

The Long and Winding Road to Implementation: The launch of an electronic patient-reported outcomes system in cardiac care in Alberta

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Abstract: Using a narrative approach, we explore the implementation of an electronic patient-reported outcome measures system following coronary angiography in Alberta. A key component of this system is the way in which we identify eligible patients and how we can integrate this directly into routine clinical workflows across two sites while minimizing staff burden. This process allows us to understand how to best scale this intervention and leverage the electronic medical system in the flagging of eligible patients.

Extended Abstract

Patient-reported outcome measures (PROMs) quantify the subjective aspects of a person's health status, such as pain, functional limitations, mental health, and social supports¹. Although PROMs are collected in cardiac care in Alberta for research, individual results are not reported back to patients or clinicians. This is a missed opportunity since, much like abnormal laboratory tests, PROM scores that fall outside the normal range (or worsen over time) can prompt early recognition of an issue requiring discussion, further investigation, treatment, or referral to community services^{1,2}. These actions can potentially prevent the need for acute care. Evidence from oncology and surgery settings suggests that providing clinicians with PROMs can improve patients' quality of life, satisfaction, and clinical outcomes. Although the APPROACH registry has been collecting patient-reported outcomes data for over 20 years using mailed paper surveys^{3,4}, with the emergence of electronic medical record (EMR) systems, we aim to implement a systematic, electronic PROMs collection process for patients following coronary angiography in Alberta. Particularly, we are most interested in understanding how to capture eligible patients during routine clinical workflow within the electronic medical system.

Following the launch of Connect Care in Alberta, the APPROACH group co-developed an electronic PROMs tool, alongside physicians and patients, to replace the existing mailed survey. The APPROACH ePROM tool was launched at two of Alberta's cardiac catheterization labs (Foothills Medical Centre & Royal Alexandra Hospital), where eligible patients were identified during routine clinical workflows. In order to capture the highest number of eligible patients, clinical staff were asked to flag eligible patients, obtain consent to contact, and add patients to a site-specific permission-to-contact list. Once identified, research staff managed all subsequent steps, including electronic survey distribution, follow-up, and data capture within the APPROACH tool. This implementation strategy was designed to minimize disruption to clinical workflows while embedding PROM collection within routine care processes.

Using a narrative approach, we completed an overview of the implementation steps, facilitators and barriers to launching an ePROM collection tool following cardiac catheterization in Alberta⁵. Key strategies included early and ongoing stakeholder engagement with multidisciplinary clinical teams (physicians, nurses, unit clerks, booking clerks, and radiology techs), integration with the provincial EMR system (Connect Care), enabling the use of automated alerts to flag eligible patients, staff training, and incentive periods. Additional implementation support included monthly site-specific feedback reports to encourage uptake. Nonetheless, several barriers to adoption persist, including technical limitations, human factors, and existing workflow demands. Overall, this process allowed us to identify practical challenges, alongside barriers and facilitators to adoption and uptake.

References

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