Brown
(Current QPI Fellow: 2023-2024)

We also want to extend a warm welcome to Channing Hamilton, who will be joining our team in July. Channing studied at the University of Texas at Austin, where she received her Bachelor's degree in Public Health and a Minor in Business. Following her undergraduate studies, she attended Cornell University, where she earned her Master of Health Administration. Before joining our team as a fellow, Channing interned for NYP's Physician Services Organization.

Channing Hamilton
(Future QPI Fellow: 2024-2025)

Our previous fellow, Chinenye Ezeh (2022 – 2023), has started her role as a Project Manager in Operations for New York Presbyterian Hospital. She has also been elected as the Chair of NYP's Emerging Leadership Council (ELC).

Chinenye Ezeh
(Past QPI Fellow: 2022-2023)

Current Projects

CUSP Arthroplasty: Utilizing a Unit-Based Team Approach to Improve Perioperative Efficiency in Adult Hip and Knee Arthroplasty Procedures

The Comprehensive Unit-Based Safety Program (CUSP) is a quality and patient safety program developed by Johns Hopkins University and has been implemented across a range of healthcare settings. It aims to both identify and address opportunities for quality and patient safety improvement in accordance with the core principles of safety science.

Our hospital has adapted CUSP to target perioperative efficiency for pediatric spinal fusions, adult and pediatric cardiac cases, and adult total hip and knee arthroplasty procedures. Bimonthly collaborative CUSP meetings involve senior hospital leaders, as well as leaders from the operating room, anesthesia, central processing and sterilization, scheduling, and frontline staff. Additionally, several workgroups were created to target system stressors across the perioperative workflow and directly implement interventions to address them.

Since the implementation of CUSP Arthroplasty in November of 2021, the team has experienced the following improvements:

- **63%** increase in first-case on-time start rate.
- **23%** decrease in room turnover time.
- Decreases in time to incision, surgical length, patient exit, and overall case length for both total hip and knee arthroplasty procedures.

Our meeting in March highlighted the continued dedication of all stakeholders involved. The sustainability of our success has been at the forefront of the CUSP team's focus, and our shift in culture encourages staff to continuously identify areas of improvement and engage in solution-driven discussions.

We are also excited to announce that our initiative has been selected for publication in The Journal of Arthroplasty! Look out for our paper in the next issue, *The Impact of the Comprehensive Unit-Based Safety Program on the Perioperative Efficiency and Patient Safety of Adult Hip & Knee Arthroplasty Procedures.*

Resident-Led Quality Improvement

We are excited to partner on quality initiatives with Columbia's orthopedic surgery residents as they offer a wealth of frontline expertise and insights into opportunities for improvement. We hope this partnership will empower residents to become change agents within the institution and continue to learn with a patient-focused mindset.

Why Engage Residents?

1. **Observational Expertise.** Residents spend significant time in clinical settings, witnessing various aspects of patient care firsthand. Their observations often highlight areas for improvement that might go unnoticed.

2. **Innovative Ideas.** Engaging residents fosters a culture of innovation, leading to creative solutions and best practices that stem from those doing the work.

3. **Educational Benefits.** Participation in quality initiatives offers residents valuable learning experiences beyond clinical skills. They gain insights into quality improvement methodologies, project management, stakeholder engagement, and leadership.

Current Initiatives

Our residents have pinpointed three key areas for improvement within our perioperative care framework. These initiatives have been selected to enhance patient outcomes and streamline processes:

1. **Ankle Fracture Follow-up and Time to Surgery:** Improving the follow-up process and reducing the time to surgery for ankle fractures will ensure timely interventions and comprehensive care.

2. **Hip Fracture Consult Workflow:** Developing a structured workflow for hip fracture consultations to optimize communication and coordination between teams will lead to improved patient experience and care.

3. **Collaboration with CUSP Team**: Partnering with our CUSP team to enhance turnover times across our orthopedic service will promote efficiency and patient flow.

We are enthusiastic about further collaboration with our residents to drive positive changes and make care better for our patients.

Reading List

New England Journal of Medicine

A Novel Network-Based Metric of Surgical Team Consistency Opens Opportunities to Improve Hospital Performance and Care Value (Verhaegen et al.)

This study investigates the implementation of a network-based metric that measures orthopedic surgical team consistency and its link to both improved efficiency metrics and maintained quality of care.

Cureus Journal of Medical Science

Anxiety as a Risk Factor for Postoperative Delirium in Elective Spine Deformity Surgeries: A National Database Study (Hudock et al.)

This study investigated the relationship between generalized anxiety disorder (GAD) and postoperative delirium in patients undergoing elective spinal deformity surgeries. The study revealed that patients with GAD were more likely to experience postoperative delirium compared to those without GAD.