

HOP to ITT: Hypertension Optimization Program to Implement Treatment Targets

Hypertension is common and present in about 10% of the adult population or about 2 million people in Canada. For the most part patients with hypertension are under-diagnosed and under treated. The Canadian Heart Health Survey has shown that 42% of patients are unaware that they have hypertension, 19% are aware but remain untreated, 23 % are treated and not controlled and only 16% of hypertensive patients are treated and controlled.

Hypertension is a significant risk factor for:

- Cerebrovascular disease
- Coronary artery disease
- Congestive heart failure
- Renal failure
- Peripheral vascular disease

The clinical challenge is to identify, treat and control as many hypertensive patients as possible and to ensure long-term adherence. In doing so the goal is to achieve clinical outcomes including:

Patients Younger than 60

- Reduce the risk of stroke by 42%
- Reduce the risk of coronary event by 14%

Patients Older than 60

- Reduce overall mortality by 20%
- Reduce cardiovascular mortality by 33%
- Reduce incidence of stroke by 40%
- Reduce coronary artery disease by 15%

The CHS defines hypertension as:

Blood pressure (BP) 140/90 mmHg during 1-5 visits, with an average of two readings per visit, over a six-month period, if the BP is mildly elevated and there is no hypertensive target organ damage. It may take up to 5 visits over six months and 10 office BP readings to rule in or out the diagnosis of hypertension. This schedule itself may be a deterrent to patient attendance and compromise the identification of hypertension. A BP of 180/105 or presence of TOD (target organ damage) at any visits mandates therapy.

The CHS recommends Home BP monitoring in selected patients to improve adherence and to monitor hypertensive diabetic patients and the use of Ambulatory BP monitoring to exclude white coat hypertension. A BP of > 130/85 on ABP or HBP is considered elevated. HBP devices should have met the standards of

the Association for the Advancement of Medical Instrumentation and/or The British Hypertension Society. Approved devices were recently reviewed in the BMJ¹. Most commercially available units have not been formally evaluated.

Home BP monitoring may also be useful to:

- Confirm the initial diagnosis of hypertension
- Fast track the diagnosis of hypertension
- Exclude white coat hypertension
- Improve patient adherence and control
- Empower the patient to manage his/her own disease
- Evaluate medication compliance
- Monitor medication titration

Home BP, “especially those recorded on the second day, correlated significantly, and more tightly than clinic BP, with LVMI, AER and” global indices of target organ damage.² Despite this neither the CHS 1999 or 2001 recommendations, the JNC VI or the WHO-ISH 1999 Guidelines for the Management of Hypertension delineate specific protocols for Home BP monitoring.

The HOP to ITT protocol is intended to Bridge that Gap.

An Ambulatory BP recording provides approximately 2 BP readingshour or approximately 48 readings in a 24 hour period. In the HOP to ITT protocol the patient is advised to obtain 4 Home BP readings per day for one week then 4 readings per day, 2 days per week (one work-day and one week-end day) for an additional 3-7 weeks giving total of approximately 52-84 readings.

Initial readings in the AM should be taken before arising and all other readings should be taken after 5 minutes of seated rest. Values may be averaged on a daily, weekly and monthly basis to provide mean systolic and diastolic readings.

Diagnostic and treatment decisions may be made after one month of monitoring. Patients may be given initiation and titration parameters base on Home BP readings or further monitoring may be warranted in borderline cases. Maintenance monitoring is encouraged according to the twice-weekly schedule, to ensure long-term adherence.

See the [HOP to ITT BP Calendar](#) for further instructions.

¹ [E. O'Brien et al. Blood pressure measuring devices: Recommendations of the European Society of Hypertension. BMJ 2001;332: 531-536.](#)

² *G. Mulè, E. Nardi, G. Piazza, V. Volpe, F. Raspanti, D. Ferrara, M. Federico, G. Andronico, S. Cottone, G. Cerasola. Istituto di Clinica Medica e Malattie Cardiovascolari, University of Palermo, Italy. Value of Home Blood Pressure As Predictor of Target Organ Damage In Mild Arterial Hypertension. Abstract presented ASH, San Francisco May 2001.*