

The Alberta Cardiac Access Collaborative: Improving the Cardiac Patient Journey

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Abstract

The Alberta Cardiac Access Collaborative (ACAC) is a joint initiative of Alberta's health system to improve access to adult cardiac services across the patient journey. ACAC has created new care delivery models and implemented best practices across Alberta in four streams across the continuum: heart attack, patient navigation, heart failure and arrhythmia. Emergency medical providers, nurses, primary care physicians, hospitals, cardiac specialists and clinicians are all working together to integrate services, bridge jurisdictions and geography with one aim – improving the patient journey for adults in need of cardiac care.

Introduction/Background

Cardiovascular disease is the leading cause of death in Canada, accounting for approximately 80,000 deaths each year. More than 450,000 Canadians were hospitalized for cardiovascular disease in the year 2000. In 2006/07 there were over 80,000 heart failure patients in Alberta, with over 10,000 new cases diagnosed each year since 2000. Alberta will be facing increasing demands for cardiac services at a time when there are shortages

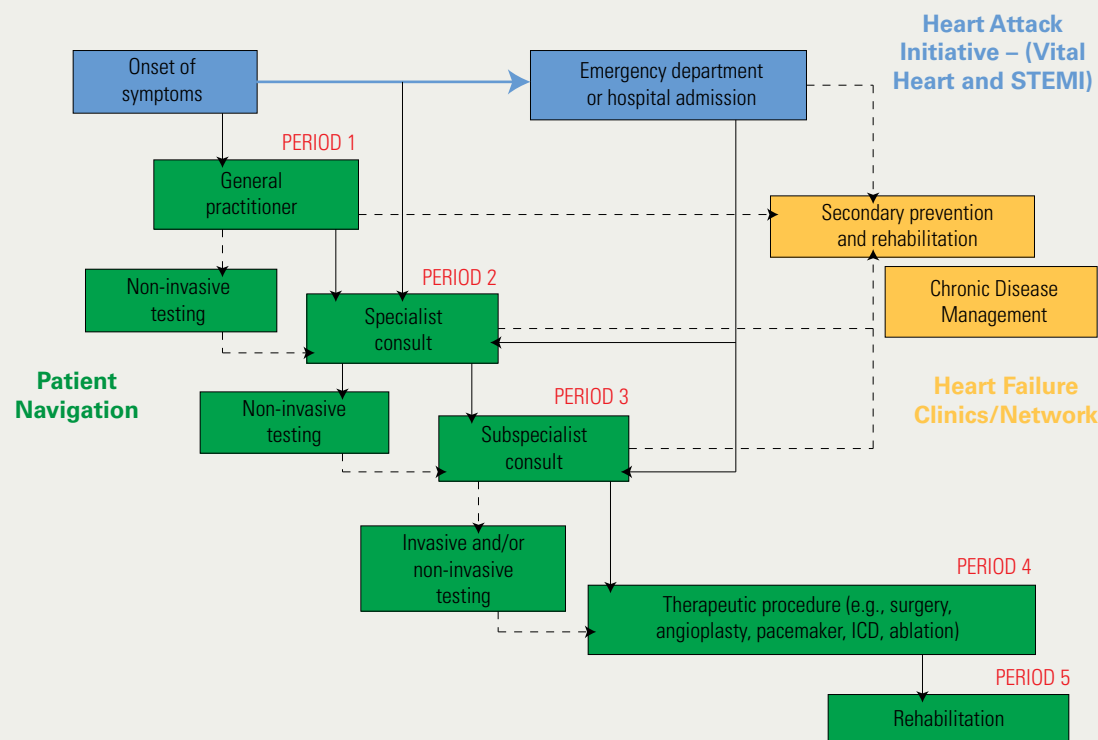
in healthcare providers and infrastructure as well as geographic barriers to access. Cardiac service delivery needs to be innovative, collaborative and systematic in order to meet current demand and future growth.

The Alberta Cardiac Access Committee was established in 2003 to develop appropriate wait times for coronary artery bypass surgery and angioplasty. By 2006, the committee recognized that disconnects in the patient journey and distance to services were creating barriers to access. In June 2006, the committee hosted the Patient Journey symposium for all regions and invited them to participate in a provincial plan to improve access for cardiac patients and families.

