

# Reducing Length of Stay for Total Joint Replacement Patients

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## Introduction/Problem

### Background:

- BIDMC's primary Total Joint Replacement (TJR) surgical service line was identified as one of the top three service lines to have a substantially higher observed length of stay (LOS) relative to their expected LOS.
- Additionally, the LOS index for knee and hip replacement patients at BIDMC was significantly higher than that of comparison hospitals and Academic Medical Centers (AMCs)

LOS FY 17	BIDMC	Compare Group	AMCs
Hip	2.91	1.79	2.12
Knee	3.37	1.74	2.24

Vizient Consultants conducted a week-long, detailed analysis of the Joint Replacement Program at BIDMC to identify opportunities for improvement in decreasing the length of stay for knee and hip replacement patients.

Baseline 10/2017-4/2018	% DC'd on Target
Hip	13% (POD1)
Knee	40% (by POD2)

### Factors contributing to increased length of stay (LOS):

- Lack of standardized target length of stay
- Inconsistent patient education materials and messaging around LOS and discharge disposition
- Lack of standardized protocol for surgical pathways, post-op orders, and post-op care
- Identified clinical complications, such as hypotension and pain management, delaying discharge

## Aim/Goal

1. Streamline care for TJR population
2. Standardize messaging around LOS and discharge disposition to improve patient expectations
3. Improve patient experience
4. Decrease LOS for TJR patients

### Target Discharge Date:

- LOS for Hip Replacement – 1 day
- LOS for Knee Replacement – 1-2 days

### Goal % Discharged on Target:

- 33% of hips discharged on POD1
- 66% of knees discharged by POD2

## The Interventions

A large multidisciplinary team was assembled to address barriers to goals and identify opportunities for improvement in the following areas:

### Care Standardization

- Revision of Total Knee Replacement & Total Hip Replacement Pathways
- Standardization of Post-Operative Order Sets
- Surgeon agreement on Patient Selection Criteria
- Creation of Pre-Operative Hydration Protocol
- Consistency of patient messaging throughout the care continuum
- Shared decision making amongst full care team re: readiness for discharge
- Standard language regarding patient pathway, milestones, and barriers to discharge during Patient Progression Rounds

### Educational Materials

- Begin Revision of Contents of Pre-operative Education Folder
- Creation of Updated Patient Education Videos for Department Website
- Revision of Course Outline for Total Joint Replacement Pre-Operative Class
- All patients to receive gift bag with supplies for Pre-Operative Hydration and Infection Prevention



### Inpatient Experience

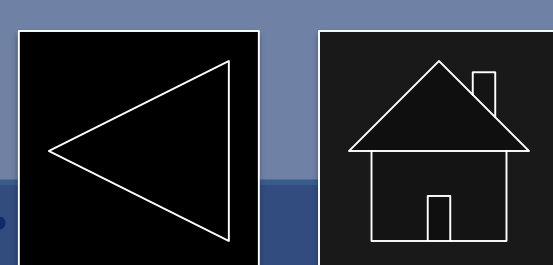
Total Joint Replacement Bundle	
Monitoring	• Orthostatic Vital Signs POD #0* • Vital signs q 4 hrs* • I&O*
Activity/Mobility	• Ambulate at least 1 POD #0** • Every 2 hours when awake** • 100% in chair for ambulation**
Safety/Prevention	• Special Screen Fall Precautions for full admission** • Pneumobeds while in bed or chair for full admission**
Rehab Services	• PT visits BID • OT eval for all TJR patients
Communication	• Individualized Care Plan • Names of care team • Shared decision making • Discharge plan (POD 1 for hip, POD 2 for knee) • 100% in chair** • Patient Progression Rounds

\* Document on eFlowSheet  
 \*\* Unless not clinically indicated

- Development of Nursing Care Bundle
- Increased frequency of physical therapy visits to twice daily, plus a visit POD #0 when clinically indicated
- Altered whiteboard template to include transparent plan of care and discharge date
- Tracking of weekly data related to length of stay, identifying patient on/off target and barriers to discharge

