

Hypertension management by family physicians

Is it time to pat ourselves on the back?

Karen Tu MD MSc CCFP FCFP

Hypertension is the number 1 risk factor for mortality in the world¹ and an important risk factor for cardiovascular disease and stroke.^{2,3} Hypertension is typically diagnosed and managed in the outpatient setting and is one of the most common reasons to visit a family physician.⁴ With almost a quarter of the adult population and almost half of people aged 50 years and older having hypertension, the burden of this disease is undeniably high.⁵ As treatment of hypertension is associated with a 20% to 25% reduction in cardiovascular events,⁶ getting control of this generally asymptomatic disease might be one of the most important preventive measures that family physicians can take.

Improving diagnostic and control rates

Previous treatment and control rates of hypertension in Canada measured from 1986 to 1992 were dismal at 39% and 16%, respectively.⁷ For quite a while it appeared as though the Americans, with 58% treated and 31% controlled from 1988 to 2000, were doing a much better job.⁸ More recently, in an Ontario actual measures survey, treatment and control rates were measured at 81% and 65%, respectively.⁹ This, along with studies in which administrative data identified trends of increasing prevalence of physician-diagnosed hypertension⁵ and decreased mortality for patients with hypertension over the past decade,¹⁰ suggests that family physicians have improved in their management of hypertension.

In this issue of *Canadian Family Physician* there are 3 examples of the evaluation of hypertension management in real-world settings in Canada. In Ontario (page 719)¹¹ and Alberta (page 735)¹² similar treatment and control rates were found in chart reviews in family physician offices. In both provinces, the rate of treatment was above 85%. Although the control rate of about 45% found in the real-world studies^{11,12} is not as impressive as the control rate of 65% found in the actual measures survey,⁹ measurement techniques and settings for blood pressure (BP) measurement differed between the studies and the survey. In the real-world setting, control rates were measured using BP measurements taken in the physicians' offices and recorded in the clinical notes. This is compared with outpatient measurements taken by a nurse using a BP measuring device—the BpTRU—which would throw out the first measurement and average a subsequent 5 readings taken when the patient was left alone, thereby likely decreasing the effect of

white-coat hypertension.⁹ Which measurement technique is more appropriate to base treatment decisions on can be debated, but one can imagine that these control rates might not be as far apart as they initially appear. In addition, in these real-world studies neither the length of time a patient has been diagnosed with hypertension nor at what point in the diagnostic time frame the BP measurements are being used to assess control rates can be taken into account. Even in a randomized controlled trial setting, with a much stricter environment and more hypertension- and physician-focused interventions, control rates for hypertension ranged from 61% to 68% after 5 years of study participation.¹³ Taken in the context of a busy family medicine practice where patients come in with multiple complaints, I would say family physicians are doing quite well.


A Nova Scotia study focusing on patients with diabetes and hypertension had a control rate of 27% and an average BP value of 135/73 mm Hg among the study participants (page 728).¹⁴ Compared with the landmark United Kingdom Prospective Diabetes Study,¹⁵ in which the average BP value of patients with diabetes was only 144/82 mm Hg, it would appear that physicians are recognizing BP targets and are at least trying to achieve them.

It is noteworthy that this improvement has occurred in a setting without pay-for-performance or quality indicator measurements. These findings might be reflective of the Canadian Hypertension Education Program, established in 1999,¹⁶ which provides annual updates of national hypertension guidelines (page 697),¹⁷ with a mandate to disseminate information and educate health care providers on the management of hypertension.

Room for improvement?

The Canadian Hypertension Education Program's recent focus on getting patients with diabetes to achieve target BP values is likely prudent given that those with diabetes are at a high risk of cardiovascular events. Of course there is always room for improvement—but how much better can family physicians be expected to do? Certainly there are patient factors that help determine BP control, which the family physician might be unable to alter. Although rates of antihypertensive persistence have improved, nearly a quarter of elderly patients taking antihypertensives did not receive renewed prescriptions for antihypertensive medications 2 years after initiation.¹⁸ Strategies to improve patient medication compliance and persistence are needed. Whether audit and feedback or more self-reflection on hypertension

Cet article se trouve aussi en français à la page 686.

management by physicians will lead to further improvements warrants investigation. All in all, I do think it is time to pat ourselves on the back. Substantial improvements have been made—job well done! 

Dr Tu is a family physician in the Toronto Western Hospital Family Health Team, a Scientist at the Institute for Clinical Evaluative Sciences in Toronto, Ont, and an Associate Professor in the Department of Family and Community Medicine at the University of Toronto.

