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Sustaining Rural Access to Emergency Care through Collaborative Emergency Centres in Nova Scotia

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Abstract

Collaborative Emergency Centres (CECs) were introduced in Nova Scotia in 2011 to address gaps in rural access to emergency care through enhanced primary care, urgent care, and interprofessional teams supported by remote physicians. In the wake of a historic election win by the New Democratic Party (NDP) in 2009, who promised to keep rural emergency departments open, a series of reports highlighted the troubles with small hospital emergency departments and suggested the development of CECs as a novel model of care. CECs aimed to improve access to emergency care in rural areas by matching the offered services to the needs of the community. The policy window for this reform was created through the convergence of a publicly recognized crisis in rural emergency department closures, a nationwide trend toward community-centred and interprofessional care models, and a historic NDP provincial government victory. Budgetary allocations and enabling legislation supported the development of the first set of four CECs for the province. Ministerial emergency department accountability reports and the Care Right Now report proclaimed the success of the CECs in reducing the number of hours of unplanned emergency department closures and in increasing rural communities' access to primary and emergency care. The CECs allowed Nova Scotia to provide access to around-the-clock emergency care at a greatly reduced cost, improved the work-life balance for rural physicians, and created a case for successful implementation of interprofessional teams in other environments.

Les Centres d'urgence collaboratifs (CUC; en anglais les CECs) ont été mis en place en Nouvelle- Écosse en l'an 2011 afin de combler les lacunes en matière d'accès aux soins d'urgence en milieu rural par le biais de soins primaires améliorés, de soins d'urgence, et d'équipes interprofessionnelles soutenues par des médecins à distance. À la suite d'une élection historique remportée par le NPD en 2009, qui avait promis de garder ouverts les services d'urgence ruraux, une série de rapports a souligné les difficultés de prestation de services d'urgence par des petits hôpitaux, et a recommandé le développement des CUC comme modèle de soins novateur. Les CUC avaient pour objectif d'améliorer l'accès aux soins d'urgence dans les milieux ruraux en favorisant l'alignement entre les services offerts et les besoins de la communauté. La possibilité de mettre en place cette politique a résulté de la convergence d'une crise, reconnue publiquement, des fermetures de départements d'urgence en milieux ruraux et d'une tendance nationale vers des modèles de soins interprofessionnels centrés sur la communauté coïncidant avec une arrivée historique du NPD au gouvernement provincial. Les allocations budgétaires et un cadre législatif favorable ont soutenu la création du premier groupe de quatre CUC pour la province. Les rapports ministériel de reddition de comptes des départements d'urgence en Nouvelle-Écosse, ainsi que le rapport Care Right Now, ont salué le succès des CUC dans la réduction du nombre d'heures de fermeture imprévues de départements d'urgence et dans l'amélioration de l'accès des communautés rurales aux soins

primaires et d'urgence. Les CUC ont permis à la Nouvelle-Écosse de donner accès aux soins d'urgence sans interruption à un coût considérablement réduit, et d'améliorer la conciliation travail-vie personnelle pour les médecins dans les régions rurales, créant un cas de réussite pour les équipes interprofessionnelles dans d'autres environnements.

Key Messages

- The implementation of the first Collaborative Emergency Centres in Nova Scotia in 2011 improved access to primary and emergency care in rural areas, reducing unplanned emergency department closures by 90-100%.
- The success of the CEC interprofessional care model can serve as a model for multi-disciplinary teams and innovative models of care in other environments.
- Collaborative Emergency Centres are an innovative model for the provision of 24/7 access to emergency care in rural areas at lower cost.

