The Canadian Hypertension Education Program (CHEP)
Putting Evidence Into Practice

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Disclosure Statement of Financial Interest

I, Norm Campbell DO NOT have a financial interest/arrangement or affiliation with any healthcare related companies that could be perceived as a real or apparent conflict of interest in the context of the subject of this presentation.
Objectives

- Discuss the Canadian Hypertension Education Program approach and impact to date.
- Review the evolution of the Canadian effort and future plans.
The Canadian Effort to Prevent and Control Hypertension.

Can Other Countries adopt Canadian Strategies?

Improvement in key clinical indicators of hypertension management in Canada

CHHS 1985-1992

- Treated and controlled: 43
- Aware Not Treated: 22
- Treated not Controlled: 13
- Not Aware: 16

CHMS 2012/13

- Treated and controlled: 68
- Aware Not Treated: 12
- Treated not Controlled: 16
- Not Aware: 4
Lifestyle Changes After Hypertension Diagnosis

Age Standardized Rates of Lifestyle Change After a Hypertension Diagnosis

- Smoking: -1.6%
- BMI 25+: +1.4%
- Inactive: -2.4%
- Alcohol 9+: -0.1%

A is pre diagnosis and B is up to 2 years post diagnosis

Source NPHS (1994-2002):
Canadian Hypertension Education Program (CHEP) Concept Development

1990s
- Discussions on how to improve blood pressure control

2000
- CHEP established
  - Knowledge dissemination program
  - Rigorous annually updated program

2003
- Formal outcomes program added
Hypertension Canada

Steering committee - now operations committee

Evidence-Based Recommendations Task Force

Implementation Task Force

Outcomes Research Task Force

HSFC CIHR Chair in Hypertension Prevention and Control

Public policy
Oversight for National Hypertension Strategy
The Recommendations Development Process is Designed to **Convince** Canadians and especially Canadian health care professionals that the recommendations are the **right** ones for Canadians.
The Canadian Hypertension Education Program: Key Messages

- Know Current BP
- Encourage Home BP monitoring
- Assess and Manage CV Risk
- Sustainable Lifestyle Modification
- Treat to Target
CHEP: Diagnostic Algorithm

Measure Blood Pressure in All Adults at All Appropriate Visits

Elevated BP Reading(s) – office, home or pharmacy

Hypertension Visit 1
History, Physical Examination and Diagnostic Tests

BP ≥180/110
Hypertension

AOBP ≥ 135/85
OBPM ≥ 140/90
NO
No Hypertension
(Annual BP Measurement Recommended)

YES

Out of Office Assessment
– ABPM (preferred)
– HBPM Diagnostic Series

Alternate Method
(IF ABPM or HBPM is not available)

Hypertension Visit 2
(Within 1 Month)
Daytime ABPM or HBPM ≥135/85
24-hour ABPM ≥130/80

NO

White Coat Hypertension
If the average HBPM <135/85, it is advisable to perform ABPM or repeat HBPM to confirm

YES

Hypertension

No Hypertension
(Annual BP Measurement Recommended)

OBPM:

Hypertension Visit 2
≥ 140 SBP or ≥ 90 DBP

≥ 160 SBP or ≥ 100 DBP
Hypertension

< 160/100

Hypertension Visit 3

< 140/90

Hypertension Visit 4-5
≥ 140 SBP or ≥ 90 DBP
No Hypertension
(Annual BP Measurement Recommended)

< 140/90

Measurement using electronic (oscillometric) upper arm devices is preferred over auscultation

ABPM: Ambulatory Blood Pressure Measurement
AOBP: Automated Office Blood Pressure
HBPM: Home Blood Pressure Measurement
OBPM: Office Blood Pressure Measurement
CHEP: IMPLEMENTATION

Can J Cardiol 2006;22:595-98
Implementation requires strong partnerships of committed people and organizations.

“Nothing is impossible if you have the strength, determination, and perseverance to make someone else do the hard part!”
CHEP Implementation: Engage Stakeholders

Engage

- Patients and the Public
- ALL Health Care Professionals

Active Participation

- Individuals directly involved in the management of hypertension
- Individuals who oversee the health care system
Implementation: Key Steps

Develop Resources
- Patient educational materials that suit them
- Keep it new and interesting
- Remove identified barriers to access resources

Agreement Among National Organizations
- Harmonize hypertension recommendations

Establish networks of health care professional organizations
- Including training schools
Implementation: Access and Dissemination

www.hypertension.ca

- For health care professionals
- For patients
Implementation: Access and Dissemination

www.whleague.org

- For health care professionals
- For health care professional organizations
Have hypertension management and outcomes changed in Canada since CHEP?

- Improvements in awareness
- Improvements in treatment
- Changes mirror CHEP recommendations
- Increasing intensity of therapy over time
- Improvements in BP control
- Improvements in outcomes
Changes in Stroke, Heart failure (CHF) and Acute Myocardial Infarction (AMI) after CHEP starts in 1999.
Antihypertensive Drug Prescription rate in Canada

CVD rate in Canada (per 100,000)

CHEP starts

year


rate/10,000

2600 2500 2400 2300 2200 2100 2000 1900 1800 1700 1600 1500 1400 1300 1200 1100 1000


245 225 205 185 165 145 125
Summary-Discussion

• CHEP was designed to be a model that could be expanded to CVD risk and or to other substantive chronic non communicable diseases /risks.

• Aspects of the CHEP program can be used in other countries with adoption to local context (Yaroslavl Russia, Iran etc.)
New programs and directions

- Internet based education programs
- Mobile device app
- Pharmacy based htn care
- Automated CV risk assessment
- Core curriculum videos