MedicalXpress

Web-based tool will provide individualized care plan for osteoarthritis patients

May 20 2016

Researchers at UMass Medical School are developing a web-based, decision-support tool for osteoarthritis patients that will provide individualized, evidence-based information in real time to guide optimal knee and hip care, including joint replacement. Patricia Franklin, MD, MBA, MPH, professor of orthopedics & physical rehabilitation, has been approved for a $6.4 million funding award by the Patient-Centered Outcomes Research Institute (PCORI) to create the care plan, which will be based on evidence gathered from a national total joint replacement database led by UMass Medical School called Function and Outcomes Research for Comparative Effectiveness in Total Joint Replacement (FORCE-TJR.) It is the most comprehensive U.S. database on total hip and knee joint replacement patients and their surgical, patient-reported outcomes.

"Two-thirds of adults over age 65 suffer with knee or hip osteoarthritis pain and disability and when the pain is no longer controlled with medication and physical therapy, they have to decide whether to undergo total joint replacement surgery," said Dr. Franklin, principal investigator for the FORCE-TJR research registry. "Patients say it's difficult to know how their individual symptoms will benefit from surgery, or what risks it may bring. We believe that the osteoarthritis care plan we are developing will improve the interaction of patients and clinicians to enhance the decision process. Those informed decisions will improve the quality of care and outcomes."

The PCORI contract will be used to refine and transform the existing

FORCE-TJR web-based care management system to an automated care plan for patients and surgeons to use together when making decisions about joint replacement or further nonoperative care. The care plan will include FORCE-TJR's individualized pain and function measures, trended over time; estimated benefits and risks of surgery; evidence-based information; and patient goals. The design of the care plan was informed by input from a patient advisory panel.

"When you are trying to decide whether to have surgery, it can be hard not knowing what to do and what to expect," said Ron Scott, of Worcester, who underwent hip replacement surgery and served on the patient advisory panel for the care plan. "This new tool is going to help a lot. It will educate the patient as to what is going on and give them good information for making decisions and the impact they will have. It will help the patient be involved in the actual decision making."

The care plan will be based on standardized, patient-reported measures and will be evaluated within the established FORCE-TJR orthopedic network with more than 230 surgeons in 28 states. In the initial phase of the PCORI study, a random sample of 40 surgeons with 4,000 patients will receive (or not) the tailored care plan. In the second phase, community-based peer and primary care physician support will be added to the standard plan and the combined impact evaluated in another 4,000 patients.

The contract builds upon the work of FORCE-TJR, which is currently being used by surgeons and hospitals across the country as a care management system and patient outcomes reporting tool. Originally funded by the Agency for Healthcare Research and Quality (AHRQ), FORCE-TJR provides for independent assessment of total joint replacement effectiveness in terms of both implant performance and improvement in patient pain and physical function.

"The information gathered by FORCE-TJR over the past four years from more than 30,000 TJR patients and 280 surgeons across the country has established a valuable database. (http://www.force-tjr.org) We've been able to develop the only risk-adjusted, U.S. national benchmarks for peri-operative adverse events, patient-reported outcomes and early implant failure," said Franklin. "The PCORI contract is recognition that such information is the cornerstone for comparing the effectiveness of different approaches in total joint replacement and will transform the data into actionable information for individual patients and physicians making care decisions."

Each year, more than 1 million Americans elect total joint replacement surgery to eliminate the pain of advanced knee or hip arthritis and to restore physical function. These procedures are becoming increasing in demand. By 2030, hip replacements and knee replacements are projected to grow by 174 percent and 673 percent, respectively.

"This project was selected for PCORI funding not only for its scientific merit and commitment to engaging patients and other stakeholders, but also for its potential to fill an important gap in our health knowledge and give people information to help them weigh the effectiveness of their care options," said PCORI Executive Director Joe Selby, MD, MPH. "We look forward to following the study's progress and working with UMass Medical School to share the results."

Franklin's study was selected for PCORI funding through a highly competitive review process in which patients, clinicians and other stakeholders joined clinical scientists to evaluate the proposals. Applications were assessed for scientific merit; how well they will engage patients and other stakeholders; and their methodological rigor, among other criteria.

Franklin's award has been approved pending completion of a business

and programmatic review by PCORI staff and issuance of a formal award contract. PCORI is an independent, nonprofit organization authorized by Congress in 2010. Its mission is to fund research that will provide patients, their caregivers and clinicians with the evidence-based information needed to make better-informed health care decisions. For more information about PCORI's funding, visit http://www.pcori.org.

Provided by University of Massachusetts Medical School