

## Access to emergency care in rural Canada: should we be concerned?

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Approximately 20% of Canadians live in rural areas.<sup>1</sup> Compared to their urban counterparts, rural citizens are in poorer health and are at greater risk for trauma and trauma death.<sup>2</sup> There are great challenges providing and accessing rural emergency care in Canada due to inherent greater distances and limited resources. However, few studies have described the level of resources available in rural emergency departments (EDs) in Canada and the challenge this represents for providing safe patient care.<sup>3,4</sup> There is minimal information on ED use in Canada, and comparison between provinces is limited by differences in the types of data collected.<sup>5</sup>

We present the situation in a rural ED in Nelson, British Columbia, after major service cuts took place.<sup>6,7</sup> The issue of reasonable access to emergency services is discussed in the context of the Canada Health Act (CHA).<sup>8</sup> We argue that with budgetary constraints and rising costs, service attribution may not be evidence based and outcomes will not be compared to established benchmarks. Considerable variability in access to timely patient care may result; further research is required to determine the impact of service cuts prior to their implementation.

In 2001, health care services to BC rural populations were reduced. In the region served by Kootenay Lake Hospital in Nelson, services were centralized in a community 74 km away. The intensive care unit, general surgical service, and inpatient mental health ward were closed, and laboratory and radiography services were reduced.

As a result, over 1,500 patients per year required transfer for workups, consultations, or a higher level of care,<sup>6</sup> frequently on an emergency basis. This transfer process resulted in delays in obtaining definitive care. A recent report also suggested that the service cuts coincided with worse outcomes. Using data from the

Discharge Abstract Database and the Canadian Institute for Health Information, the Fraser Institute published its British Columbia hospital report card in 2011.<sup>9</sup> For example, residents in Nelson fell from fourth place (4 of 47 municipalities in 2001–2002, prior to health cuts) to last in the province in 2008–2009 with respect to “failure to rescue,” which is considered among the most important health quality indicators and describes mortality from complications that arose while a patient was hospitalized.<sup>10</sup>

For many, Canada’s universal health care system is a defining feature of this country. Rural citizens may be tempted to look toward the CHA as a safeguard because one of the central components of the CHA is “reasonable access” to care.<sup>8</sup> The “intent of accessibility criterion” of the CHA is set to ensure that Canadians “have *reasonable access* to insured hospital, medical and surgical-dental services on uniform terms and conditions, unprecluded or unimpeded, either directly or indirectly, by charges (user charges or extra-billing) or other means (e.g., discrimination on the basis of age, health status or financial circumstances).”<sup>11</sup> Yet reasonable access in terms of physical availability of medical services has been interpreted under the CHA using the “*where and as available*” rule.<sup>11</sup> Thus, residents of a province or territory are entitled to have access to insured health services at the facility where the services are provided and as the services are available in that setting. Moreover, Canadian emergency medical service systems are not part of the CHA; emergency transportation times and direct costs to patients to where services are available will demonstrate great variation across the country.<sup>12</sup>

Hence, the “where and as available” nuance confers significant powers to provinces with respect to service

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attribution in rural and remote regions, and the CHA may not straightforwardly be invoked to guarantee better access to emergency care.

The geographic variability of access to emergency care in Canada is not well documented. The scarcity of the literature on the subject has several potential explanations. First, most studies in emergency medicine are conducted in academic centres located in urban areas. Second, front-line rural physicians may be overwhelmed by efforts to sustain services, with limited time left to report on their situations. Also, concerns about inhibiting recruitment, or even a fear of reprisal from health authorities, could also dissuade rural physicians from disclosing information on the negative impacts of limited access to services.<sup>6,13</sup>

Trauma is the leading cause of death for Canadians between the ages of 1 and 44.<sup>14</sup> Rural populations are at higher risk for trauma and trauma death.<sup>15,16</sup> A recent report by Hameed and colleagues showed that 22.5% of Canadians reside more than 1 hour by road from a level I or a level II trauma centre.<sup>12</sup> Disparities in access to trauma care range from poor in the three territories (with 0% of the population residing within the 1-hour catchment area) to excellent in Ontario (85%) and Quebec (87%); other provinces lie in the 40 to 76% range of access to the “golden hour” of trauma care. The authors concluded that an urban/rural divide persists in access to high-quality trauma care. Future studies should examine the impact on outcomes due to this variability in access.

Despite significant pressures to control costs, decision makers have been criticized for what several consider a simplistic and potentially hazardous approach (for rural citizens) at cost containment: regionalization of services and hospital closures.<sup>17</sup> However, have we provided them with the necessary evidence or even guidelines to support sustainable quality emergency care in rural areas? Research shows that when we strive to attain quality standards and monitor performance, health care improves.<sup>18,19</sup> The list of evidence-based emergency treatments is growing, but researchers struggle to define the most important quality of care benchmarks in emergency medicine. It is difficult to request “better” services in rural communities when no consensus exists on quality of care indicators or standards. However, efforts to establish such indicators will likely change this.<sup>19</sup> A nationally representative committee of investigators developed a set of 48 evidence-based indicators to measure and compare the quality of care in Canadian EDs.<sup>19</sup> It is hoped that these indicators will gain widespread acceptance and be monitored in EDs across Canada.

While we await further study of quality of care indicators, future guidelines and policy may take cues from previous work from the Canadian Association of

Emergency Physicians (CAEP). In 1997, the CAEP presented a position paper on rural emergency medicine in Canada.<sup>20</sup> It established general and specific guidelines as to which basic services should be provided. It may be time to revise these guidelines in light of recent medical advances and ongoing threats to rural emergency services. Furthermore, it appears that only Quebec has published provincial guidelines with sections addressing rural emergency care (*Guide de gestion de l'urgence*).<sup>21</sup> The Quebec guide defines what support services an ED should receive based on the hospital's designation. That designation is determined by several factors, including the number of annual patient visits. In 2006, this guide was developed with the goal of making all stakeholders accountable for quality of care in EDs. It is unclear if Quebec has been successful in implementing these recommendations and, if implemented, that they have led to increased access to quality care. We are conducting a study to examine this issue.

With increasing health care costs and physician and staff shortages, rural communities might expect further attempts to centralize hospital services, leading to reduced services for EDs. We argue that stakeholders will need convincing evidence to help prevent further reductions in access. As a priority, research should focus on defining rural standards for emergency care, develop and test relevant indicators, identify causes for disparities in access to care, and, finally, measure outcomes. Inspired by the work in the field of rural obstetrics, data from such studies could lead to the development of models that would guide service attribution decisions to rural areas in the context of our complex geodemographic realities.<sup>22</sup> Meanwhile, relatively inexpensive technologies such as telemedicine, bedside ultrasonography, and enhanced point of care testing are already beginning to improve rural emergency care, and these avenues need to be pursued.<sup>23,24</sup> Provinces should increase their interactions to share their experiences.

Access to comprehensive emergency care in rural Canada is under challenge, and current legislation may not be helpful in protecting rural citizens from further service cuts. Evidence-based standards of rural emergency care are required. We call on CAEP's leadership in this process. Revising its landmark 1997 *Recommendations for the Management of Rural, Remote and Isolated Emergency Health Care Facilities in Canada*<sup>20</sup> document would be a valuable first step. Communities such as Nelson urgently need all stakeholders to unite and find solutions to their challenges.

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