

## Medical Device Surveillance and Assessment (MDSA)

Unit of Clinical Analysis

Newsletter



### Leveraging Clinical Registries and Electronic Health Systems to Advance Value-Based Medicine Across Specialties

As health care costs continue to rise in the U.S., health systems are increasingly focused on delivering better outcomes at lower cost. One of the most effective, and often underrecognized, tools supporting this shift is clinical registries, especially when paired with a fully integrated electronic health record (EHR). A recent review in *The Permanente Journal* highlights how implant registries embedded within an integrated health system have become a cornerstone of value-based medicine, improving patient outcomes, strengthening safety, and generating substantial cost savings across multiple specialties.

“Clinical registries paired with the EHR are a powerful engine for value-based care—improving outcomes, safeguarding patients, and reducing costs at scale.”

**Elizabeth W. Paxton, PhD, Medical Device Surveillance and Assessment,  
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#### Turning Data Into Better Care

Clinical registries go beyond data storage. By systematically capturing real-world information on patient characteristics, surgical techniques, implant performance, complications, and long-term outcomes, registries provide the visibility needed to identify variation in care and uncover best practices.

Within an integrated EHR environment, registries allow clinicians and leaders to:

- Benchmark outcomes across regions and providers
- Detect underperforming implants or techniques early
- Identify patients at risk for poor outcomes
- Measure the real-world impact of practice changes

This continuous feedback loop supports rapid learning and informed decision-making at scale.

#### Enhancing Patient Safety and Trust

Postmarket surveillance is a critical gap in traditional medical device oversight. Registries fill this gap by enabling early detection of safety issues and rapid response to FDA recalls. Integrated systems can immediately identify affected patients, ensure appropriate follow-up, and prevent avoidable complications.

Prospective monitoring methods, such as longitudinal safety surveillance, allow organizations to intervene before problems affect large numbers of patients while protecting patient safety and avoiding costly downstream care.



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### Advancing Value-Based Medicine in Practice

The article highlights multiple examples where registry insights directly informed changes in clinical practice across specialties. These data-driven interventions reduced low-value device use, optimized implant selection, and supported safer care pathways while maintaining or improving patient outcomes.

The result includes:

- Fewer complications and reoperations
- Reduced unnecessary utilization
- Improved quality and consistency of care
- Hundreds of millions of dollars in cost savings across the system

Registries make it possible to rigorously assess whether innovation truly delivers value before widespread adoption.

### Why Registries Matter

Clinical registries are not just quality tools, they are strategic assets. When integrated into daily practice and leadership decision-making, they enable health systems to move from reactive care to proactive, evidence-based improvement. As health care continues to evolve toward value-based models, registries play a central role in ensuring that improvements in quality, safety, and affordability happen together, not in isolation.

### [Link to Published Manuscript](#)

Paxton EW, Harris J, Okike K, Navarro RA, Reddy NC, Chang RW, Sedrak M, Mostaedi R, Guppy KH, Maletis GB, Prentice H (2026). **Leveraging Clinical Registries and Electronic Health Systems to Advance Value-Based Medicine Across Specialties** Perm J, 25 (184): 1-12.

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