



Alberta Provincial Project for Outcome Assessment in Coronary Heart Disease

APPROACH's mission is to collect and process information to improve cardiac care for all.

Thank you to all personnel at the Foothills Medical Centre, CK Hui Heart Institute, Mazankowski Heart Institute, Rockyview General Hospital, Peter Lougheed Centre, Medicine Hat Regional Hospital and Lethbridge Regional Hospital who have diligently entered data into the APPROACH registry.

What is APPROACH?

APPROACH is a practical, effective and patient-focused initiative. Coronary artery disease, the leading cause of death and disability in Canada, continues to be our prime focus.

The APPROACH software is copy written and began with a cathlab and CV surgery database in Alberta in 1995. In the 17 years since APPROACH was launched it has expanded geographically across the country as well as conceptually to areas of waitlist management, ACS, nuclear medicine and most recently CT angio. This powerful tool currently includes clinical information on 170,000 Albertans with diagnostic cardiac catheterization and/or revascularization procedures and, more recently, 53,000 patients with hospital admissions for ACS. APPROACH has become an invaluable resource for frontline and

administrative healthcare providers.

Since the inception of APPROACH, patients undergoing cardiac catheterization have been asked to consent to long-term follow up; patients respond to a health status survey at baseline as well as 1, 3 and 5 years.

Using APPROACH provides the opportunity for a long-term view of the patient journey and ongoing assessment of the patient's quality of life in the transition for acute events (such as acute coronary syndromes - ACS) to chronic realities; a perspective that spans the continuum of care. This data continues to reveal important insights into short and long term quality indicators and management strategy effectiveness in Alberta and confirms to us that together we can do an even better job of caring for patients.

The success of the APPROACH initiative requires real-time prospective data collection, the ongoing skill and commitment of key outcome and information technology specialists and an acceptance of this work in a collaborative spirit within each partner healthcare facility. Our goal is to ensure that the very latest strategies for care, quality promotion and surveillance are made available.

Important ongoing developmental priorities include: development of a dynamic risk model to inform urban and rural physicians and patients, expansion from a procedure-based orientation to a disease-based outcome focus and collaboration with the electronic medical record initiative to develop communication tools and promote better decision making through innovative use of health information.

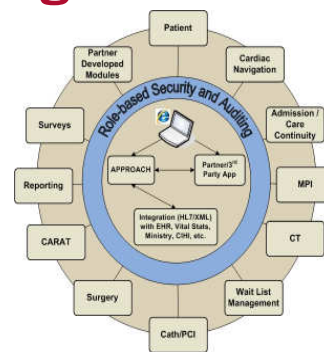
APPROACH Online - Coming Soon!

The APPROACH Team has been focused on the next generation of the APPROACH software, 'APPROACH Online' which will be released this year.



APPROACH Online is web-based (accessed via a web browser), and includes features such as:

- Enhanced role-based security and auditing
- Modular software components
- A focus on data exchange/integration (HL7/XML)
- Intuitive, user-friendly interface maximizes productivity and minimizes the learning curve for new users.
- Web-based administrative and clinical reporting.



Coronary Artery Reporting and Archiving Tool

The Intersection of Science and Art

CARAT is a state-of-the-art graphic recording and communication application for medical caregivers.

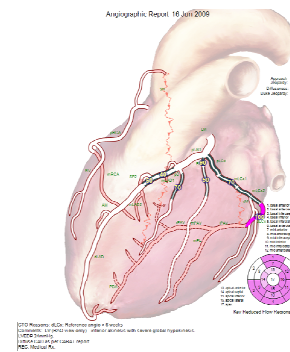
As the artist paints details onto a canvas, so the medical practitioner can "paint" arterial details directly onto an anatomically accurate representation of the heart. Blockages, narrowing, lesions, hardening, and any other features are added at the stroke of a mouse.

Once a patient's arterial condition is accurately reflected in the on-screen CARAT diagram, the diagram can

then be printed, or exported in PDF format and shared online or via email. In Alberta, the CARAT diagram is exported to Alberta Netcare for immediate access by clinicians.

Finally there is an accurate and consistent coronary artery information recording and communicating format for cardiologists, CT angiographers, and other medical caregivers.

Precise, concise, intuitive, and attractive, CARAT makes coronary artery reporting and archiving a fine art.



Download a fully functional demo version of CARAT and view CARAT Tutorials at our website.

