Public education on hypertension: A new initiative to improve the prevention, treatment and control of hypertension in Canada

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High blood pressure is one of the leading risk factors for death. Nevertheless, there is a lack of awareness of hypertension as a risk factor, as well as significant misconceptions about hypertension in the Canadian population. Furthermore, according to the Canadian Heart Health Surveys (1985 to 1992), 42% of hypertensive adult Canadians are unaware of their hypertensive status. A collaboration between Blood Pressure Canada, the Heart and Stroke Foundation of Canada, the Canadian Hypertension Society and the Canadian Hypertension Education Program has been formed to improve public and patient awareness and knowledge of hypertension. The effort will involve the translation of Canadian Hypertension Education Program recommendations for the prevention and management of hypertension to a public level with a broad and evolving dissemination strategy; the training of health professionals to speak to the public and patients on hypertension, coupled with opportunities to speak in forums organized in their local communities; and, media releases and information on hypertension in association with World Hypertension Day and the release of the annually updated public recommendations. Based on higher rates of awareness of hypertension in countries with sustained public education programs on hypertension, it is anticipated that this evolving program will result in improvement in the rates of awareness, treatment and control of hypertension and, ultimately, in lower cardiovascular disease rates in Canada. Public health programs that could reduce the prevalence of hypertension will be integrated into key public recommendations. The program outcomes will be monitored using Statistics Canada national surveys and by specific surveys examining hypertension knowledge in the Canadian population.

Key Words: *Community health; Education; High blood pressure; Hypertension; Knowledge translation; Public health*

Suboptimal blood pressure management is estimated by the World Health Organization to be the leading risk factor for death (1). In Canada, approximately 27% of all adult Canadians and 50% of those over 65 years of age have hypertension (2,3). It is estimated that middle-aged North Americans have a 90% lifetime risk of developing hypertension (4). Hypertension is a significant, growing public health problem, and its under-detection and undertreatment represent a significant concern for all adult Canadians.

Despite the fact that hypertension is a known and modifiable risk factor for stroke, ischemic heart disease, congestive heart failure, kidney failure, peripheral vascular disease and Alzheimer's

Éducation du public sur l'hypertension : nouvelle initiative visant à améliorer la prévention, le traitement et la maîtrise de l'hypertension artérielle au Canada

L'hypertension artérielle (HTA) est un des principaux facteurs de risque de mortalité. Pourtant, l'HTA n'est pas perçue comme facteur de risque et il existe de nombreuses idées fausses sur l'hypertension au Canada. De plus, selon l'enquête *Canadian Heart Health Surveys* (1985-1992), 42 % des adultes hypertendus au Canada ne sont pas conscients de leur état. Aussi un projet de collaboration entre *Blood Pressure Canada*, la Fondation des maladies du coeur du Canada, la Société canadienne d'hypertension artérielle et le Programme d'éducation canadien sur l'hypertension a-t-il vu le jour pour sensibiliser le public en général et les patients en particulier à l'hypertension et pour accroître leurs connaissances sur la maladie. Il consistera en la traduction des recommandations du Programme sur la prévention et la prise en charge de l'HTA, sous une forme vulgarisée, et une stratégie de grande diffusion qui évoluera dans le temps; en la formation de professionnels de la santé sur la façon de parler de l'hypertension au public et aux patients, associée à des possibilités d'exposé dans le cadre de forums organisés dans les communautés locales; en la diffusion de communiqués et d'information à l'occasion de la Journée mondiale de l'hypertension et la publication de la dernière mise à jour annuelle des recommandations destinées au public. À en juger d'après les taux élevés de sensibilisation du public à l'HTA dans les pays où il existe des programmes continus d'éducation sur la maladie, nous croyons que le présent programme évolutif se traduira par une amélioration des taux de sensibilisation à l'hypertension ainsi que de traitement et de maîtrise de l'affection et, par le fait même, par une diminution du taux de maladies cardiovasculaires au Canada. Les programmes de santé destinés au public, susceptibles de réduire la prévalence de l'HTA seront intégrés aux principales recommandations vulgarisées. Les résultats de ces programmes feront l'objet de suivi au moyen d'enquêtes de Statistique Canada, menées à l'échelle du pays et d'enquêtes particulières visant à évaluer les connaissances de la population canadienne sur l'hypertension.