**For more information, contact:**

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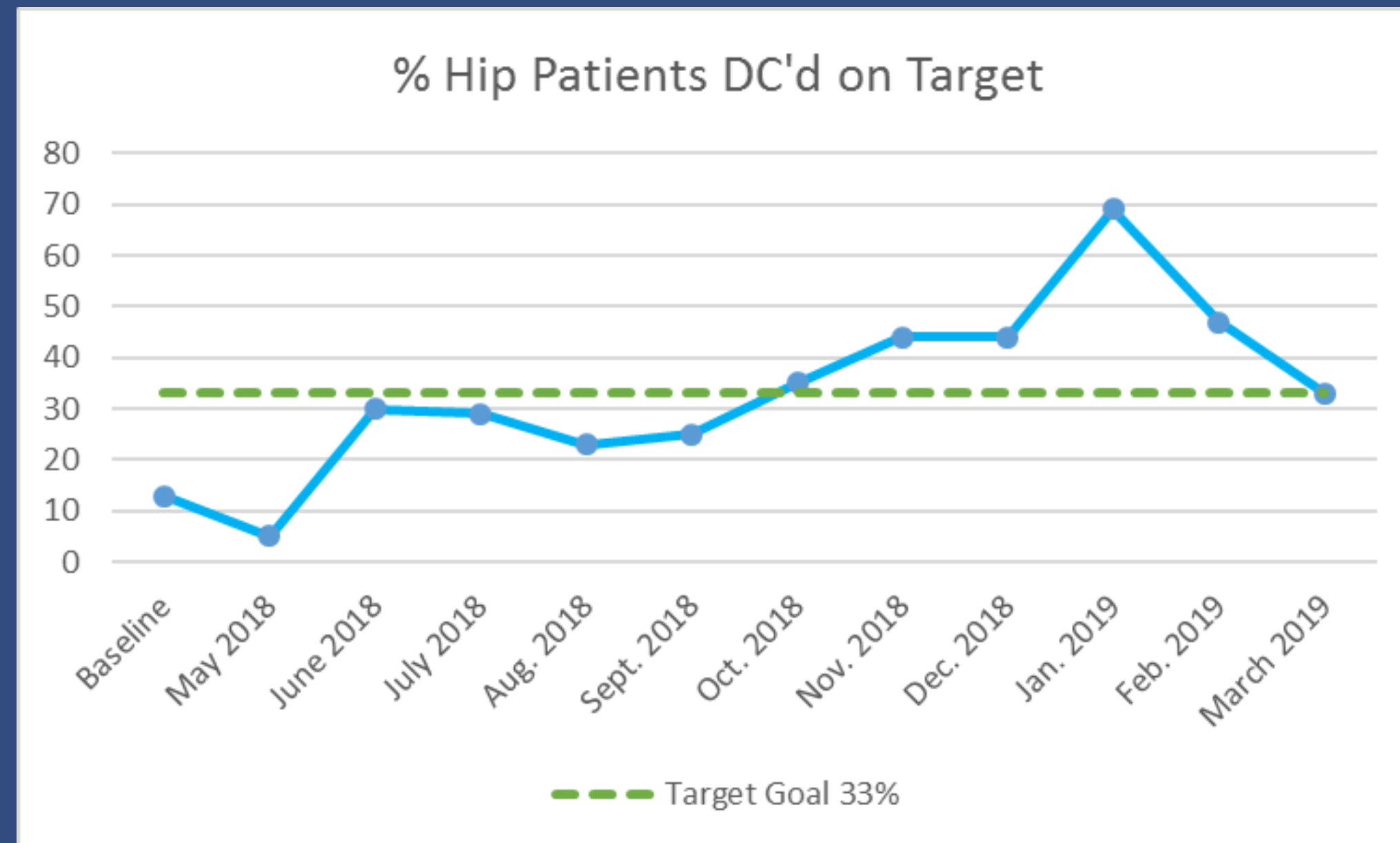