At the Patient Journey symposium all regions agreed to adopt and implement the Canadian Cardiovascular Society (CCS) benchmarks for adult cardiac patients across the full continuum of care (Figure 1) (The Wait Time Alliance for Timely Access to Health 2005). Participants also agreed with the following four priority interventions: ensuring timely treatment for heart attack, improving patient navigation for planned cardiac care and improving access to heart failure and arrhythmia services across the province.

In developing the Alberta Cardiac Access Collaborative project, participants were asked to identify how improved coordination would be evident in their region. The following is a selection of responses received:

Figure 1. The continuum of care



Decreased waiting times, decreased time to reperfusion with better patient outcomes, educational opportunities with the project where system problems will be identified and repaired quickly, better distribution of resources both provincially and within David Thompson Health Region, better and more consistent access to resources.

Improving the coordination and management of cardiac patients will enable East Central Health staff to track patients more effectively, ensuring their flow through the continuum of cardiac care.

Improved access to evidence-based protocols and standards will result in improved patient outcomes and service provision. Establishment of benchmarks will assist us in service and budget planning. (Peace Country Health)

Hopefully we will address the challenges of working with many diverse sectors to accomplish best care approaches. (Chinook Health Region)

The results of the Patient Journey symposium were the foundation of a comprehensive proposal that was approved and funded by the Alberta Wait Times Management Steering Committee.

In June of 2007, a central provincial coordinating structure was established to support each of the regions as they planned, implemented and evaluated each intervention. Provincial coordination has ensured increased use of common clinical guidelines and improved information collection and dissemination, with the long-term aim to improve clinical outcomes.

Project planning started in September 2007, and implementation of the interventions commenced in February 2008.

Intervention

The Alberta Cardiac Access Collaborative has focused on the entire patient journey to better support patients and their families as they travel through the cardiac system as well as healthcare practitioners who provide services along the continuum. The heart attack, patient navigation, heart failure and arrhythmia interventions each focus on a separate area of the continuum of care. Each has a unique focus, but all four are committed to

meeting the principles of integration: providing people-centred care, reducing clinical variance, organizing the care continuum and improving process management.

Implementation of the heart attack initiative in rural settings allows non-tertiary centres and emergency medical providers to send ECGs electronically to specialists who can provide a diagnosis and a treatment plan over the phone.

Heart Attack

Acute myocardial infarction is a leading cause of death in Canada and a common antecedent event leading to other cardiovascular conditions including heart failure and cardiac arrhythmias.

Built on the foundation of existing programs in Edmonton and Calgary, the heart attack initiative focuses its attention on a specific type of heart attack known as STEMI (ST segment elevated myocardial infarction). The objectives of the heart attack initiative are to reduce time to treatment for STEMI patients, reduce reperfusion delays, increase collaboration between healthcare providers and improve communication between healthcare professionals. Developed from national/international guidelines and the application of evidence-based medicine, the heart attack initiative has developed standardized care pathways to treat patients diagnosed with STEMI. Implementation of the heart attack initiative in rural settings allows non-tertiary centres and emergency medical providers to send ECGs electronically to specialists who can provide a diagnosis and a treatment plan over the phone. This collaboration between acute care nurses, emergency service providers, emergency physicians, internists and cardiologists has significantly improved treatment of the rural STEMI patient. Early initiation of treatment provides patients with the best possible outcomes and increases their chances of a successful recovery.

STEMI treatment programs previously existed in Edmonton and area, Camrose, Westaskwin and rural/urban areas serviced by the Calgary jurisdiction. These programs included both hospital and EMS care pathways and have focused on process optimization during the heart attack initiative.

New STEMI care pathways have been implemented in the following communities: Fairview, Viking, Tofield, Rocky Mountain House, High River, Okotoks, Airdrie, Banff, Medicine Hat, Brooks and Bassano. The following EMS providers have also implemented the program: Peace Country Regional EMS, Beaver Ambulance, Specialty Medical Service Ltd. and Mountain View EMS.

Patient Navigation

The healthcare system today is very complex, with multiple entry points and numerous service providers. These complexities make it very difficult for patients, their families and healthcare practitioners to effectively navigate the cardiac healthcare system. "Patient navigation" has emerged as a valuable approach to address these concerns.

The objectives of the cardiac navigation initiative are to reduce wait times; improve quality, appropriateness and continuity of care; and create a system that meets divergent needs and increasing demands. Based on these principles, the navigation initiative has developed a program to improve the journey for patients and healthcare practitioners alike.