disease (5), the last Physical Measures Survey of Hypertension in Canada (2) found that 42% of adult Canadians with elevated blood pressure were unaware they had hypertension. Part of the reason for the poor level of control may be a lack of knowledge and awareness of hypertension on the part of many Canadians. The public might also have erroneous understandings of hypertension that could influence the prevention, detection, treatment and control of hypertension. Therefore, increasing awareness among patients and health care providers is one strategy to reduce the burden of high blood pressure (6). Raising and maintaining public awareness, however, may be difficult (7), in part due to an apparent misconception of the risk that high blood pressure poses

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at the public level (8). Most Canadians surveyed did not believe they would develop hypertension, and over one-third thought they could control blood pressure on their own despite the fact that the public may not have the skills, knowledge or tools and access to antihypertensive medications to manage hypertension on their own. Furthermore, most respondents believed that hypertension had 'identifiable symptoms'. High blood pressure, or hypertension, has often been referred to as the 'silent killer', specifically because there are no warning signs or indications that one has the condition. If patients believe there are warning signs or symptoms for the condition but don't have such symptoms themselves, then they may think that they are not at risk for high blood pressure and therefore do not need to discuss the issue with a physician. These misconceptions parallel the challenge of professional and public strategies to implement greater awareness and best evidence for blood pressure prevention and control.

There is reason for optimism that multiple strategies to implement hypertension recommendations will improve prevention and control in Canada. Certainly, an increased awareness and the provision of regular recommendations for physicians and health care professionals have been linked to improved treatment of high blood pressure (9). The gap in high blood pressure care, however, requires a parallel provision of public recommendations to complement the success of the Canadian Hypertension Education Program (CHEP).

In Finland and the United States, there are public education programs designed to raise the overall level of awareness and knowledge surrounding hypertension and its causes, prevention and treatment options (10,11). Both countries have a considerably higher proportion of hypertensive adults that are aware of this highly prevalent condition than does Canada (11,12). By the year 2015, 16% of the Canadian population will be over the age of 65 years, which will undoubtedly mean a sharp increase in the percentage of people with high blood pressure, as well as an increase in the absolute number of people with the condition (13). The burden of hypertension is a major public health concern and cannot be addressed unless and until the public becomes more aware of hypertension and its risks. Hence, several new initiatives are being developed to enhance public and patient awareness of hypertension in Canada. Hence, we present herein what we consider to be the first effort to publish public recommendations for the treatment and control of high blood pressure.

TRANSLATION AND DISSEMINATION OF RECOMMENDATIONS TO PATIENTS WITH HYPERTENSION

For seven years, CHEP has developed evidence-based recommendations for the management of hypertension aimed at health care professionals. Starting in 2006, these recommendations will be annually translated into public and patient versions to assist the general public in understanding how these recommendations apply to their lives. Attention to issues such as target education level, ethnic and cultural diversity (14), as well as engagement of the public to empower blood pressure control, will be key determinants of the success of CHEP. These recommendations will be disseminated through lay publications, pamphlets and Web sites. It is anticipated that over the next several years, several versions of the public recommendations will be developed to better address the needs of different segments of the Canadian population. A special tear-out section, which can be found at the end of the present paper, contains the initial 2006 public recommendations for hypertension that highlight key points every Canadian should

know about blood pressure and hypertension. Annual media launches are planned to coincide with the release of the public recommendations.

'TRAIN THE TRAINER' SESSIONS FOR EDUCATING THE PUBLIC ON HYPERTENSION

For several years, CHEP, in collaboration with the Canadian Hypertension Society, Blood Pressure Canada and the Heart and Stroke Foundation of Canada, has developed and made available a slide set with lecture notes on hypertension (15). This slide set is intended to be a resource for health care professionals when conducting public education sessions about hypertension. More recently, the Heart and Stroke Foundation of Canada has revised this slide set. Unfortunately, there was little dissemination of the slide set and no training was provided regarding its proper and most effective use. Starting at the Canadian Cardiovascular Congress on October 21, 2006 (Vancouver, British Columbia), CHEP, in collaboration with the Canadian Hypertension Society and Blood Pressure Canada, will host a workshop to train health care professionals to use the slide set more effectively. Tentatively, the Heart and Stroke Foundation of Canada will identify provincial Heart and Stroke Foundations interested in organizing community sessions where those trained will have an opportunity to educate the public. Further 'Train the Trainer' sessions will be refined and organized based on an evaluation of the initial sessions.

