# "Staying Hip with the Times: Who Goes Home or Who Stays"

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A New Direction

# Translating the Strategic Vision to pursue Improved Patient Outcomes

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## Vision & Strategic Plan

- There has been a growing demand for hospitals to:
  - Decrease a patient's length of stay
  - Standardize practices
  - Lower overall costs
  - And produce better patient outcomes

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## Vision & Strategic Plan

- Mercy established an organizational strategic plan
  - Reduce overall length of stay for the Joint Journey Population
    - This objective called for a three pronged approach
      - Visionary direction and planning from leadership
      - Quality improvement at the bedside focused on improved outcomes
      - Scientific research to strengthen the programs

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## Collaboration

- Clear Goals Provided by Executive Level
- Strong Support of Program by Orthopedic Surgeons & Anesthesia Providers
- Representatives of Various Departments began Collaborating Early and Frequently
  - Executive Leadership
  - Perianesthesia Nursing Leadership
  - OR Leadership

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## Collaboration

- Representatives of Various Departments began Collaborating Early and Frequently (continue):
  - Inpatient Orthopedic Unit Nurse Leadership
  - Joint Journey Coordinator
  - Lead Orthopedic Physicians Assistant
  - Lead Orthopedic Anesthesiologist
  - Physical Therapy Leadership
  - Pharmacy Leadership

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Supporting from Within

# Utilizing the Voice of our Staff to Improve Patient Outcomes

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## Staff Empowerment

- Perianesthesia Nurse Representation in Early Decisions
  - Advocacy on behalf of the Bedside Perianesthesia Nurse to avoid logistical barriers
  - Promoting Nursing Engagement by encouraging all forms of feedback
- Education Needs Identified & Addressed
  - Go-Live Preparedness Training with Hands-on Component
  - Ongoing Training through Nurse Orientation & Annual Competencies

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## Staff Empowerment

- Creation of Take-home Prescription Packs for Late Night Discharges
  - Eliminated barrier encountered when a patient's home pharmacy has closed for the night
- Consistent Multi-disciplinary Collaboration throughout, and following, Go-Live

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## Quality Improvement: Same Day Discharge of Joint Journey Patients in PACU to Reduce LOS

- BASELINE ASSESSMENT (Prior to November 2019)
  - 0% of total joint arthroplasties were discharged from the PACU
  - 7% of total joint arthroplasties were discharged within 23 hours
  - Total Hip Cases LOS was 1.53 Days
  - Total Knee Cases LOS was 1.95 Days

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## Quality Improvement: Same Day Discharge of Joint Journey Patients in PACU to Reduce LOS

- DEPARTMENT QI GOAL
  - To decrease the average length of stay for the joint journey (hip and knee) arthroplasty patients.
  - Program resulted in a 10% increase in patients with a LOS <23 hours.

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## Quality Improvement: Same Day Discharge of Joint Journey Patients in PACU to Reduce LOS

- Purpose of PACU QI
  - To implement evidence-based practices to safely prepare hip/knee arthroplasty patients for discharge home from the PACU.

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## Quality Improvement: Same Day Discharge of Joint Journey Patients in PACU to Reduce LOS

- PACU INTERVENTIONS:
  - Assess Knowledge Needs & Provide Education on
    - Assessing a patients readiness for early ambulation
    - Safe ambulation of joint journey patient
    - Understanding the PT/OT criteria

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## Quality Improvement: Same Day Discharge of Joint Journey Patients in PACU to Reduce LOS

- PACU INTERVENTIONS:
  - Multidisciplinary collaboration
    - Work closely with Physical/Occupational Therapy to increase confidence in performing PACU Ambulation
    - In-Services with the Anesthesia Leadership to review anesthetic techniques and postoperative pain management in the population
    - Team meetings with the Joint Journey Coordinator to establish a clear understanding of the roles the patient and their "Coach" play to ensure the patient is prepared for Same Day Surgery

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## Quality Improvement: Same Day Discharge of Joint Journey Patients in PACU to Reduce LOS

- PACU INTERVENTIONS:
  - Unit-based dissemination through staff education:
    - Didactic and hands-on training
    - Patient assessment on readiness to ambulate using an algorithm
    - Strategies on safe ambulation
    - Use of assistive devices and traversing installed Physical Therapy Stairs

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## Quality Improvement: Same Day Discharge of Joint Journey Patients in PACU to Reduce LOS

- PACU INTERVENTIONS:
  - Space was created to meet the needs of the new Outpatient Joint Journey Program
  - Ambulation Champion established to assist staff with Joint Journey Ambulation and Patient Needs