Competing interests

None declared

Correspondence

Dr Karen Tu, Institute for Clinical Evaluative Sciences, G1 06, 2075 Bayview Ave, Toronto, ON M4N 3M5; e-mail karen.tu@ices.on.ca

The opinions expressed in commentaries are those of the authors. Publication does not imply endorsement by the College of Family Physicians of Canada.

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(9343):1347-60.
2. Lawes CM, Bennett DA, Lewington S, Rodgers A. Blood pressure and coronary heart disease: a review of the evidence. *Semin Vasc Med* 2002;2(4):355-68.
3. Lawes CM, Bennett DA, Feigin VL, Rodgers A. Blood pressure and stroke: an overview of published reviews. *Stroke* 2004;35(3):776-85. Epub 2004 Feb 19.
4. Sloane PD, Ebell MH. Introduction to common problems. In: Sloane PD, Slatt LM, Ebell MH, Jacques LB, Smith MA, editors. *Essentials of family medicine*. 5th ed. Hagerstown, MD: Lippincott Williams & Wilkins; 2007. p. 119-30.
5. Tu K, Chen Z, Lipscombe LL; Canadian Hypertension Education Program Outcomes Research Taskforce. Prevalence and incidence of hypertension from 1995 to 2005: a population-based study. *CMAJ* 2008;178(11):1429-35.
6. Gueyffier F, Boutitie F, Boissel JP, Pocock S, Coope J, Cutler J, et al. Effect of antihypertensive drug treatment on cardiovascular outcomes in women and men. A meta-analysis of individual patient data from randomized, controlled trials. *Ann Intern Med* 1997;126(10):761-7.
7. Joffres MR, Ghadirian P, Fodor JG, Petrasovits A, Chockalingam A, Hamet P. Awareness, treatment, and control of hypertension in Canada. *Am J Hypertens* 1997;10(10 Pt 1):1097-102.
8. Hajjar I, Kotchen TA. Trends in prevalence, awareness, treatment and control of hypertension in the United States, 1988-2000. *JAMA* 2003;290(2):199-206.
9. Leenen FH, Dumais J, McInnis N, Turton P, Stratyckuk L, Nemeth K, et al. Results of the Ontario survey on the prevalence and control of hypertension. *CMAJ* 2008;178(11):1441-9.
10. Tu K, Chen Z, Lipscombe LL; Canadian Hypertension Education Program Outcomes Research Taskforce. Mortality among patients with hypertension from 1995 to 2005: a population-based study. *CMAJ* 2008;178(11):1436-40.
11. Tu K, Cauch-Dudek K, Chen ZL. Comparison of primary care physician payment models in the management of hypertension. *Can Fam Physician* 2009;55:719-27.
12. Houlihan SJ, Simpson SH, Cave AJ, Flook NW, Hurlburt ME, Lord CJ, et al. Hypertension treatment and control rates. Chart review in an academic family medicine clinic. *Can Fam Physician* 2009;55:735-41.
13. ALLHAT Officers and Coordinators for the ALLHAT Collaborative Research Group. The Antihypertensive and Lipid-Lowering Treatment to Prevent Heart Attack Trial. Major outcomes in moderately hypercholesterolemic, hypertensive patients randomized to pravastatin vs usual care: the Antihypertensive and Lipid-Lowering Treatment to Prevent Heart Attack Trial (ALLHAT-LLT). *JAMA* 2002;288(23):2998-3007.
14. Putnam RW, Buhariwalla F, Kendrick L, Goodfellow M, Goodine R, Hall J, et al. Drug management for hypertension in type 2 diabetes in family practice. *Can Fam Physician* 2009;55:728-34.
15. UK Prospective Diabetes Study Group. Tight blood pressure control and risk of macrovascular and microvascular complications in type 2 diabetes: UKPDS 38. *BMJ* 1998;317(7160):703-13. Erratum in: *BMJ* 1999;318(7175):29.
16. Canadian Hypertension Education Program. *2009 CHEP recommendations for the management of hypertension*. Kingston, ON: Canadian Hypertension Society; 2009. Available from: <http://hypertension.ca/chep/recommendations-2009>. Accessed 2009 Jun 9.
17. Canadian Hypertension Education Program. 2009 Canadian Hypertension Education Program recommendations. An annual update. *Can Fam Physician* 2009;55:697-700.
18. Tu K, Campbell NR, Duong-Hua M, McAlister FA. Hypertension management in the elderly has improved. Ontario prescribing trends, 1994 to 2002. *Hypertension* 2005;45(6):1113-8.