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### Project #32: Improving Patient Reported Outcome Survey Completion Rate in Elective Hip and Knee Replacements

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# Improving Patient Reported Outcome Survey Completion Rate in Elective Hip and Knee Replacements

## Henry Ford Hospital & Henry Ford Grosse Pointe-Cottage Medical Center

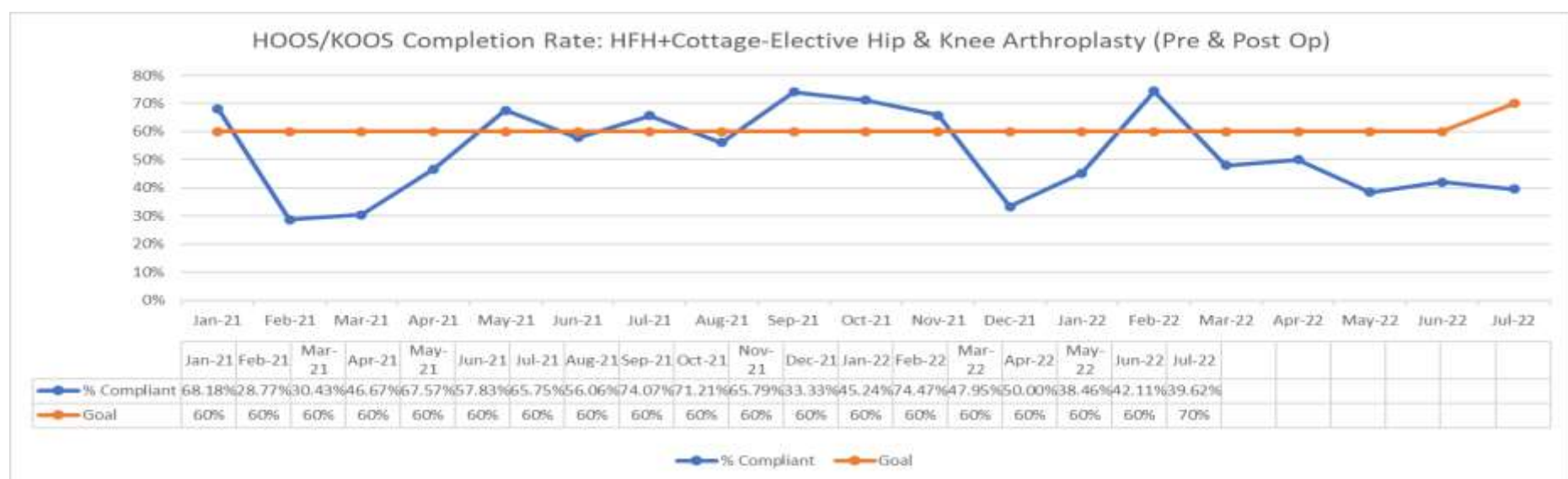
**Team Members:** Tammy Krozal, RN-Nurse Manager, HFMG Ortho Clinic; Jennifer Pietsch, RN, MSN, Clinical Quality Facilitator, Michael Motherwell, MPH, MSHM, Management Engineer-Ortho Admin, Eric Makhni, MD-Orthopedic Surgeon, William Dobson, IT Solution Architect-Clinical & Quality Analytics; Lisa Schley, Supervisor, HFH PACU, Barb Babb, RN-Nurse Manager, OR, Grosse Pointe-Cottage; Michael Charters, MD-Orthopedic Surgeon, Thomas Schoen, RN, MBA-Regional Director, Orthopedics, Tori Davis, MSA-Regional Director, Orthopedics

## AIM

- Problem Background: Patient Reported Outcomes Surveys (PROS) are not being completed at a high enough rate. PROS provide a direct report of the patient experience and facilitate patient outcome projection, identify areas for quality improvement and can offer early detection of implant failure. Our goal was to improve the rate of both pre and post operative survey collection while also making survey results available to a broader audience.

## PLAN: CURRENT STATE

- Beginning in 2020, the Orthopedic Service Line began the process of attaching the PRO surveys to the visit in Epic so that the need for the survey and the result could be seen and managed in Epic. The process had previously been documented in RedCap and was only accessible to a small audience and stored in the MARCQI (Blue Cross Blue Shield Clinical Quality Collaborative [BCBS CQI]) database.
- In early 2022, we identified a decrease in the collection rate of the surveys for HFH and Grosse Pointe-Cottage cases which became a trend into 2<sup>nd</sup> and 3<sup>rd</sup> quarter of 2022..
- PROS collection rate (specifically surveys entitled HOOS and KOOS) is a scorecard measure for the MARCQI Collaborative (MARCQI= Michigan Arthroplasty Registry Collaborative Quality Initiative). Both a pre and post op survey must be completed to be considered compliant.
- Quarterly MARCQI reports as well as monthly manual reports pulled locally indicated the collection rate was below the MARCQI Collaborative Goal.
- Key stakeholders and leaders were assembled to analyze the problem. Multiple root causes identified:
  - Dr. North's patients were not assigned the post op surveys to the post op visits if they saw one of the Advanced Practice Providers (APP's).
    - The APP's were new and had not been included in the workflow/algorithm in Epic
  - Not all staff and leadership understood what PROS were or why they needed to be completed