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## Algorithm


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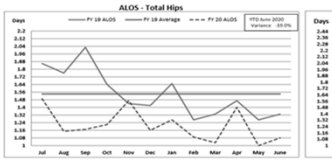
Mercy Medical Center
Surgical Cases -Total Hips & Knees
Twelve Months Ended June 30, 2019 & 2020

| Surgical Cases | INPATIENT FY 2019 | INPATIENT FY 2020 | INPATIENT Variance | INPATIENT % Var | OUTPATIENT FY 2019 | OUTPATIENT FY 2020 | OUTPATIENT Variance | OUTPATIENT % Var | TOTAL FY 2019 | TOTAL FY 2020 | TOTAL Variance | TOTAL % Var |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TOTAL HIP CASES | 817 | 683 | (134) | -16.4% | 11 | 65 | 54 | 490.9% | 828 | 748 | (80) | -9.7% |
| *ALOS* | *1.54* | *1.27* | *(0.27)* | *-17.5%* | *1.36* | *0.86* | *(0.50)* | *-36.8%* | *1.53* | *1.24* | *(0.29)* | *-19.0%* |
| TOTAL KNEES | 963 | 694 | (269) | -27.9% | 29 | 196 | 167 | 575.9% | 992 | 890 | (102) | -10.3% |
| *ALOS* | *1.95* | *1.58* | *(0.37)* | *-18.9%* | *1.66* | *1.28* | *(0.38)* | *-22.7%* | *1.94* | *1.51* | *(0.43)* | *-22.2%* |

Corporate Priority -10%





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## Quality Improvement: Same Day Discharge of Joint Journey Patients in PACU to Reduce LOS

- MEASURE: Surgical cases showed….
  - The Joint Journey Program has achieved and surpassed the corporate goal of discharging 10% of patients within 23 hours of surgery by achieving 16%.
  - The average length of stay for Total Hip Arthroplasty decreased by 19%. Decreasing from 1.53 days to 1.24 days.
  - The average length of stay for Total Knee Arthroplasty decreased by 22.2%. Decreasing from 1.95 days to 1.51 days.

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## Quality Improvement: Same Day Discharge of Joint Journey Patients in PACU to Reduce LOS

- MAINTAIN
  - Early Ambulation
  - Ambulation Champion
  - Collaboration


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## Scientific Study


PROBLEM: Growing demand for hospitals to decrease their length of stay to lower overall costs and produce better patient outcomes. There is a lack of LOS stratification of standardized discharge criteria for patients undergoing hip and knee arthroplasty.

PURPOSE: To determine which discharge criteria best fit based on the length of stay in the hospital (<24 hrs., 24- 36 hrs. and >36hrs.) for patients undergoing hip and knee arthroplasty.

RESEARCH QUESTION: What are the discharge criteria associated with the length of stay (< 24hrs; 24 hrs to 36hrs; > 36hrs.) among hip and knee arthroplasty patients?

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## Scientific Study: SYNTHESIS OF EVIDENCE

- Conducted EBP/Johns Hopkins EBP Model
- Databases: CINAHL, PUBMED, and Joanna Briggs databases.
  Articles Searched = 40 / Reviewed: 30 / Appraised: 16
- Level I: 1 evidence / A Quality
- Level II: 7 evidences / A & B Quality
- Level III: 5 evidences / B Quality
- Level V: 3 evidences / B Quality
- These findings were used to create the discharge criteria guidelines, characteristics, clinical and non-clinical elements including acuity level and length of stay in the hospital among hip and knee arthroplasty: <24 hrs to >36 hrs.

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## Scientific Study: PRACTICE RECOMMENDATIONS

- Consider time of surgery.
- Shorter length of stay does not equal a higher complication rate.
- Essentially choosing the right patient for an outpatient, fast-track (short stay), or inpatient surgery.
- The most significant hospital perioperative factor associated with longer stays was patients not ambulating on the day of surgery.

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## Scientific Study: PRACTICE RECOMMENDATIONS

- Develop risk stratification tool
- Emphasize the importance of following up with patients at home after surgeries to ensure they are successful.
- Communication before surgery to adequately prepare a patient for surgery and after to follow up are essential for a healthy recovery process.

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## Scientific Study

- Methodology
  - Research Design:
    - Non-experimental retrospective descriptive study
  - Sample:
    - A convenience sample of 181 patients were selected from three joint replacement surgeons October 2019 to Sept. 2020 at a large Mid-Atlantic urban community hospital. Exclusion criteria: planned ICU admit.