Acting as a single point-of-access to cardiac care for healthcare practitioners, patient navigators focus on improving coordination of services between multiple care providers, decreasing duplication of services, increasing patient preparedness and facilitating transition of care between numerous healthcare providers. Moreover, acting as a liaison between practitioners, navigators provide relevant and timely information to support patients and their caregivers on disease adjustment, therapeutic options and anticipated care paths.

The cardiac navigators are an excellent resource for patients, ensuring that each patient and their family members have the information, knowledge and support they require as they move through the cardiac care system.

The Alberta Cardiac Access Collaborative website was established to support the project on a provincial basis. Intended for public and member access, the site not only contains information for patients and families, but also houses information integral to a provincial delivery system. As a repository for information such as region- and service-specific referral requirements, a provincial inventory of cardiovascular resources and member contact information, the site is an excellent support for the patient navigation team.

Various region-specific patient navigation models have been developed to remove barriers and improve access to timely treatment in Lethbridge, Medicine Hat, Calgary, Camrose, Red Deer, Edmonton and Fort McMurray.

Heart Failure

As the population continues to age, the number of individuals diagnosed with heart failure will increase dramatically. Those diagnosed with heart failure have high readmission rates to hospital, multiple co-morbid conditions and require a high level of specialized care to optimally manage their condition. Heart failure clinics provide a multi-disciplinary approach to treating and managing patients diagnosed with heart failure. Physicians, registered nurses, pharmacists, dieticians and social workers all play a key role in providing treatment, support, education and self-management strategies to this patient population.

The majority of patients with heart failure cannot or do not have access to specialized heart failure services due to travel distance and lengthy appointment wait times. Leveraging the successes of existing heart failure clinics in Lethbridge, Calgary, Red Deer and Edmonton, multi-disciplinary clinics were established in the rural/suburban areas of Alberta in order to bring care closer to patients. Having the resource close to home has improved compliance and increased patient satisfaction, and we anticipate that it will reduce emergency visits.

Implementation of heart failure clinics across Alberta involved a multi-phased educational approach. The training program for nurses, allied health professionals and physicians increased their knowledge of heart failure. The educational support for new clinics included small-group educational sessions, job shadowing where new clinic staff worked within existing clinics and on-site clinical support provided by a Registered Nurse specialized in heart failure who travelled from an existing clinic. Ongoing educational sessions and opportunities to shadow in the existing clinics have been offered when appropriate. Heart failure clinics have successfully been implemented in the following communities: Medicine Hat, Camrose, Wainwright, Grande Prairie and Fort McMurray.

Arrhythmia

The Arrhythmia South clinic has streamlined the referral, triage, education and assessment process for primary prevention implantable cardioverter defibrillator and for supra-ventricular tachycardia patients.

Providing with a central point of referral, both patients and referring physicians are working with a small, specialized group of nursing and support staff. Patients are engaged early in the referral process and provided with written educational materials as well as necessary diagnostic testing prior to the first clinic visit. This has improved patients' awareness and understanding of their condition and of available treatment options. Patients also appreciate knowing who to contact with questions, both before their visit and during ongoing follow-up.

Physicians are able to see more new referrals as their time is more effectively utilized, with the addition of nurse clinicians providing the bulk of the history retrieval and education at the clinic visit. This has led to a decrease in the wait times from referral to clinic visit and ultimately to initiation of treatment.

Methodology, Change Process and Results

Implementing new programs can be very challenging. The following factors have contributed to the success of the interventions:

- **Motivated medical and/or administrative leads:** Each intervention at the provincial level is led by two clinical and/or administrative leads who are highly motivated

and committed to creating programs that improve service delivery for patients and their families.

- **The right people:** The initiatives are strengthened through the use of multi-disciplinary teams. Where appropriate, administrators, EMS personnel, physicians, nurses and allied health professionals have all played a role in program development and implementation.
- **Evidence-based guidelines:** Clinical protocols and developed care pathways are based on current literature and national/international best practice guidelines.
- **Physician engagement:** The ACAC project demonstrates that interventions are most successful where there is strong physician support. Engagement of both healthcare practitioners who use the service and specialists who support the service is essential.
- **Flexibility is a key to success:** Each site tailored the initiatives to support its unique geographical and organizational differences. This ensured that each area had a program most suited to its needs.

The lack of a province-wide collaboration framework for on- and off-line data and information sharing has been challenging. Interfaces between existing systems are needed, as well as tools for provincial wait list management to effectively care for cardiac patients.