Messages-clés

- *La mise en place des premiers Centres de soins d'urgence collaboratifs en Nouvelle-Écosse en 2011 a amélioré l'accès aux soins primaires et d'urgence dans les milieux ruraux, réduisant de 90 à 100% les fermetures imprévues des services d'urgence.*
- *Le succès du modèle de soins interprofessionnels des Centres de soins d'urgence collaboratifs peut servir de modèle pour des équipes multidisciplinaires et des modèles de soins novateurs dans d'autres environnements.*
- *Les Centres de soins d'urgence collaboratifs constituent un modèle novateur pour l'accès aux soins d'urgence 24 heures sur 24, 7 jours sur 7, à moindre coût, dans le milieux ruraux.*

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1 BRIEF DESCRIPTION OF THE HEALTH POLICY REFORM

In 2011, Nova Scotia opened its first Collaborative Emergency Centre (CEC) in Parrsboro, NS. CECs were developed as a means of addressing a complex problem with access to necessary emergency care in rural areas of the province. The gaps in care, characterized by thousands of hours of temporary but unplanned and unpredictable small emergency department closures, left the population vulnerable and confused about what (and when) care could be accessed in their communities. The deficiencies in emergency care were symptomatic of a more complex access problem. Residents faced long waits of up to five weeks for primary care appointments which led to increased use of local emergency departments for low-acuity conditions. Local emergency departments were staffed by primary care physicians who, due to taking overnight and weekend call, reduced their office hours during post-call days. This compounded the primary care access problem. The overnight emergency call program for physicians was costly and the work-life balance problems inherent in that paradigm made rural recruitment extra challenging. In 2009, the newly elected New Democratic Party (NDP) government faced a challenge: "how to address the serious inefficiencies presented by rural emergency departments, without actually eliminating them" (Fierlbeck 2018, 74).

CECs represent an innovative model of interprofessional care which aimed to address the various layers of complexity of the rural emergency care conundrum. They consisted of three components: (1) a primary health care team, (2) urgent care capacity, and (3) a "plan/protocol for emergency care in collaboration with Emergency Health Services and the District Health Authorities (DHAs)" (Stylus Consulting 2014). CECs would be staffed by physicians during the highest volume times (during the day), and by a nurse-paramedic team with telemedicine support from distant physicians during the overnight hours.

2 HISTORY AND CONTEXT

In late 2007, the provincial Progressive Conservative (PC) government under Rodney MacDonald commissioned a report addressing escalating health care costs in Nova Scotia. The so-called "Corpus Sanchez report" raised concerns in many communities regarding the threat of closures for rural hospitals. Simmering fear and anxiety continued through 2008 as political discourse focused on the global economic slowdown, rising unemployment, and possible government deficits. In mid-2009, the PC government fell and, for the first time in Nova Scotia history, a New Democratic Party (NDP) majority government was elected on a platform which included a promise to keep emergency rooms open (*CBC News* 2009).

Soon after the newly elected government was seated, they named a Provincial Advisor on Emergency Care, Dr. John Ross, who, in early 2009, as director of the emergency room at Queen Elizabeth II Health Centre, had sounded an alarm to the province about the state of emergency care in Halifax. Ross surveyed the state of the province's emergency

departments and released a final report and recommendations in October of 2010. The Ross report was problematic for the NDP government which had promised not to close any rural emergency departments. Despite being costly to operate, smaller hospital emergency departments were found to treat primarily less urgent or minor conditions which could be treated in a clinic setting and night time visits to the department were extremely rare (Ross 2010). The report noted that in 2009-10, "Emergency Departments were closed for more than 19,000 hours—or the equivalent of 795 days—province wide" (p. ix). The new Minister of Health, Maureen MacDonald, responded quickly, releasing the Better Care Sooner plan in December of the same year which accepted all of Ross's recommendations and planned, first and foremost, implementation of the CECs. The first CEC, located in Parrsboro, NS, was announced in April of 2011 and opened that July (Nova Scotia Department of Health and Wellness 2011).

3 GOALS OF THE REFORM

3.1 Stated goals

The Better Care Sooner plan states that the objective of the CECs is to "Improve Access to Emergency Care" by matching the services with "the needs of the individual communities" (Nova Scotia Department of Health and Wellness 2010, 12), including "access to emergency care around the clock" (2010, 11).

