

## **Scale and spread of quality improvement initiatives for bronchiolitis management in Alberta emergency departments**

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**Background:** Acute viral bronchiolitis is among the most common illnesses seen in the emergency department (ED) and is the leading cause of infant hospitalization in Canada. Practice guidelines do not recommend routine use of certain diagnostic tests and medications in managing bronchiolitis, yet prior studies suggest that low-value interventions are routinely administered to patients with bronchiolitis. Successful implementation of quality improvement at the Alberta Children's Hospital suggested that low-value interventions and tests can be improved. Yet, practice variation and potential opportunities to improve bronchiolitis management are likely present in EDs in urban and rural settings.

**Implementation:** The project is a collaboration between the Maternal Newborn Child and Youth Strategic Clinical Network (MNCY SCN), the Improving Health Outcomes Together Team (IHOT), and Physician Learning Program (PLP) under the umbrella of the AHS Ernst & Young Clinical Appropriateness Theme recommendations to expand and scale initiatives to reduce unnecessary tests to improve patient safety. A provincial Bronchiolitis Steering Committee, led by two Physician Initiative Leads, was formed to guide the project and implementation at 16 facilities across Alberta.

Site implementation includes two key aspects:

1. Audit & Feedback (A&F) – review practice data, facilitated discussion with clinicians, and identify enablers and barriers to practice change
2. Site Specific Implementation Plan – options for sites include use of posters, tools, resources; utilization of ConnectCare (order sets); and staff and physician education

Qualitative interviews with site-champions will provide perspectives and feedback on enablers and barriers to change. Discussions from the A&F sessions, in addition to the qualitative interviews will be coded and analyzed based on the Consolidated Framework for Implementation Research and Theoretical Domains Framework.

Resources required included clinical leads, project management, data/dashboards, educational posters, updated order sets, and a central location for staff and physician to access bronchiolitis materials (via SharePoint).

**Evaluation Methods:** The primary objective of the study is a reduction of chest x-ray utilization. Chest x-rays utilization can be readily obtained from administrative data at all sites in the project. Secondary measures include medications (PIN) and respiratory viral testing. There is strong evidence to support that medications and respiratory viral testing do not impact bronchiolitis management. The project addresses patient safety and outcomes by reducing the

use of low-value interventions and tests in the ED and enables resources to be directed towards evidence-based care. As ConnectCare is phased into all facilities across Alberta, additional metrics will be incorporated into reports and updates to participating sites.

**Results:** The first phase of the project took place from September to November 2021, with rollout to six facilities (four EDs and two inpatient units). A total of 151 physicians attended the audit and group feedback sessions. Site-specific planning sessions and qualitative interviews with site-champions are planned, and the next phase of the project will continue with spread and scale to regional EDs (n=5), urban (n=2) and rural (n=4) locations in fall 2022.

**Advice and Lessons Learned:**

1. The partnership with MNCY SCN, PLP, IHOT, and two Clinician Leads has been beneficial for establishing a team-based multi-disciplinary approach to address needs as they arise and the ability to work together with site champions.
2. Identifying and collaborating with site champions is necessary for establishing relationships and trust prior to conducting audit and feedback sessions and addressing practice change. Site champions understand the contextual factors of their facility and how to best utilize enablers or address barriers for practice change. Initiation of these working relationships need to take place months before implementation and ideally develop through existing networks.
3. Timing and flexibility are crucial for successful implementation. Rescheduling launch dates, adjusting session time, validating data, and adjusting to external factors such as delays in ConnectCare rollouts and pressures on the healthcare system brought on by the COVID-19 pandemic were experienced in the planning and initiating phases of the project. These lessons will be carried forward as we plan for the second part of spread and scale in Fall 2022.