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## Scientific Study

- Methodology
  - Process
    - IRB approval Approved Consent Waiver
    - Standardized documentation form used to retrieve data from the databases.
    - The retrieved data was taken within 2 months post discharge
    - Limited access to data to PI, Co-PI and Biostatistician
    - A code was assigned to each participant to be de-identified.
    - Obtain outcome reports from the from EPIC electronic health record and Ortho Service Line Optimization Management.

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## Scientific Study: RESULTS

- Demographics:
  - Primarily female (56.9%), ≤75 years of age (84.5%), and had a BMI ≤35 (75.7%)
  - Nearly three quarters of the sample had an ASA Classification of 1 or 2 (74.0%)
  - No assistive mobility device (47.5%) vs patients who reported using an assistive mobility device or were immobile (51.9%).
  - Length of stay: 28.7% low risk (<24hrs) patients; 35.9% moderate risk (24-36hrs) patients and 35.4% high risk (>36hrs) patients.

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## Scientific Study: RESULTS

- Discharge Criteria:
  - **Risk factors**: neuro/cognitive, respiratory, cardiac, kidney, GU, diabetes, hgb, opioid use, timing of therapy, with responsible adult at home, preop education and distance between home and hospital access.
  - **Length of stay** categories are correlated with demographics and the discharge criteria risk factors.
- **Older age groups-** high risk discharge group (chi-square p-value <0.001)

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## Scientific Study: RESULTS

- Discharge Criteria:
- **Cognitive function-** significantly correlated with length of stay (chi square p-value 0.002)
- Patients who **didn't completely follow instructions -** discharged >36hrs post-surgery (chi square p-value <0.001).
- H**istory of OSA and cardiac disease-** high risk discharge group (chi square p-values 0.004)

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## Scientific Study: RESULTS

- **Decreased hemoglobin levels-** moderate and high risk discharge groups (chi square p-value <0.001).
- **Physical therapy session timing and surgery-** significantly correlated with length of stay (chi-square p-value <0.001).
- All patients in the low risk discharge category (<24hrs) had a **responsible adult at home** to be discharged to (chi square p-value <0.001).
- **Higher levels of preop education-** correlated with a decreased length of stay (chi square p-value <0.001).

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## Scientific Study

- Implications:
  - The findings of this study provide a novel guideline in applying discharge criteria to determine patient's readiness for discharge for <24 hours, 24-36 hours and >36 hours.
- Conclusion:
  - This study provides guidance in the development of standard practice for assessing discharge criteria for hip and knee replacement patients associated with the length of stay (< 24hrs ; 24 hrs to 36hrs. and > 36hrs.

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## Scientific Study

- Conclusion:
  - Collaboration with physicians is imperative to support the evidence-based standardized discharge criteria hip and knee replacement criteria that can be consistently implemented by the team.
  - Research Recommendation:
    - Further study on a Predictive Model with LOS Stratification for hip and knee arthroplasty discharge criteria inclusive of time of ambulation.

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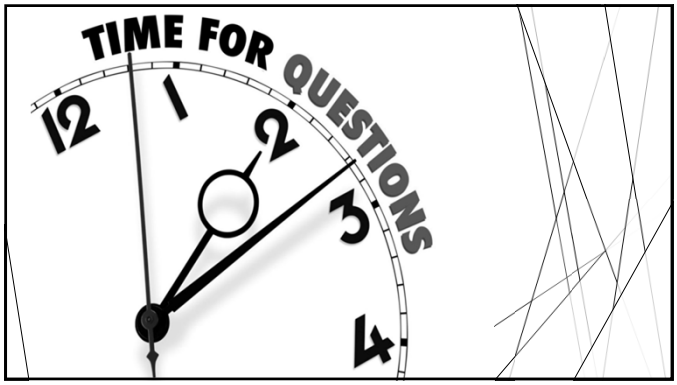


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## Post Tests #1

- Assessing patient's readiness for early ambulation includes evaluation of spinal/ regional nerve block resolution.
  - True
  - False

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## Post Tests #2

- The ambulation champion responsibilities include the following, except____
  a. Assists new PACU nurses during orientation to gain confidence in early ambulation
  b. Be available to bedside nurses to assess patient's readiness for ambulation
  c. Ambulate all patients
  d. Resource for changes in practice related to early ambulation

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## Post Tests #3

- Pre-admission education of the Hip or Knee Arthroplasty Patient correlates with a decreased length of stay in the hospital
  - 1. True
  - 2. False

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