3.2 Implicit goals

The NDP government faced a dilemma: the rural emergency departments that they had promised to preserve were shown to be largely underutilized and overly costly, but delivering on their elected mandate was critical. CECs presented a novel way of achieving 24/7 access to emergency care in a cost effective and community-centred way. The initiative was "as much a response to political imperatives as it was to organizational ones" (Fierlbeck 2018, 74).

4 FACTORS THAT INFLUENCED HOW AND WHY

Why and how CECs became the chosen solution for sustaining access to rural emergency care in Nova Scotia is interesting in part due to the paucity of evidence on which the innovation was built. In 2009, scant literature existed related to emergency care in Canada, and it was only after the innovation had been deployed that a rapid review was commissioned to evaluate related evidence (Hayden and Nova Scotia Cochrane RC 2012).

The policy's rapid adoption despite a deficit of evidence can be understood through consideration of the Kingdon framework which posits that a policy window is opened when

three streams align: the problem stream, policy stream, and political stream (Kingdon 2003).

4.1 Problem stream

The fate of community emergency care had been creating anxiety amongst rural Nova Scotians since the Corpus Sanchez report in late 2007. Small communities were seeing increased unplanned emergency department closures that made access to local and timely emergency care unpredictable. At the same time, urban emergency rooms were also facing access problems: dangerous overcrowding. In January of 2009, the crisis in the emergency rooms of Nova Scotia was thrust into the spotlight when Dr. John Ross called a "Code Orange"—a disaster alert—to deal with critical overcrowding and a backlog of patients. While Dr. Ross's alarm was sounded with regards to an urban hospital, it highlighted the need for emergency department standards and galvanized support for access to emergency care across the province.

4.2 Policy stream

Upon election, the Nova Scotia NDP appointed Dr. Ross as a policy champion and expert on emergency care to lead a review of the emergency care system in the province. In parallel, a trend toward multidisciplinary teams and collaborative interprofessional care was evolving in Canada and in Nova Scotia in particular where recent enabling regulation had been enacted (Lahey 2013). An earlier pilot project which made innovative use of nurse-paramedic teams to provide primary care on two remote islands in Nova Scotia had shown good results (Martin-Misener *et al.* 2009). Ross's report capitalized on these successes in its suggestion for what would become the CECs.

4.3 Political stream

In 2009, the Nova Scotia NDP achieved a historic victory, becoming the first majority NDP government in any Atlantic province. The momentum of that key victory propelled the party forward with their agenda to preserve access to rural emergency departments. At the same time, Canada and the world faced an economic recession; expansion of costly government-funded services was politically and fiscally problematic. CECs provided a means of innovatively and cost-effectively delivering on a key election promise to sustain access to rural emergency care.

5 HOW THE REFORM WAS ACHIEVED

5.1 Policy instruments

A series of policy actions allowed the NDP to establish rural emergency care as a priority and to keep it in the public spotlight. The *Emergency Department Accountability Act* (EDAA), enacted in late 2009, provided the legislative framework for the appointment of Dr. Ross and compelled the government to annually collect and report data on emergency department closures. The Emergency Department Standards that Ross developed for Nova Scotia were not legislatively binding but did provide a reference point for what he believed adequate emergency care should look like.

The 2011-2012 budget included $800,000 for salaries for paramedics and other health care providers and a $3M Emergency Room Protection Fund (Nova Scotia n.d.). These funds allowed the province to act on Dr. Ross's recommendations for actions including opening at least four CECs in that year.

Subsequent to the implementation of the first CECs, additional policy was enacted to enable compensation structures for the models of care exemplified by the CECs, and for interprofessional self-regulation which facilitated and sustained the collaborative care model (Lahey 2013).

5.2 Implementation plan

Both Ross and the Better Care Sooner plan outlined the actions required to establish the CECs. These included involving the community stakeholders to ensure that "members of the care teams, the levels of service, and the hours those services are provided" are tailored to the needs of the community (Nova Scotia Department of Health and Wellness 2010). Four CECs were initially planned with a view to adding another four by 2013.

