

# The need to review knowledge gaps on sudden cardiac death in Canadian Indigenous populations

## LETTER TO THE EDITOR

Sir,

It is known that the prevalence and mortality of cardiovascular disease are disproportionately higher in Indigenous peoples of Canada (First Nations, Métis, and Inuit).<sup>1</sup> Sudden cardiac death is responsible for approximately one-half of all deaths from cardiovascular disease globally. However, the incidence of sudden cardiac death has not been specifically described for Canadian Indigenous populations,<sup>2</sup> and it is unclear what modifiable factors should be addressed to improve the prevention, recognition, and treatment. Therefore, there is need for a national strategy to address the knowledge gaps regarding sudden cardiac death in Indigenous peoples.

The disparities in determinants of cardiovascular health between Indigenous and non-Indigenous persons are well documented. An unequal burden of poverty, inequities in medical treatment, along with socioeconomic factors stemming from historic governmental policies that disrupted Indigenous societies, all contribute toward the increased prevalence of cardiovascular disease.<sup>1</sup> Bresee and colleagues found that across urban and remote geographies, First Nations people were less likely to receive coronary angiography within 24 hours of myocardial

infarction and more likely to die from sudden cardiac death.<sup>3</sup> Remote Indigenous communities experience higher mortality rates from poorer emergency medical service (EMS) response time, a lack of permanent road access, and hazardous conditions.<sup>4</sup> Early defibrillation remains the key to survival in arrhythmias leading to sudden cardiac death, hence acknowledging challenges of providing timely resuscitation is important. Furthermore, genetic differences between Indigenous and non-Indigenous populations should be considered. Arbour and colleagues found at least three different Canadian Indigenous communities have a disproportionately higher rate of congenital long QT syndrome.<sup>5</sup> The culmination of these socioeconomic, epidemiological, and genetic risk factors place Indigenous populations at higher risk of sudden cardiac death and require a unique approach to optimize survival outcomes.<sup>5</sup>

We propose the development of a national strategy to address this. First, it will be important to gather input from key stakeholders including EMS, Indigenous leaders, medical/public health representatives, and various governmental healthcare experts. Second, developing an efficient method of tracking cardiac arrests will be necessary. Involving the Canadian Sudden Cardiac Arrest

Network Registry, which is working to build Canada's first database of sudden cardiac death cases, will be valuable. Lastly, Indigenous communities face barriers to many basic services, which have a significant impact on general health including cardiovascular disease. This project will serve as a window into one of many serious public health deficiencies that affect overall Indigenous health. It is hoped that by highlighting gaps in care with sudden cardiac death in Indigenous communities, attention to other public health needs will be addressed.

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