WORLD HYPERTENSION DAY

The year 2006 marked the second annual World Hypertension Day. World Hypertension Day, which was last held on May 13, 2006, is sponsored by the World Hypertension League and is intended to draw attention to the preventable morbidity and mortality associated with uncontrolled hypertension. Dr Arun Chockalingam, Secretary General of the World Hypertension League, led these efforts in Canada. Educational pamphlets were developed on hypertension and were widely distributed through health care professional offices throughout Canada in conjunction with World Hypertension Day. This day attracted substantial media attention and included a media launch, which took place on Parliament Hill on May 13, 2006.

SUMMARY

Evidence-based public education on hypertension and its causes, prevention and treatment options is critical to enhance general public awareness of hypertension and to assist in advocating health policies and regulation to improve hypertension prevention. Furthermore, education is required to ensure that the Canadian public has regular assessments of their blood pressure to identify early those at risk and to provide timely and appropriate further investigation and treatments for those who need it. Greater patient education is also fundamental to enhance patient adherence to therapy. A sustained and expanded public education program will likely lead to improvements in the diagnosis of hypertension and, ultimately, to improvements in hypertension treatment and control. The success of the program will be monitored by the use of Statistics Canada Population Health Surveys and by periodically administering more detailed surveys of public knowledge regarding hypertension.

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REFERENCES

1. Ezzati M, Lopez AD, Rodgers A, Vander Hoorn S, Murray CJ; Comparative Risk Assessment Collaborating Group. Selected major risk factors and global and regional burden of disease. *Lancet* 2002;360:1342-3.
2. Evans WE, Relling MV. Pharmacogenomics: Translating functional genomics into rational therapeutics. *Science* 1999;286:487-91.
3. Wolf-Maier K, Cooper RS, Banegas JR, et al. Hypertension prevalence and blood pressure levels in 6 European countries, Canada, and the United States. *JAMA* 2003;289:2363-9.
4. Vasan RS, Beiser A, Seshadri S, et al. Residual lifetime risk for developing hypertension in middle-aged women and men: The Framingham Heart Study. *JAMA* 2002;287:1003-10.
5. Khan NA, McAlister FA, Lewanczuk RZ, et al; Canadian Hypertension Education Program. The 2005 Canadian Hypertension Education Program recommendations for the management of hypertension: Part II – therapy. *Can J Cardiol* 2005;21:657-72.
6. Chockalingam A, Campbell N, Ruddy T, Taylor G, Stewart P. Canadian national high blood pressure prevention and control strategy. *Can J Cardiol* 2000;16:1087-93.
7. Petrella RJ, Speechley M, Kleinstiver PW, Ruddy T. Impact of a social marketing media campaign on public awareness of hypertension. *Am J Hypertens* 2005;18:270-5.
8. Petrella RJ, Campbell NR. Awareness and misconception of hypertension in Canada: Results of a national survey. *Can J Cardiol* 2005;21:589-93.
9. Campbell NR, McAlister FA, Brant R, et al; Canadian Hypertension Education Process and Evaluation Committee. Temporal trends in antihypertensive drug prescriptions in Canada before and after introduction of the Canadian Hypertension Education Program. *J Hypertens* 2003;21:1591-7.
10. Lenfant C. Reflections on hypertension control rates: A message from the director of the National Heart, Lung, and Blood Institute. *Arch Intern Med* 2002;162:131-2.
11. Nissinen A, Kastarinen M, Tuomilehto J. Community control of hypertension – Experiences from Finland. *J Hum Hypertens* 2004;18:553-6.
12. Joffres MR, Hamet P, MacLean DR, L'italien GJ, Fodor G. Distribution of blood pressure and hypertension in Canada and the United States. *Am J Hypertens* 2001;14:1099-105.
13. Manuel DG, Leung M, Nguyen K, Tanuseputro P, Johansen H; Canadian Cardiovascular Outcomes Research Team. Burden of cardiovascular disease in Canada. *Can J Cardiol* 2003;19:997-1004.
14. Stamler J, Elliott P, Appel L, et al. Higher blood pressure in middle-aged American adults with less education-role of multiple dietary factors: The INTERMAP study. *J Hum Hypertens* 2003;17:655-775.
15. The Canadian Hypertension Society. <www.hypertension.ca> (Version current at April 26, 2006).