5.3 Communication plan

Cognizant of the potential for confusion and uncertainty surrounding the periodic and unpredictable closures, and acknowledging the novelty of the care model, implementation of the CECs involved community engagement, communication, and education. Furthermore, the EDAA explicitly required the District Health Authorities to conduct public forums in communities affected by "an ongoing pattern of closure of the emergency department" to consider solutions to "keep open or re-open" the department (*Emergency Department Accountability Act* 2009).

6 EVALUATION

The 2009 EDAA compels the Minister of Health to report on the state of rural emergency care on an annual basis, describing the dates and reasons for all emergency room

closures within the province. This periodic monitoring provides a way of systematically and quantitatively tracking the effects of CECs and other emergency department policies and initiatives on emergency department closures over time. In addition, the Department of Health and Wellness "commissioned the development of an evaluation framework to guide the assessment of the CEC model's performance" (Stylus Consulting 2014). The first phase of the evaluation, which aimed to identify the strengths and weaknesses of the model, was completed in 2014.

By 2014, CECs were open in eight communities and there were plans to open another six. That year, an evaluation was commissioned to assess the impact of the CECs. As detailed in the Care Right Now report, a survey found that 82% of respondents agreed or strongly agreed that access to daytime primary health care was as good as or better than before. The average number of overnight low-acuity presentations decreased by 37-74% per quarter. A drastic reduction (90-100%) in the number of hours of unplanned overnight closures was noted. The evaluation report indicated that, on average, only one patient visits the CEC per night; however, feedback indicated that people are able to obtain health services in the community at the hours that they need them. The CECs were well received by providers: 98% of physicians, nurses, and paramedics surveyed believed that the CECs provide quality patient care. The overarching conclusion of the 2014 evaluation was that CECs have been successful but that lessons should be gleaned from the early experience before implementing the model in a second generation of CECs (Stylus Consulting 2014).

Notably absent from the evaluation is any assessment of clinical measures in the rural population (e.g., quality of care, clinical outcomes or mortality data) either before or after implementation of the CECs. While access to 24/7 emergency care appears to have been sustained, the impact of the new model of care on patient outcomes is unknown.

7 STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS

Table 1 presents a SWOT analysis of the Collaborative Emergency Centres pioneered in Nova Scotia in 2011 at the time of their development. Parentheses indicate the stakeholders to whom the perspectives apply.

Table 1: SWOT Analysis

Strengths	Weaknesses
• Reduce hours of rural emergency department closure (patients/communities) • Improve access to primary and emergency care (patients/communities) • Achieve 24/7 access to emergency care with lower cost than physician-staffed ED (government) • Better work-life balance resulting from fewer on-call shifts (physicians) • Alleviates some of the recruitment challenges for rural physicians (physicians, communities)	• Distance (and potentially time) to definitive care is increased for emergent conditions (patients) • Recruitment challenges shift from physicians to nurses and paramedics (health professionals, health human resource managers)
Opportunities	**Threats**
• Decrease in government health spending through decrease of on-call physicians (government, health professionals) • Creates precedent for use of interprofessional teams in other areas, including paramedics in emergency rooms (health professionals, government)	• Lack of previous evidence supporting the innovative model of care (Hayden and Nova Scotia Cochrane RC 2012) (government, health professionals, patients) • Lack of regulatory and remuneration infrastructure supporting interprofessional teams (health professionals, government)

8 CONCLUSION

Although research documenting access to emergency care in Canada has increased in recent years, especially in Quebec (Fleet *et al.* 2013), at the time of CEC development little evidence existed to suggest an evidence-based proposal for Nova Scotia. The creation of Collaborative Emergency Centres represented a true innovation in the provision of 24/7 access to emergency care. The policy window for this reform was created through the convergence of a publicly recognized crisis in rural emergency department closures, a nationwide trend toward community-centred and interprofessional care models and a historic NDP provincial government victory. Access to both primary and emergency care improved in rural areas and the reforms were met with satisfaction from health care providers and patients alike.

The model has since been adopted in Prince Edward Island and Saskatchewan, and has been evaluated for implementation in other provinces where access to rural care is problematic.

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