

Kaiser Permanente demonstrates success of large-scale total joint replacement registry

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A total joint replacement registry based on carefully designed and integrated technology can enhance patient safety, quality of care, cost-effectiveness and research, according to a paper published in the online and print editions of *Clinical Orthopedics and Related Research*, a journal of the Association of Bone and Joint Surgeons.

Kaiser Permanente's Total [Joint Replacement](#) Registry- the nation's largest such registry -- allows caregivers to analyze specific data from standardized forms and Kaiser Permanente HealthConnect®, an electronic health record, on more than 100,000 joint replacement cases by more than 350 Kaiser Permanente surgeons nationwide.

Since its inception in 2001, the TJRR has helped [health care providers](#) identify best practices, evaluate risk factors associated with revision surgeries, and assess the clinical effectiveness of implants. It also provides information that can be used to study patient demographics, implant characteristics and surgical techniques in relationship to post-operative complications such as infections, revisions and re-operations.

The TJRR also allows Kaiser Permanente to immediately identify and notify patients about recalled or defective implants prior to an official recall notice. The TJRR was instrumental in assessing more than 15 advisories and concerns with implants in 2009 alone.

In the article, the authors share insights from the organization's experience in developing, implementing and integrating the registry into

KP HealthConnect®, a comprehensive health information system that is one of the most advanced and largest private sector [electronic health records](#) in the world, securely connecting 8.6 million people to their health care teams.

"To be successful, a large registry must have physician involvement, integration into workflow including rigorous validation and quality control methods, and provide ongoing feedback to participating surgeons and staff," said paper lead author Elizabeth Paxton, director of [surgical outcomes](#) and analysis at Kaiser Permanente. "Having used our registry to conduct research and translate these findings into actionable clinical-care guidelines, our total joint replacement registry shows that a national registry has the potential to improve patient safety and quality across the industry."

By analyzing information included in the registry, researchers found that younger patients, those with diabetes, and patients with diagnoses other than osteoarthritis (e.g. post-traumatic and rheumatoid arthritis) were at higher risk for revision total joint surgery. This information has been integrated into a risk calculator for surgeons and patients to use in making decisions about treatment. Research from the registry on implants and surgical techniques also has influenced changes in clinical practice, which have resulted in optimization of both techniques and implants.

"Within the United States, more than 600,000 total joint replacement procedures are performed each year, and the volume and costs associated with these procedures are projected to increase dramatically over the next 20 years," said Monti Khatod, MD, paper co-author and orthopedic surgeon at Kaiser Permanente in Baldwin Park, Calif. "Our registry allows health care professionals and other researchers to evaluate ways to be more efficient while enhancing quality and assessing new technology in order to

determine which implants are best for our patients."

Provided by Kaiser Permanente

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