Patient Reported Outcomes Summit For Total Joint Arthroplasty

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Introduction

- Essential to the US Affordable Care Act is the transition from fee for service to a new paradigm where demonstrating value is critical. This is evident with the introduction of the Centers for Medicare & Medicaid Services' (CMS) Comprehensive Care for Joint Replacement (CJR) bundled payment model.
- Patient reported outcome measures (PROMs) will be required to evaluate total hip and knee replacements results. However, there has not been a national consensus about which of the many hip and knee patient outcome scoring systems should be used.
- AAHKS has a strong commitment to improving quality of care for patients undergoing lower extremity total joint replacement. We support improving patient care and measuring outcomes and believe that risk adjusted data must be collected using instruments that enable time effective and accurate collection for patients and surgeons.

Methods

- In April 2016, CMS implemented and began testing a new payment model called Comprehensive Care for Joint Replacement (CJR). CMS states the intent of the new payment model "is to promote quality and financial accountability for episodes of care surrounding lower-extremity joint replacement." CJR includes the use of patient-reported outcome measures. The CJR rule also included a list a candidate risk variables for lower extremity joint replacement. In the past, critical orthopaedic related risk variables have not been included in risk assessment for total joint arthroplasty patients.
- On August 31, 2015, AAHKS convened a Patient Reported Outcomes Summit for Total Joint Arthroplasty. Representatives from orthopaedic organizations (AAHKS, AAOS, The Hip Society, The Knee Society, and American Joint Replacement Registry), CMS, Yale New Haven Health Services Corporation/Center for Outcomes Research and Evaluation, National Committee for Quality Assurance, Mathematica, CECity, and Blue Cross Blue Shield Association participated.
- The Summit's goal was to obtain a consensus regarding the patient-reported outcomes (PRO) and risk variables suitable for total hip and knee arthroplasty performance measures.

Patient Reported Outcome Measure Instruments

- CMS should require the use of only one general heath questionnaire for the proposed patient reported outcome measure. It is recommended that CMS allows hospitals to use **either** the VR-12 **OR** the PROMIS-Global 10 instrument. Both instruments evaluate physical and emotional health. In addition, both instruments have a minimal number of questions (ten or fourteen) which is important to the orthopaedic community. The group acknowledged that the PROMIS-10 tool is a new instrument and may not have the legacy data that VR-12 has available. However, the National Institutes of Health (NIH) has made a significant investment in the PROMIS surveys and many facilities are starting to collect the PROMIS-10 data. It would be redundant for CMS to require both general health PRO instruments. It is recommended that either the PROMIS-10 **or** the VR-12 instruments be used to collect general health information.
- It is recommended that a disease-specific instrument be used as part of the proposed patient reported outcome measure. The HOOS and KOOS instruments, as outlined in the CMS proposed rule, would be a substantial burden to patients, orthopedic surgeons and their staff because of the overall length of the instruments. The meeting participants had a lengthy discussion regarding the appropriate disease-specific patient survey instruments for lower extremity joint replacement. In reality, the collection of post-operative patient surveys will be the responsibility of the orthopaedic surgeon and his/her staff. Orthopaedic surgeons are concerned regarding the number of questions the patients will be required to answer in order to complete the instrument. Many surgeons do not collect PROM data currently and it is unreasonable to expect them to begin collecting such extensive data right away. The consensus of the Summit participants was that HOOS, JR. (six questions) and KOOS, JR (seven questions) instruments should be used as the disease-specific patient survey instruments.

Risk Variables

- CMS should use a staged approach in selecting the candidate risk variables as some variables are more clinically relevant and are easier to collect at the present time. A priority list of risk variables, future desired list of risk variables and risk variables that should not be included are identified below along with information on how the data elements should be collected. It is essential that risk adjusted data be collected or access to care for certain patients will be limited in the future.

Priority List of Risk Variables

- Body Mass Index – The actual height and weight should be recorded. The BMI should not be captured from the administrative data. The height and weight are currently being recorded in many electronic health records (EHR).
- Race/Ethnicity – Race/ethnicity should be a patient-reported variable and may be recorded in the EHR.
- Smoking Status – Smoking status may be reported through administrative data but additional information may be provided from the EHR.
- Age – Age is reported in administrative data.
- Sex – Sex is reported in administrative data.
- Back Pain – Back pain would be a patient-reported variable and recorded in the EHR. It has been noted to influence outcomes of joint replacement patients.[i]
- Pain in Non-operative Lower Extremity Joint – Pain in a non-operative lower extremity joint would be a patient-reported variable and recorded in the EHR. It has been noted that pain in other extremities can influence the outcome of a total joint replacement.[i]
- Health Risk Status – The actual comorbidities that should be included need further investigation. Both the Charlson morbidity index and the Elixhauser morbidity measure may identify appropriate comorbid conditions. In order to identify the patient's comorbid conditions, it is recommended that all inpatient and outpatient diagnosis codes for the prior year be evaluated.
- Depression/Mental Health Status - The PROMIS-Global 10 or VR-12 will collect this variable, as well as the administrative data.
- Chronic Narcotic or Pre-operative Narcotic Use – This variable affects patient outcomes and requires additional consideration. The information should be available in the EHR.
- Socioeconomic Status – This variable affects patient outcomes and requires additional consideration. Further evaluation is required regarding how the data could be collected.

Future Desired List of Risk Variables

- Literacy
- Marital Status
- Live-in Home Support

Risk Variables to Not Include

- American Society of Anesthesiologists score
- Range of Motion
- Mode of PROM collection

Results

Recommended Instruments:

- General Health: VR-12 **or** PROMIS-Global 10
- Disease-Specific: HOOS, JR and KOOS, JR
- Risk Variable: staged approach in selecting candidate risk variables; some variables are currently more clinically relevant and easier to collect

Conclusion

- CMS added the recommendations to the CJR final rule
- American Joint Replacement Registry incorporated the measures into their registry
- AAHKS included these PROMs in our new Total Hip Arthroplasty Performance Measure Set
- These actions are part of a larger movement that should to lead to better data collection and registry reporting

Reference

[i] Ayers DC, Li W, Oatis C, Rosal MC, Franklin PD. *Patient-reported outcomes after total knee replacement vary on the basis of preoperative coexisting disease in the lumbar spine and other nonoperatively treated joints: the need for a musculoskeletal comorbidity index.* J Bone Joint Surg Am. 2013 Oct 16;95(20):1833-7. doi: 10.2106/JBJS.L.01007.