Department of Orthopaedics Launches Initiative to Analyze Patient-Reported Functionality, Quality of Life

In this age of data gathering, there are surveys to monitor the patient experience and analyses of outcomes such as length of hospitalization and adverse events. But there may be a critical gap in important knowledge without patient-reported information related to quality of life, which patients and doctors alike might argue is most important for measuring the true value of medical interventions.

The Department of Orthopaedics has begun to capture, collect and analyze patient-reported outcomes.

The University of Miami Miller School of Medicine’s Department of Orthopaedics aims to change that and has started to capture, collect and analyze patient-reported outcomes on all orthopaedic patients, according to Nathan H. Lebwohl, M.D., professor of clinical orthopaedics and vice chair of quality and safety in the department.

“The new data will reveal such things as, Are patients better able to walk without pain after spine surgery? Can a patient who has had an ankle operation walk on uneven ground?” Dr.
Lebwohl said. “Is the patient more optimistic about the future as a result of the surgery? Isn’t it more important to measure whether the patient’s health or function was helped by our care than how perfectly the anatomy has been restored on the X-ray, or how long they stayed in the hospital?”

Validated surveys that allow the patients to report their experience and function are available, according to Dr. Lebwohl.

“Standardized questionnaires have been developed, called Patient-Reported Outcomes Measures (PROMs), which have been shown to accurately and quantitatively measure general and mental health, as well as physical and social function,” he said.

**Tracking Quality of Care**

Data from the questionnaires can be used to compare care quality at the Miller School to national benchmarks, and to help identify patients who are not doing as well as expected so their care can be changed to achieve better results, according to Dr. Lebwohl.

This is an enterprise-wide quality initiative at UHealth that can be adapted to measure outcomes in any clinical department.

“Our plan is to use these measurements to assess the quality of the care we are providing, and to build a database for research on the effectiveness of the surgery we do,” Dr. Lebwohl said.

The new quality initiative provides an opportunity for patients to report and share how they are feeling on a wide
range of symptom domains, which can better inform providers’ care, according to Marilyn Heng, M.D., M.P.H., FRCSC, professor of clinical orthopaedics at the Miller School.

“The data we collect is immediately available to the clinician in the clinic. A provider can view a patient’s response before or during a clinical encounter to inform their advice and treatment recommendations,” Dr. Heng said. “Clinicians and researchers can use this objective data to track aggregate groups of patients that can direct improvement initiatives and health policy.”

Dr. Heng was senior author on a paper published in the *Annals of Surgery* on how different surgical subspecialties use and embrace patient-reported outcome measures. The bariatric, breast oncology, orthopaedic, plastic and rhinology surgeons they studied endorsed patient-reported outcome measures as enhancing clinical management and helping them in their patient counseling. They also noted that the measures elicited information from patients that might otherwise have gone undetected.

**A Big Step in Health Care Quality Metrics**

“This is a major commitment to measure the quality of our care by the Department of Orthopaedics and our health system as a whole,” Dr. Lebwohl said. “I think that measuring the quality of our work should be the standard of care not just in orthopaedics, but across all medical disciplines.”

In the bigger picture, the Miller School has taken a giant leap in how it acquires, manages and interprets health data by establishing the Department of Informatics and Health Data Science. While the PROMs initiative in orthopaedics is not
part of the Department of Informatics and Health Data Science, both illustrate the Miller School’s investment in medical informatics.

“As we continue to leverage the power of informatics and data in health care, patient-reported outcomes are becoming an increasingly important tool for quality improvement, particularly in orthopaedics,” said Azizi Seixas, Ph.D., interim chair of the Department of Informatics and Health Data Science. “By collecting and analyzing patient feedback, we can gain valuable insights into the effectiveness of treatments and interventions, and make data-driven decisions to improve patient outcomes.”

This innovative approach to health care not only enhances the patient’s experience but also helps health systems optimize resources and deliver more efficient and effective care, according to Dr. Seixas.

“At the Department of Informatics and Health Data Science, we are committed to advancing the use of patient-reported outcomes in health care and harnessing the full potential of data to drive innovation and improve the health of our communities,” he said.

**Impressive Rollout of PatientIQ**

The Department of Orthopaedics partnered with PatientIQ, which helped to streamline the interface and integrate patient-reported outcome measures into the UHealth system’s electronic medical record.

“We had an aggressive three-month timeline, from mid-June to September 2022, to implement PatientIQ,” said Tatiana M.
Arreglado, D.N.P., M.S.N., R.N., director, UHealth Information Technology Clinical Optimization and Process Improvement at the Miller School, who led the information technology (IT) team charged with implementing the initiative.

The UHealth IT team integrated PatientIQ with UChart, while the optimization team engaged orthopaedic physician champions to determine specialty-specific clinical pathways, such as surveys, timepoints, clinic visit types and surgical procedures, according to Dr. Arreglado.

“Once these pathways were validated, PatientIQ built them into their platform and the system went live September 22, 2023,” Dr. Arreglado said. “We will follow the same process when implementing a new department or specialty.”

Dr. Arreglado explained that all orthopaedic patients who have upcoming scheduled clinic visits or surgical cases will receive an email link to their surveys, which are available in the patient’s preferred language and can be completed on their mobile device, desktop or tablet.

“Upon opening a patient’s chart, the survey scores are displayed in UChart to help guide the providers with their assessment and/or treatment plan,” she said.

“Patient-reported outcomes are powerful when effectively integrated into the point of care,” said Matthew Gitelis, CEO of PatientIQ.

“By utilizing a PRO platform specifically designed to engage patients and provide health care providers with meaningful insights directly within the electronic health record, UHealth continues to prove itself to be an innovative provider of
patient-centered care,” Gitelis said.

Launching an initiative like this takes buy-in and collaboration, according to Dr. Lebwohl.

“We had the support and guidance of information technology leadership, Dr. David Reis, vice president and chief information officer, and Dr. Maritza Suarez, chief medical informatics officer, who both saw the value of collecting this information directly from patients and building a database that we could use to evaluate the quality of our care,” Dr. Lebwohl said.

“The combination of PatientIQ’s technology and experience, support from IT leadership, and an incredible IT team made this possible,” he said. “Since launching in the fall of 2022, over 50,000 outcome questionnaires have been completed, and we are just getting started.”

For more information on how to implement this quality initiative in your department, contact Tatiana Arreglado at tma1302@miami.edu.

Content Type Article