



*Ischemic heart disease (IHD) remains the single leading cause of morbidity and mortality in the U.S and among veterans who use the Veterans Health Administration (VHA). Cardiac catheterization and interventional procedures are primary therapy for IHD, and increased access to cardiac catheterization may lead to improved outcomes for VA patients. Previously there has been no mechanism to monitor and evaluate how such procedures are used in VHA. In response to the 2003 Cardiac Care Initiative, a national effort to improve cardiac care in VHA—the **Cardiovascular Assessment, Reporting and Tracking System for Cardiac Catheterization Laboratories (CART-CL)**—was developed to address the critical need for a systematic, system-wide method for tracking the use of diagnostic and interventional catheterization procedures, such as percutaneous coronary intervention (PCI).*

Cardiovascular Assessment, Reporting and Tracking System

The mission of CART-CL is to develop and implement a national VA reporting system, data repository, and quality improvement program for procedures performed in VA cardiac catheterization laboratories. CART-CL is a collaborative effort between the Ischemic Heart Disease Quality Enhancement Research Initiative (IHD-QUERI), VA's Patient Care Services, the Office of Quality and Performance, and the Office of Information. A recent VHA national directive mandates CART-CL installation and use for all VA catheterization laboratories. IHD-QUERI has had lead responsibility for the development and implementation of CART-CL since its inception.

CART-CL Provides:

- Standardized data capture and reporting across all VA cath labs. The application automatically creates reports (pre-procedure assessment, cardiac catheterization, and PCI) for inclusion in the patient record. The application is tightly integrated with VA's Computerized Patient Record System to support providers in generating reports documenting the procedures, and helping to avoid duplication of work.
- A single national data repository for tracking and documenting cardiac procedures performed in VA cath labs.
- Core data elements that conform to the definitions and standards of the

American College of Cardiology's National Cardiovascular Data Registry (ACC-NCDR).

- A centralized platform to support both local and national quality improvement programs.
- Extensible database structure to support modification based on input from test sites, updating to evolving standards (e.g. as ACC-NCDR data elements change) and expansion of the clinical scope of the project.

What Will CART-CL Do for the VA and Your Facility?

- *Improve clinical care:* CART-CL will greatly improve the communication of cardiac procedure results by prompting documentation based on ACC care standards.
- *Support quality improvement:* CART-CL will directly inform quality improvement with the availability of accurate national clinical data on cardiac procedures.
- *Monitor patient safety:* CART-CL provides a unique mechanism to monitor patient safety around cardiac procedures. Features include documentation of pre-procedural data related to patient safety, such as patient ID check, and the transfer of data on allergies and adverse reactions and current labs.

CART-CL also will serve to capture

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workload, support program and system evaluation, as well as support research (clinical and health services research). It also will provide a platform for expansion to other procedures (i.e., peripheral interventions) and clinical areas (i.e., acute coronary syndrome care).

As of April 2008, more than 1675 providers have entered more than 109,000 reports on over 55,000 patients. All VA cath labs (75) are participating in CART-CL. Feedback from clinicians has been overwhelmingly positive. Currently, VA is working with the FDA toward designating CART-CL as a “sentinel patient safety network” for the U.S. for cath lab device safety.

How Do I Learn More?

If you are interested in learning more about CART-CL, please contact:

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For information about IHD-QUERI, contact:

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Web Resources

For more information about IHD-QUERI visit their website at:

www1.va.gov/PS_IHDQueri

For more information about the QUERI program in general, visit the national QUERI website at:

www.hsrdr.research.va.gov/queri

Access QUERI’s “Guide for Implementing Evidence-Based Clinical Practice and Conducting Implementation Research” at:

www.hsrdr.research.va.gov/queri/implementation

IHD-QUERI Executive Committee

Each QUERI Executive Committee is co-chaired by a research expert and a clinician. The research coordinator for IHD-QUERI is **Stephan Fihn, MD, MPH**, and the clinical coordinator is **John Rumsfeld, MD, PhD**. This executive committee includes other experts in the field of ischemic heart disease, including: Jeroan Allison, MD, MS; Thomas B. Ferguson, MD; Ross Fletcher, MD; Mary K. Goldstein, MD, MSc; Paul A. Heidenreich MD, MS; **Christian D. Helfrich, MPH, PhD** (Implementation Research Coordinator); Robert L. Jesse, MD, PhD; Harlan Krumholz, MD, SM; Greg Larsen, MD; Laura Petersen, MD, MPH; Eric Peterson, MD, MPH; Anne E. Sales, MSN, PhD; and John Spertus, MD, MPH, FACC.