QUERI UPDATE

Ischemic Heart Disease QUERI: Revised Goals and New Projects

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Ischemic Heart Disease: Prevalence and Costs

Ischemic heart disease (IHD) remains the single leading cause of morbidity and mortality in the U.S. among Veterans who use the Veterans Health Administration. Precise figures are not available on the prevalence of IHD among VHA patients, however, more than 500,000 VHA patients have a diagnosis of IHD, and it is a leading cause of mortality and hospitalization for Veterans.[1,2] Each year, there are approximately 9,000 admissions for acute myocardial infarction (AMI) to VA healthcare facilities, and approximately 2,500 AMIs among Veterans admitted to VHA facilities for other conditions [Unpublished, Cardiac Care Follow-up Clinical Study (CCFCS) data]. In FY08, chronic IHD was the third most frequent discharge diagnosis for VHA hospitalizations, accounting for 20,651 of 588,856 hospital discharges.[3] Moreover, the annual cost of VA care for IHD is $3,187 per patient.

Between 1996 and 2006, the annual death rate from IHD in North America declined by 36.4%; however, death rates remain higher for males and African-Americans (relative to females and whites),[4] and IHD remains the number one cause of death in men and women, accounting for 1 of every 6 deaths in the United States. In 2010, the total estimated cost (direct and indirect) of caring for patients with IHD in the U.S. exceeded $177 billion.[4]

IHD-QUERI's overall mission is to improve the quality of care and clinical outcomes for Veterans with IHD and Veterans at risk for IHD through identifying, assessing and promoting implementation of evidence-based best practices; fostering collaboration among researchers and operational units; and advancing the sciences of evidence-based medicine and evidence-based management. While that mission remains unchanged, we recently revised our center goals substantially.

In its first decade, IHD-QUERI's goals centered on discrete disease states, i.e., improving the quality of care and outcomes for patients with specific acute and/or chronic clinical conditions related to IHD. While those objectives remain integral to IHD-QUERI's mission, several trends over the past five years have transformed current goals, including:

- IHD is a dynamic continuum rather than a series of isolated clinical stages.
- Increased emphasis on assessing the effectiveness and safety of therapies (e.g., medications, devices, diagnostic testing) applied in clinical practice.
- Increased focus on improving systems of care as opposed to discrete processes of care.
- A shift to team-based, patient-centered, coordinated care.

Recognizing these trends, IHD-QUERI has revised its major goals:

1. Leverage data stored in new and existing information systems to improve the quality and safety of care for IHD patients at point of service; and
2. Improve cardiovascular risk factor management by integrating new programs into evolving systems of care.

Several new IHD-QUERI projects advancing these goals include:

Appropriateness of Percutaneous Coronary Intervention

Drs. Christopher Bryson and Steven Bradley's projects aim to identify data elements necessary for the appropriate classification of percutaneous coronary intervention (PCI) and will then validate Clinical Assessment, Reporting, and Tracking System for Cardiac Labs (CART-CL) data elements for appropriateness classification. Dr. Bradley's Career Development Award will extend this work on the appropriateness of PCI and includes a pilot project to provide appropriateness ratings to patients and providers at the point-of-care, with the hopes of reducing inappropriate PCI.

For more information, contact Dr. Bryson at Christopher.Bryson@va.gov or Dr. Bradley at Steve.Bradley@va.gov.

Veteran Exposure to Radiation in the Cardiac Catheterization Laboratory

Dr. Thomas Tsai's project utilizes CART data to define the distribution of fluoroscopy time and effective radiation dose for procedures performed in the cardiac catheterization laboratory.

Continued

He will also seek to determine the feasibility of creating a dynamic patient dose monitoring tool and protocol to alert catheterization laboratory teams of effective radiation dose.

For more information, contact Dr. Tsai at Thomas.Tsai@va.gov

Intervention to Improve Transition from Hospital to Home Following Cardiac Hospitalization

Dr. Michael Ho's pilot study seeks to better inform the transition process from hospital to home in a regional model of cardiac care, and to develop and refine a transition of care intervention based on evidence-based best practices. He will then pilot test this intervention at a single center to assess the effectiveness of the tool to improve important processes of care.

For more information, contact Dr. Ho at Michael.Ho@va.gov

References:
1. Yu W, Ravelo A, Wagner, T, et al. Prevalence and costs of chronic conditions in the VA Health Care System. *Medical Care Research and Review* 2003;60(3):146S-167S.
2. Ashton C, Petersen N, Souchek J, et al. Geographic variations in utilization rates in Veterans Affairs hospitals and clinics. *N Engl J Med* 1999, 340(1):32-39.
3. Maynard C and Fihn S. Hospital discharges for mental illness in the Veterans Health Administration. *The Internet Journal of Epidemiology* 2010;(9)1.
4. Lloyd-Jones D, Adams R, Brown T, et al. Heart disease and stroke statistics--2010 update: A report from the American Heart Association. *Circulation* 2010;121(7):e46-e215.

How Do I Learn More?

For information about IHD-QUERI, contact:

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Web Resources

For more information about the QUERI program in general, and to link to all of the individual QUERI Centers, please go to
www.queri.research.va.gov

The IHD-QUERI Executive Commitee

Each QUERI is led by a research expert and a clinician. The Director for IHD-QUERI is **Christopher Bryson, M.D., M.S.,** and the Clinical Coordinator is **Michael Ho, M.D., Ph.D.** The Executive Committee includes other experts in the field of ischemic heart disease including: Steven Bradley, M.D.; T. Bruce Ferguson, M.D.; Stephan Fihn, M.D, M.P.H.; Mary K. Goldstein, M.D., M.Sc.; **Christian Helfrich, Ph.D., M.P.H.** (Implementation Research Coordinator); Paul Heidenreich, M.D., M.S.; Cynthia Jackevicius, Pharm.D., M.Sc.; Robert L. Jesse, M.D., Ph.D.; Harlan Krumholz, M.D., S.M.; Brahmajee Nallamothu, M.D., M.P.H.; Laura Petersen, M.D., M.P.H.; Eric Peterson, M.D., M.P.H.; John Rumsfeld, M.D, Ph.D.; Anne E. Sales, M.S.N., Ph.D.; John Spertus, M.D., M.P.H., FACC; and **G. Blake Wood, M.S.,** (Administrative Coordinator and co-Implementation Research Coordinator).