As with all program implementations, several challenges were encountered:

- **Resource availability:** Although funding for resources was available, qualified candidates for project and clinical positions were not always readily available.
- **Buy-in is not always simple:** Despite multiple varied approaches to gain acceptance, there are sites that have struggled in gaining physician buy-in to the new programs. This applies to both physicians supporting the services and physicians referring to the services.
- **Technology and/or information management issues:** The lack of a province-wide collaboration framework for on- and off-line data and information sharing has been challenging. Interfaces between existing systems are needed, as well as tools for provincial wait list management to effectively care for cardiac patients. Specifically, the heart attack initiative is very dependant on technology for transmission of ECGs, and as technology changed this posed problems for the program.

- **System capacity:** In some cases system capacity has posed a significant problem, impeding implementation of developed care pathways.

Evaluation of the four initiatives that fall under the Alberta Cardiac Access Collaborative will be completed to assess viability and sustainability of the demonstration projects prior to undertaking a province-wide rollout. The evaluation framework incorporates a number of perspectives, including the Alberta Quality Matrix for Health and guidelines from the Canadian Cardiovascular Society.

A province-wide common data set for the purposes of evaluating each initiative was developed after consultation with numerous key players. The defined elements will be used in various combinations to evaluate each initiative. Interim evaluations were conducted to refine the data collection framework and process. The final evaluation report will be submitted to the Alberta Wait Times Management Steering Committee at the end of May 2009.

Early evaluation results have been very positive:

- The heart attack initiative has trained 735 nurses, 115 physicians and 770 EMS personnel regarding standardized reperfusion protocols.
- There are 12 patient navigators located across the province. These individuals have started to build a network using each other as resources and access points for patients moving from one jurisdiction to another. Over 4,500 patients have benefitted from the streamlined referral process and improved communication.
- The heart failure initiative has implemented five new heart failure clinics in regions outside the urban centres. This has drastically reduced travel time for patients and significantly improved the quality of care they receive. Since the implementation of the clinics, over 200 patients have been referred to them. Fifteen registered nurses, six pharmacists, three dieticians and four physicians have been educated regarding best practices in heart failure treatment since the intervention began.

The arrhythmia clinic in Calgary has effectively streamlined the referral process for patients requiring assessment for primary prevention implantable cardioverter defibrillator and for supraventricular tachycardia patients. To date, over 325 patients have been assessed in the arrhythmia clinic, and wait times to see a specialist have improved substantially.

Conclusion

The Alberta Cardiac Access Collaborative is clearly an example of applying the principles and practices of health system integration. Since its inception at the Patient Journey symposium in 2006,

the project team has worked with stakeholders across the entire province to implement the four key change strategies of providing people-centred care, reducing clinical variance, organizing the care continuum and improving process management.

Providing People-Centred Care

From the outset, the focus on the patient's experience has been a priority. Attempting to address the continuum of care, implement best practices across the province and ultimately improve patient outcomes has been integral to each intervention. Patients surveyed as part of the evaluation process have commented on the value of having services close to home and access to navigators, and on increased levels of comfort that their needs are important.

Reducing Clinical Variance

Adopting the Canadian Cardiovascular Society guidelines in Alberta was the first major step toward standardization of cardiac care. Providing a single point-of-entry to access cardiac services, standardizing referral forms, developing care pathways and provincial transfer guidelines, and investigating innovative ways to use Telehealth has reduced clinical variance across the province of Alberta. The Alberta Cardiac Access Collaborative has set up a foundation for tracking the CCS guideline update and compliance.

Organizing the Care Continuum

Key to this principle is the use of inter-sectoral and multi-disciplinary teams. In all of the interventions, multi-disciplinary teams have worked together to identify barriers, seek solutions and implement best practices to ensure that each patient receives optimal cardiac care.

Improving Process Management

Implementing standardized quality improvement models founded on evidence-based guidelines has resulted in improved process management. Implementation of consistent care pathways and both treatment and transfer guidelines has ensured that each cardiac patient receives appropriate care, despite their geographical location.

In summary, the ACAC has had considerable success in applying the goals of integration. This achievement was not without significant challenges, some of which are highlighted in this article. A comprehensive evaluation report was submitted to the Wait Times Management Steering Committee at the end of May 2009. With the recent news of a 12-month extension, planning is under way to transition the successful components of this project into ongoing operations within Alberta Health Services. The project has been built on the key principles of integration, service coordination and process optimization, and these principles will continue to be incorporated in the months ahead. **HQ**

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