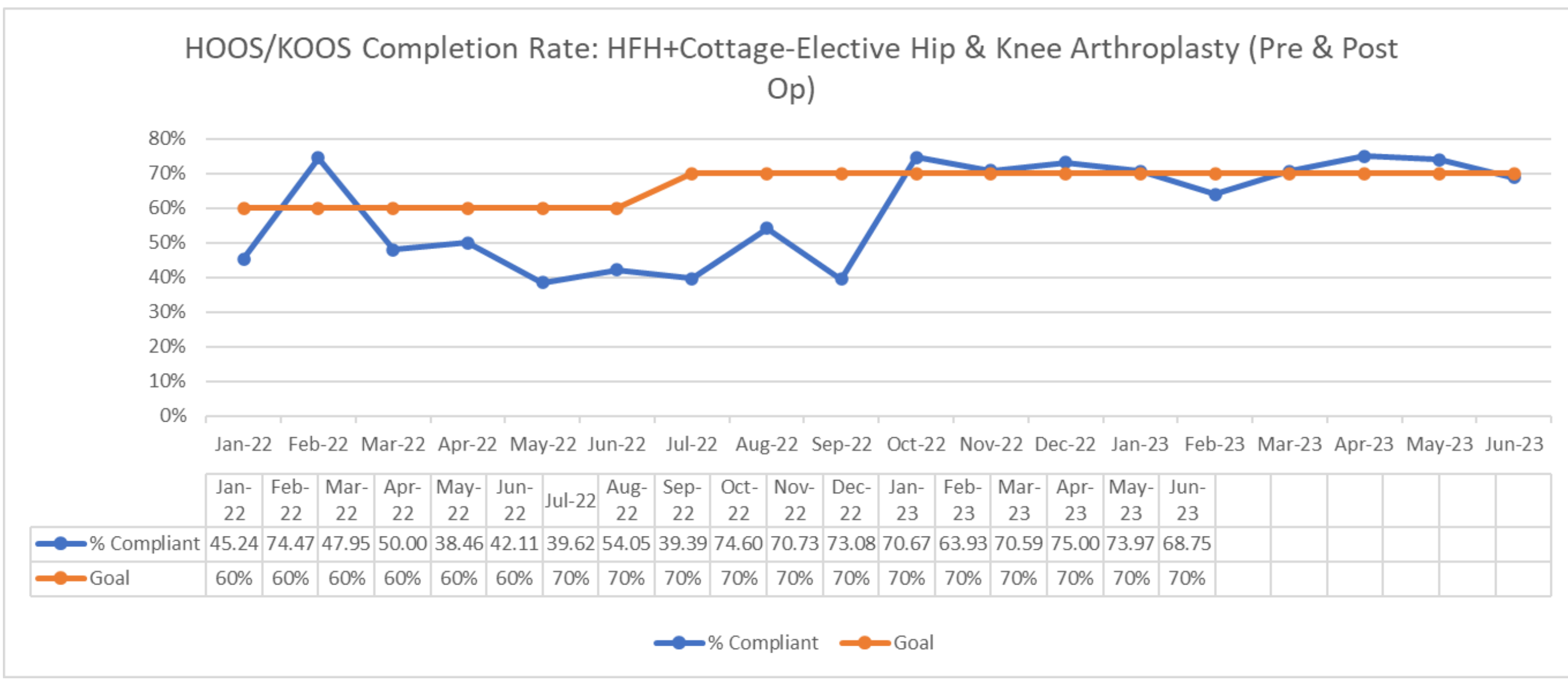
## DO: CORRECTIVE ACTIONS / INTERVENTIONS

- Team member meetings to review missed cases
- All providers seeing patients for post-op visit added to workflow/algorithm in Epic so that survey is assigned.
- Frontline staff re-educated on steps to identify need for survey completion and how to assist patient in doing so
- Audits performed on cases due for post op surveys (14-112 days post op) and survey sent to patient in MyChart if missing survey

## CHECK (EVALUATION OF CHANGES)

- Following assignment of surveys to post op visits done by APP's originally missing from the workflow, saw immediate increase in completion rate.
- MARCQI database reports were pulled monthly to evaluate progress.
- Audits on cases due for post op survey continued.
- When a slight decrease was again noted in Feb 2023, the team again investigated and identified that several pre-op surveys were being missed.
  - The team worked with the preop areas at both Henry Ford Hospital- Detroit and Cottage to investigate
- This analysis identified:
  - The iPads were timing out before the patient could complete the survey
  - Occasional connectivity issues with the iPads slowed down process and patient didn't have time to complete before they were called to the OR. How did analysis of results drive further improvement?
- The HELIOS/Ortho Administration team has since determined they will need new/updated iPads as we continue to do more of these type of functions electronically.

## MEASURES



## Acknowledgements



- MARCQI (Michigan Arthroplasty Registry Collaborative Quality Initiative)
  - Physician-led quality improvement organization with over 80 partnered sites across the State of Michigan
  - Mission is to make Michigan the best place in the world to have a joint replacement surgery.