The APPROACH research team meets weekly. Our team has conducted quality of life analyses, economic evaluations, examinations of health care access, bias, and clinical outcomes research. This research has appeared in high-impact international

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For more information, please visit our website:

www.approach.org



Recent Peer-Reviewed Publications

Kaul P, Ezekowitz JA, Armstrong PW, Leung BK, Savu A, Welsh RC, Quan H, Knudtson ML, McAlister FA. **Incidence of heart failure and mortality after acute coronary syndromes.** AHJ. 2013 Jan 28. [Epub ahead of print].

James MT, Samuel SM, Manning MA, Tonelli M, Ghali WA, Faris P, Knudtson ML, Pannu N, Hemmelgarn BR. **Contrast-Induced Acute Kidney Injury and Risk of Adverse Clinical Outcomes After Coronary Angiography: A Systematic Review and Meta-Analysis.** Circ Cardiovasc Interv. 2013 Jan 15. [Epub ahead of print]

Martin BJ, Aggarwa SG, Stone JA, Hauer T, Austford LD, Knudtson ML for the APPROACH Investigators and Ross Arena. **Obesity Negatively Impacts Aerobic Capacity Improvements Both Acutely and 1-Year Following Cardiac Rehabilitation.** Obesity (2012) 20, 2377-2383. doi:10.1038/oby.2012.119

Mutsuga M, Quinonez LG, Mackie AS, Norris CM, Marchak EB, Rutledge JM, Rebeyka IM, Ross DB. **Fast-track extubation after modified Fontan procedure.** J Thorac Cardiovasc Surg. 2012;(144)3:547-52

Shearer K, Rempel G, Norris CM, & Magill-Evans J. (2011). **"It's No Big Deal": Adolescents With Congenital Heart Disease.** J Pediatr Nurs. 2012 Apr 24 (Epub ahead of print).

Fech JC, Welsh R, Hegadoren KM, Norris CM. **Caring for the radial artery post-angiogram: a pilot study on a comparison of three methods of compression.** Eur J Cardiovasc Nurs. 2012; 11(1):44-50.

Patel AB, Waters NM, Blanchard IE, Doig CJ, Ghali WA. **A validation of ground ambulance pre-hospital times modeled using geographic information systems.** Int J Health Geogr. 2012 Oct

McMurtry MS, Southern DA, Lewin AM, Galbraith PD, Kaul P, Ghali WA, Knudtson ML, Graham MM. **Recent Temporal Trends and Geographic Distribution of Cardiac Procedures in Alberta.** Can J Cardiol. 2012 Aug 14. [Epub ahead of print]

Martin BJ, Hauer T, Arena R, Austford LD, Galbraith PD, Lewin AM, Knudtson ML, Ghali WA, Stone JA, Aggarwal SG. **Cardiac rehabilitation attendance and outcomes in coronary artery disease patients.** Circulation. 2012 Aug 7;126(6):677-87. doi: 10

Soon IS, Molodecky NA, Rabi DM, Ghali WA, Barkema HW, Kaplan GG. **The relationship between urban environment and the inflammatory bowel diseases: a systematic review and meta-analysis.** BMC Gastroenterol. 2012 May 24;12(1):51. [Epub ahead of print]

Feasby TE, Quan H, Tubman M, Pi D, Timmouth A, So L, Ghali WA. **Appropriateness of the use of intravenous immune globulin before and after the introduction of a utilization control program.** Open Med. 2012;6(1):e28-34. Epub 2012 Mar 13.

King-Shier KM, Quan H, Mather C, Verhoef MJ, Knudtson ML, Ghali WA. **Understanding coronary artery disease patients' decisions regarding the use of chelation therapy for coronary artery disease: descriptive decision modeling.** Int J Nurs Stud. 2012 Sep;49(9):1074-83. doi: 10.1016/j.ijnurstu.2012.03.011. Epub 2012 Apr 23.

Okoniewska B, Graham A, Gavriloava M, Wah D, Gilgen J, Coke J, Burden J, Nayyar S, Kaunda J, Yergens D, Baylis B, Ghali WA, Ward of the 21st Century team. **Multidimensional evaluation of a radio frequency identification wi-fi location tracking system in an acute-care hospital setting.** J Am Med Inform Assoc. 2012 Jul-Aug;19(4):674-9. Epub 2012 Feb 1.

Current APPROACH Research Grants

CIHR - Canadian Institute for Health Research (Jul 2009 - Jun 2012): **Understanding "Troponinitis": Exploring myocardial injury and its clinical and health services implications.**
 PI: Graham MM.

CIHR - Canadian Institute for Health Research (Jun 2009 - Jul 2011): **Development of audit with feedback intervention to improve acute cardiovascular care using APPROACH.**
 PI: Graham MM (Sales AE.)

Sponsors

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 Jim Kinnear

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