

## BACKGROUND

This project was launched to address inefficiencies in orthopedic surgical workflows by reducing delays and optimizing resources across the pre-operative, intra-operative, and post-operative phases to enhance the patient experience. Earlier versions had been implemented in other orthopedic areas, but this was the first within the outpatient procedure center (OPC). Portions of the change management process used the Awareness, Desire, Knowledge, Ability, and Reinforcement (ADKAR) model, chosen for its simplicity, practicality, and proven effectiveness in guiding complex change while maintaining engagement (Ball, 2024).

## PREPARATION AND PLANNING

### PLANNING

The surgeon lead convened a multidisciplinary team to map current workflows, identify bottlenecks, and align goals for the OPC. The team included representatives from anesthesia, nursing, Orthopedic surgery and leadership.

### MEETINGS

The team initially met weekly to identify potential barriers within each discipline and across all phases of patient care. They also established smaller milestones to ensure progress toward the broader implementation objectives.

## ASSESSMENT

### MULTIDISCIPLINARY TEAM ASSESSMENT

#### Pre/Post Nursing Barriers:

- Point of Care (POC) pregnancy testing
- Nothing by mouth (NPO) orders not followed

#### Surgeon Barriers:

- Inconsistent communication across Orthopedic practices
- No consistent operating room (OR) teams

### Intra-op Nursing & Sterile Core Barriers:

- Required items not being listed for cases
- Borrowing equipment from other cores
- Large volume of equipment due to number of specialties

### Anesthesia Barriers:

- Order management issues
- No dedicated team certified registered nurse anesthetist (CRNA) team for unit

## ASSESSMENT CONTINUED

### MULTIDISCIPLINARY STAFF SURVEY

A pre-implementation survey was distributed to the multidisciplinary OPC team, including certified registered nurse anesthetists (CRNAs), health unit coordinators (HUCs), certified surgical technologists (CSTs), Surgical Assistants (SAs), Anesthesiologists, advanced practice providers (APPs), registered nurses (RNs), Orthopedic Surgeons, administration, and sterile processing.

#### Key themes identified from the survey:

1. Consistency & Efficiency
  - Consistent team and staffing
  - Efficient OR starts and turnovers
  - Clear guidelines and communication
2. Communication
  - Improved team and patient communication
  - Clear, concise briefings
  - Better coordination for patient care and discharge
3. Scheduling & Planning
  - On-time first case starts and efficient block scheduling
  - Realistic case volumes and end-of-day planning
  - Prioritization of scheduling with primary teams

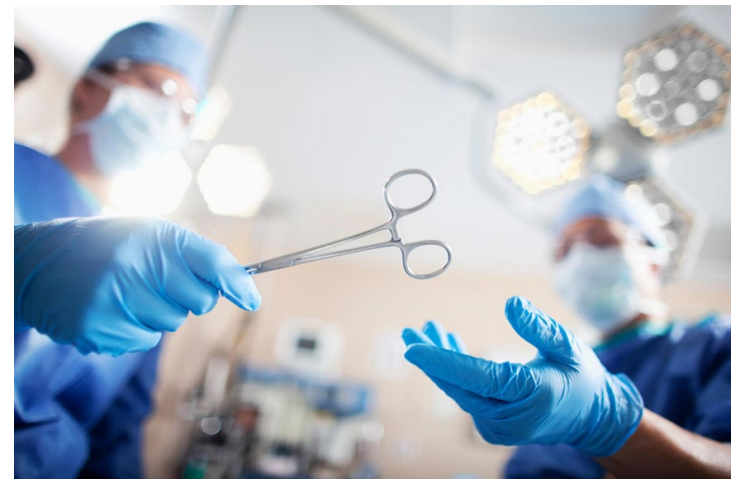
### WASTE WALK

The team conducted a “waste walk” to analyze the OPC practice by walking through the progression from patient arrival to departure (Wyles, et. al., 2021) Mapping the patient’s entire surgical journey identified additional barriers and inefficiencies across phases of care.

### INTRA-OPERATIVE PHASE OF CARE

The following priorities for intra-operative opportunities were identified:

1. Standardized communication of surgical team needs
2. Reduce OR delays by addressing POC pregnancy testing and OR readiness
3. Secure additional storage space for expanding OR practices



## IMPLEMENTATION

### STANDARDIZED COMMUNICATION

A standardized surgical-listing template was implemented for surgeons, APPs, and residents. Updates were reviewed during OPC in-services, with additional reinforcement provided through email and team huddles.

### REDUCING OR DELAYS – A HIGH PRIORITY

Key actions to reduce delays included targeted education on listing updates, reinforcing pre-op pregnancy testing requirements, consistent communication through email and huddles, and supporting stable surgical team assignments when possible.

