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STATE-OF-THE-ART REVIEW

Hypertension in Canada: Past, Present, and Future

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Abstract

Canada has an extremely successful hypertension detection and treatment program. The aim of this review was to highlight the historic and current infrastructure and initiatives that have led to this success, and the outlook moving forward into the future. We discuss the evolution of hypertension awareness and control in Canada; contributions made by organizations such as the Canadian Hypertension Society, Blood Pressure Canada, and the Canadian Hypertension Education Program; the amalgamation of these organizations into Hypertension Canada; and the impact that Hypertension Canada has had on hypertension care in Canada. The important contribution that public policy and advocacy can have on prevention and control of blood pressure in Canada is described. We also highlight the importance of population-based strategies, health care access and organization, and accurate blood pressure measurement (including ambulatory, home, and automated office modalities) in optimizing hypertension prevention and management. We end by discussing how Hypertension Canada will move forward in the near and longer term to address the unmet residual risk attributable to hypertension and associated cardiovascular risk factors. Hypertension Canada will continue to strive to enhance hypertension prevention and control rates, thereby improving the quality of life and cardiovascular outcomes of Canadians, while at the same time creating a hypertension care model that can be emulated across the world.

BLOOD PRESSURE CANADA AND THE CANADIAN HYPERTENSION EDUCATION PROGRAM

Historically, management of chronic conditions such as hypertension (HTN) was left to the discretion and initiative of individual family physicians and specialists. Because specialist access in Canada generally requires a referral from a family physician, the vast majority of HTN care occurred, and still occurs, at a primary-care level. Screening, diagnosis, and control of HTN historically had been carried out in an uncoordinated manner; almost solely by primary-care providers (PCPs) with little involvement from secondary and tertiary care providers. The poor outcomes of this laissez-faire approach are well known in Canada where HTN control rates were only 13% in the late 1980s.[1]

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In 1986, a joint federal/provincial government committee developed a HTN prevention and control strategy for Canada that had a main recommendation for creating a coalition of nongovernment and government organizations to implement actions for HTN prevention and control.[2] In 1990, the coalition (later known as Blood Pressure Canada) with the Canadian Hypertension Society developed consensus recommendations for lifestyles for prevention and control of HTN.[3] In the 1990s, Blood Pressure Canada developed a series of guidelines for assessing blood pressure (BP), improving adherence to lifestyle and pharmacotherapy, home/self-assessment of BP and with the Canadian Hypertension Society, the first set of lifestyle recommendations that systematically assessed and graded evidence and recommendations, as well as provided an update to pharmacotherapy and diagnosis, and which through Hypertension Canada, continue being issued till today.[4-9] Various short-lived implementation programs and resources were developed to increase the effect of the recommendations. In the late 1990s, driven by recognition that the control rate for HTN in the United States was twice as high as in Canada, Blood Pressure Canada led the development of an updated national HTN strategy.[10] In considering how to operationalize the strategy, plans were created for a markedly enhanced HTN recommendations process (later named the Canadian Hypertension Education Program [CHEP]).[11]

CHEP was designed to improve BP control by establishing the Recommendations Task Force with a unique process and rigor. However, it was quickly realized in creating CHEP that to be successful much work was needed with implementation, and an Implementation Task Force was established. Subsequently, it was recognized that there was a need to measure and assess what had been achieved, thus the creation of an Outcomes Task Force to use national administrative data to assess the effects of the guidelines. Then, when it looked like the process was not influencing individual practitioners enough, community and system initiatives were put in place that would allow achieving the desired objectives. Along the way, the need to focus not just on the medical model of physician-patient was recognized, so patients, the public, and other health care providers were engaged as well. Coincident with this was the need to prevent HTN rather than just detect and treat, hence the inclusion of public health and policy initiatives, coalitions, and so on. Some of these newer areas are particularly highlighted in this review.

Unique features of the CHEP included oversight by a steering committee of organizations representing primary care, government, the Heart and Stroke Foundation of Canada, and hypertension societies; annual updates to the recommendations; an evolving and extensive implementation program; and, later, an outcomes assessment and evaluation process.[11] The program was associated with large increases in diagnosis of HTN from 1992 to 2013 (57% to 84.3%), drug treatment (35% to 80%), and control of HTN (13% to 68%), and large reductions in the national rates of death and hospitalization from cardiovascular diseases (CVD) acute myocardial infarction, heart failure, and stroke.[12-14] To our knowledge, hardly any other guideline or process of any kind has effected national rates of death and disability to this extent.

In the late 1990s, Blood Pressure Canada with the Canadian Hypertension Society developed a funded leadership position (chair) dedicated to the prevention and control of HTN.[15,16] The HTN prevention and control chair has been in place since 2006. Guided by the chair, Blood Pressure Canada introduced 2 substantive new programs in 2006. One program was to educate, using lay language versions of the CHEP clinical recommendations, Canadians with or at risk for HTN.[17] The other program was to educate the public and health care professionals about dietary sodium and to advocate for policies to reduce dietary sodium.[18] The latter process led to a Blood Pressure Canada policy statement calling for a national strategy to reduce dietary sodium to recommended levels supported by 24 national health and scientific organizations. Blood Pressure Canada was subsequently represented on the intersectorial steering committee of the Canadian Dietary Sodium Strategy overseen by Health Canada 2007-2010. The Canadian Dietary Sodium Strategy called for a reduction in dietary sodium in Canada to 2300 mg/d by 2016 and has been a priority program for the provinces and territories of Canada.[19] In 2009, a process was developed to merge Blood Pressure Canada, CHEP, and the Canadian Hypertension Society that culminated in the formation of Hypertension Canada in 2010. Appendix 2 of the full Pan Canadian Hypertension Framework[20] provides detailed information on the evolution of the effort to improve HTN control in Canada.

The trajectory of the HTN initiative in Canada continues upward. The ad hoc series of HTN