## ACT: SUSTAIN AND SPREAD

- Collection rates are at goal however the plan is to increase the collection rate as the goal for the Collaborative will continue to increase.
- Increasing and sustaining PROs collection is discussed across all system hospitals performing elective hip and knee replacements
- Increasing PROS collection rates is a frequent topic at the statewide/collaborative-wide MARCQI meetings which represent about 97% of all elective hip and knee arthroplasties across the State of Michigan.
- Future efforts and spread will include implementing a one-year post op survey. This will be a 2025 Medicare measure as well as a MARCQI measure.
- Future plans to assess results of surveys and not just track collection rate, particularly the paired difference/delta between the pre-op and post-op surveys.

## Photos

•Figure 1

### HOOS, JR Survey

**I. Pain**  
What amount of hip pain have you experienced the last week during the following activities?

P1. Going up or down stairs  
☐ None (+0) ☐ Mild (+1) ☐ Moderate (+2) ☐ Severe (+3) ☐ Extreme (+4)

P2. Walking on an uneven surface  
☐ None (+0) ☐ Mild (+1) ☐ Moderate (+2) ☐ Severe (+3) ☐ Extreme (+4)

**II. Function, daily living**  
This section describes your ability to move around and to look after yourself. For each of the following activities, please indicate the degree of difficulty you have experienced in the last week due to your hip.

A1. Rising from sitting  
☐ None (+0) ☐ Mild (+1) ☐ Moderate (+2) ☐ Severe (+3) ☐ Extreme (+4)

A2. Bending to the floor/pick up an object  
☐ None (+0) ☐ Mild (+1) ☐ Moderate (+2) ☐ Severe (+3) ☐ Extreme (+4)

A3. Lying in bed (turning over, maintaining hip position)  
☐ None (+0) ☐ Mild (+1) ☐ Moderate (+2) ☐ Severe (+3) ☐ Extreme (+4)

A4. Sitting  
☐ None (+0) ☐ Mild (+1) ☐ Moderate (+2) ☐ Severe (+3) ☐ Extreme (+4)

### HOOS, JR Scoring

The HOOS JR is scored by summing the raw response (range 0-24) and then converting it to an interval score using the table provided below. The interval score ranges from 0 to 100 where 0 represents total hip disability and 100 represents perfect hip health.

Raw Score (0-24)	Interval Score (0-100)
0	100.000
1	92.340
2	86.257
3	80.550
4	76.776

•Figure 2

### KOOS, JR Survey

**I. Stiffness**  
Stiffness is a sensation of restriction or slowness in the ease with which you move your knee joint. What amount of knee stiffness have you experienced the last week during the following activities?

S1. How severe is your knee stiffness after first waking in the morning?  
☐ None (+0) ☐ Mild (+1) ☐ Moderate (+2) ☐ Severe (+3) ☐ Extreme (+4)

**II. Pain**  
What amount of knee pain have you experienced the last week during the following activities?

P1. Twisting/pivoting on your knee  
☐ None (+0) ☐ Mild (+1) ☐ Moderate (+2) ☐ Severe (+3) ☐ Extreme (+4)

P2. Straightening knee fully  
☐ None (+0) ☐ Mild (+1) ☐ Moderate (+2) ☐ Severe (+3) ☐ Extreme (+4)

P3. Going up or down stairs  
☐ None (+0) ☐ Mild (+1) ☐ Moderate (+2) ☐ Severe (+3) ☐ Extreme (+4)

P4. Standing upright  
☐ None (+0) ☐ Mild (+1) ☐ Moderate (+2) ☐ Severe (+3) ☐ Extreme (+4)

**III. Function, daily living**  
This section describes your ability to move around and to look after yourself. For each of the following activities, please indicate the degree of difficulty you have experienced in the last week due to your knee.

A1. Rising from sitting  
☐ None (+0) ☐ Mild (+1) ☐ Moderate (+2) ☐ Severe (+3) ☐ Extreme (+4)

A2. Bending to the floor/pick up an object  
☐ None (+0) ☐ Mild (+1) ☐ Moderate (+2) ☐ Severe (+3) ☐ Extreme (+4)

### KOOS, JR Scoring

The KOOS JR is scored by summing the raw response (range 0-28) and then converting it to an interval score using the table provided below. The interval score ranges from 0 to 100 where 0 represents total knee disability and 100 represents perfect knee health.

Raw Score (0-28)	Interval Score (0-100)
0	100.000
1	91.975
2	84.680
3	79.914
4	76.332
5	73.362

- Figure 1. Hip Disability and Osteoarthritis Outcome Score for Joint Replacement (HOOS, JR). Figure 2. Knee Disability and Osteoarthritis Outcome Score for Joint Replacement (KOOS, JR).

## KEYS TO SUCCESS / LESSONS LEARNED

Keys to success:

- Multidisciplinary team that includes leadership and frontline staff closest to the work

Lessons learned:

- Engage leadership and all key stakeholders at the start of the project
- Engage patients to understand why they do or do not complete surveys and what would motivate them to do so.