### ADDITIONAL STORAGE NEEDS

The waste walk identified storage gaps, especially in the sterile core. The team secured an underused office for additional storage, relocated items to improve access and reduce clutter, and removed unused or low-utilization products.

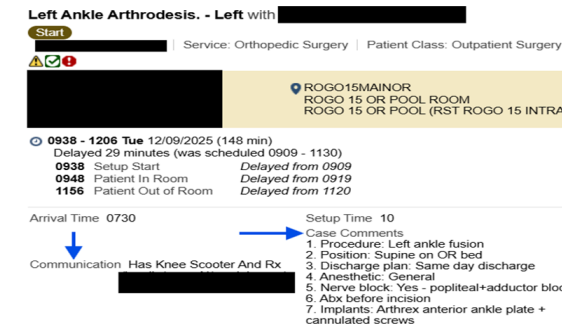


FIGURE 2

Figure 2 is an example of the implemented standardized communication within the EHR.

## OUTCOMES

Post-implementation outcomes were assessed using anecdotal feedback, direct observation, audits, and a post-implementation survey.

### STANDARDIZED COMMUNICATION

About 50% of surgeons listed their cases with template after initial education.

Pre-op RNs reported the template improved care for items such as starting IVs in the correct extremity for intra-op positioning.

### REDUCING OR DELAYS

Reasons for first-case delays were reduced in the following areas:

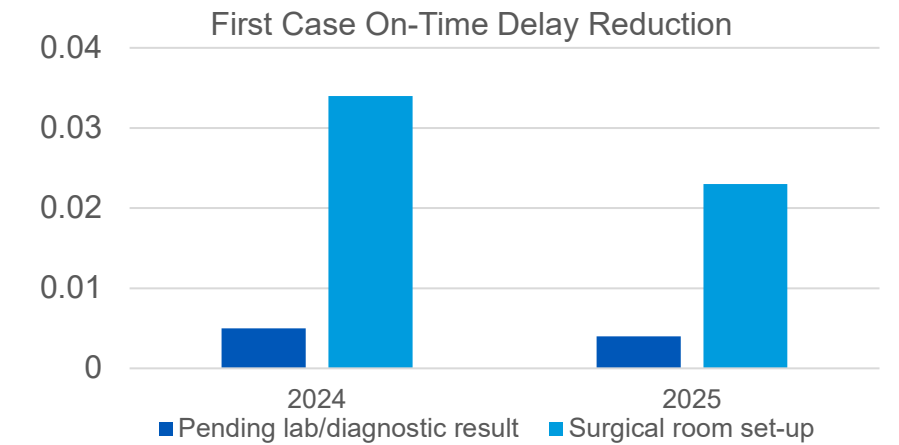
- Pending lab/diagnostic result
- Surgical room set up

#### Additional benefits:

- Intraoperative staff felt better prepared based on accurate listings.
- Less time spent updating preference cards.
- Higher satisfaction among staff and surgeons when primary OR teams scheduled.

### ADDITIONAL STORAGE

Obtained additional storage for the OPC, increasing storage capacity by roughly 600 sq. ft. and transitioning underutilized equipment into the designated area.



The graph illustrates a reduction for first-case on-time delays from 2024 to 2025, following implementation. Decreases were observed in delays caused by pending lab/diagnostic result and surgical room set up.

## IMPLICATIONS FOR PERIOPERATIVE NURSING: KEY CONCLUSIONS

Streamlining workflows by removing barriers significantly improves efficiency. Standardized communication helped the sterile core prepare cases accurately and ensured intraoperative staff had the right equipment. It also simplified pre-op care, reducing delays in start times and turnovers. Staff reported higher satisfaction when paired with their primary surgeon. Eight months later, leaders reinforced standardized communication and pre-op pregnancy screening, with ongoing cross-disciplinary collaboration needed to sustain new workflows.

## REFERENCES

Ball, K. (2024). The ADKAR advantage: Your new lens for successful change. Mayo Clinic Intranet. <https://intranet.mayo.edu/charlie/change-management/files/2024/11/The-ADKAR-Advantage-Your-New-Lens-For-Successful-Change.pdf>

Wyles, C., Smith, H., Amundson, A., Duncan, C., Niesen, A., Ingalls, L., Zavaleta, K., VanDeVoorde, R., Ryan, J., Sanchez-Sotelo, J., Taunton, M., Perry, K., Mabry, T., & Abdel, M. (2021). Orthopedic surgery and anesthesiology surgical improvement strategies project: Phase I outcomes. *The Journal of Arthroplasty*, 36(3), 823-829. <https://doi.org/10.1016/j.arth.2020.09.003>



FIGURE 1 Figure 1 represents a “flag” in the electronic health record (EHR) when patients need POC pregnancy testing and refuse the test.