

CONTROL OF HYPERTENSION IN CANADA: PLANS FOR IMPROVEMENT

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The positive effects of optimal blood pressure (BP) control on morbidity and mortality have been clearly established. Nevertheless, awareness and control of hypertension among Canadians is far from being perfect. The Canadian Heart Health Surveys taught us that only 16% of the population have their BP controlled to current standards and that 42% are actually unaware of their hypertension. We also know that uncontrolled systolic hypertension in elderly subjects has significant consequences and that obesity is on the rise. It is predicted that the number of Canadians that have major cardiovascular events will increase, which will place additional burden on healthcare resources. Poor BP control can be attributed to: patient non-compliance; acceptance of inadequate BP control by clinicians; lower BP goals; and difficulty in achieving adequate BP control using monotherapy. While the Canadian Hypertension Society has revised guidelines and have established a working group to expedite their implementation, new approaches appear to be required to dramatically improve the level of BP control.

Working in conjunction with a tripartite team of pharmacists, nurses and physicians, we have developed an "intervention" that uses a computerised, telephone-based voice activated response system to enhance a multidisciplinary hypertension support program. The intervention was designed to empower patients to be responsible for monitoring their BP and compliance and to facilitate communication with healthcare providers. Actual pharmacy prescription refill and renewal data are merged with responses that patients provide to questions on compliance and BP control. Decision-based algorithms are used to offer patient counselling and prescription refill and renewal reminder calls. In the event that BP is inadequately controlled and/or if patients are non-compliant, patients are linked with nurses, who in turn, can provide appropriate counselling to patients and/or refer the patients to their physician or pharmacist as appropriate. The system also generates monthly reports to the treating physician and pharmacist on compliance and blood pressure control, which we expect will optimise therapy. We believe that this multidisciplinary, trans-professional approach is one of the key goals in improving the treatment of hypertension.

We have undertaken a randomised controlled trial called LOYAL, which will compare the impact of this multidisciplinary, information technology supported program versus usual care on blood pressure control in primary care. We hypothesise that the program will enhance compliance with pharmacotherapy, the use of higher doses of anti-hypertensive agents and the use of more anti-hypertensive agents when appropriate, without adversely impacting quality of life. The primary outcome measure is the mean change (Δ) in 24-hour systolic and diastolic BP levels measured using ABPM. Secondary objectives are to assess the likely mechanisms that account for the results for the primary objective by measuring: refill compliance to the BP lowering regimen, the number of dosage and/or type of medication changes over the 12-month study period and the time interval between prescriptions to initiate these changes, the number of different anti-hypertensive agents used; the number and nature of interventions by pharmacists, nurses and physicians. The study will also compare the subject's health related quality of life at baseline and at 12-months and model the cost-effectiveness of the system from a third party payer's perspective.

Even though the results of the controlled trial are forthcoming, already positive benefits have been derived from the program. Nurses, physicians and pharmacists in the community and the Faculties of Pharmacy, Medicine and Nursing are working with new attitudes and perceptions. Individuals with hypertension have readily volunteered to help pilot and have provided feedback to improve the program prior to the study's implementation. Additionally, novel partnerships have been established between the CHUM and the Association Québécoise des Pharmaciens Propriétaires, the Régie Régional Montréal-Centre and Laval the Québec Réseau Cardiovasculaire of the FRSQ, the Québec Diabetes Association, the Fondation des Maladies du Cœur du Québec, the Bannière Clinique Santé de Médis Services Pharmaceutiques, the Canadian Hypertension Society, the Agence d'Évaluation des Technologies et des Modes d'Intervention en Santé (AETMIS) and, le Centre Hospitalier Ambulatoire Régional de Laval.

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