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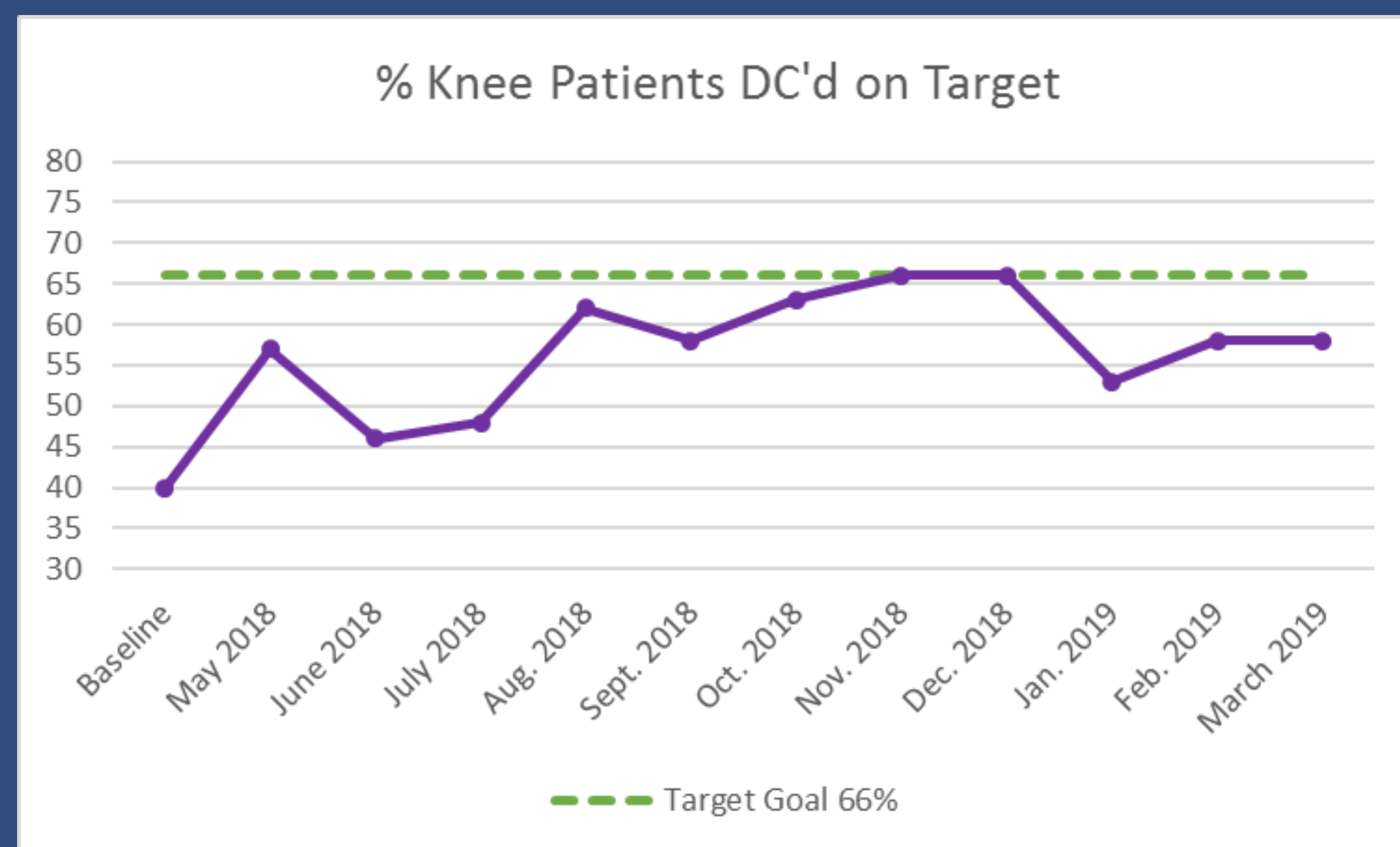
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TAP TO GO BACK  
 TO KIOSK MENU

## Results/Progress to Date



Monitoring % of patients DC'd on target began in April 2018. Over time, % patients DC'd on target has improved in both Total Hip Replacement patients and Total Knee Replacement patients. Total Hip Replacement goal changed to 60% in March 2019 due to being above goal for 5 months



## Lessons Learned

- Change is not possible without engagement of all stakeholders
- Clear and consistent messaging to patients is important throughout the care continuum
- There is no such thing as a “quick change”: In order to make a long-lasting, effective change, you need to look at each step in the process and how it relates to other parts of the process
- Sustainment requires continued focus by all members of the team

## Next Steps

- Complete Pre-Operative Educational Materials Folder
- Complete Physical Therapy Educational Videos for Department Website
- Continue to track weekly data on LOS, identifying patients DC'd on and off target, with barriers to DC
- Continue to track patients' experience through follow-up calls and post-discharge surveys

## The Team

Aaron Block, Beatrice Noel-Destin, Bernard Lee, Caroline Kenney, Charlotte Clements, Corinne Fairweather, Deborah Adduci, Douglas Ayres, Elena Canacari, Elise O'Reilly, Elizabeth Coyte, Erica Marsh, Jacob Drew, Jane Wandel, Jeanette Gutierrez, Jenny Barsamian, Joshua Medeiros, Krysta Cass, Lauren Doctoroff, Lauri Askari, Leah Lammer, Marcelle Denis, Mariela Arnal, Mary Ellis, Michael Baratz, Nancy Zhou, Nicolette Burnham, Phyllis West, Robert Davis, Ryan Cuerdon, Stacy Lewis, Susan Dorion, Ted Vander Linden, & Tracy Lee

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