

The logo for CHAP+AP features the text "CHAP+AP" in a bold, red, sans-serif font. A thin, golden-yellow line arches over the letters, and a small red cross is positioned between the "P" and the second "A".

**CHAP+AP**

**Cardiovascular Health Awareness Program + Action Plan**  
**Programme de sensibilisation à la santé cardiovasculaire + plan d'action**

# Cardiovascular Health Awareness Program

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FHT/CHAP Workshop

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# Management of hypertension in Canada

- Detection, treatment & control of hypertension remains sub-optimal ('rule of halves')
- Large number of people unaware they have high blood pressure
- “White-coat” & “masked” hypertension highly prevalent
- Recommended techniques for BP measurement rarely followed by family physicians (FPs) or their staff
- Effective community-based interventions linked to primary care have the potential to shift the risk profile at the population level

# Benefits of better management of hypertension

- Decrease of 10/5 mm Hg (one medication or a change in lifestyle) reduces:
  - Stroke by 38%
  - Heart attack by 15%
  - Heart failure by 50%
  - Death by 10%

# What is CHAP?

- Mobilizes the community for stroke/CVD prevention by recruiting participation of family physicians, pharmacists/pharmacies, community health nurses, volunteers, local organizations, public health units, older adults, and other community stakeholders.
- Integrates both 'upstream' and 'downstream' stroke/CVD prevention activities and facilitates partnership and coalition formation among stakeholders
- Weekday BP and stroke/CVD risk factor assessment sessions for older adults held in local pharmacies and other community settings

# What is CHAP? Continued...

- Trained peer volunteers help participants to measure and record BP with an accurate, automated device (BPTru™) and fill out a standardized CVD and stroke risk profile
- BP and risk factor information captured via fax-to-database technology and sent to family physicians
- Session results available to participants
- Participants also receive education materials and local resources targeted to specific modifiable risk factors.
- A community health nurse and pharmacist available to assess participants with high BP

# CHAP Development

**Phase 1:** Is it feasible to offer CV health promotion sessions in pharmacies?

- **Dundas pilot (2001)**
- **Ottawa pilot (2002)**
- Ottawa and Hamilton (**CHAT – 2003**)

**Phase 2:** Can CHAP be successfully implemented at a community level?

- Community-wide implementation in Grimsby & Brockville (**CHAP – 2004**)
- Airdrie Cardiovascular Health Awareness and Management Program (**A-CHAMP – 2005-2006**, Alberta)

**Phase 3:** Does CHAP work at a community level?

- **Multi-community implementation and evaluation (C-CHAP – 2006-08)**

**Phase 4:** Can CHAP be sustained at a community level?

- **Sustaining and evaluating an enhanced CHAP (CHAP+AP – 2008)**
- **Reinforcing CHAP+AP (2008-2010)**

# C-CHAP

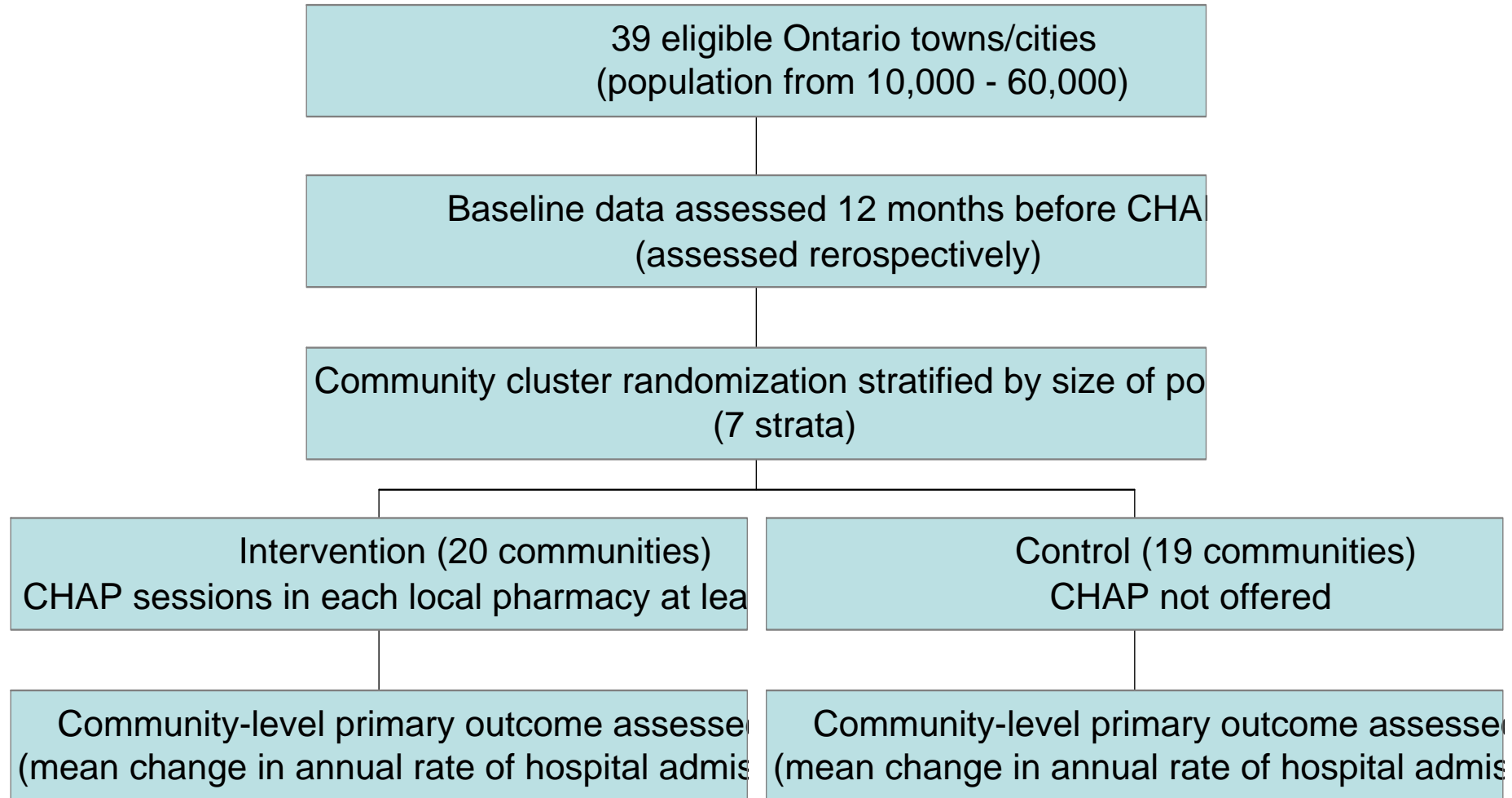
## Key Objectives / Questions

- To evaluate the effectiveness of CHAP in reducing CVD outcomes in communities:
  - primary outcome measure: change in the mean annual rate of hospital admission for acute myocardial infarction, congestive heart failure, and stroke (composite end-point) among residents aged  $\geq 65$  years in intervention compared to control communities one year before to one year after the program, based on routinely-collected, population-based administrative health data

# C-CHAP Methods

- 39-cluster community-level RCT
- 39 eligible communities randomly allocated to CHAP or no CHAP
- In CHAP communities, residents aged  $\geq 65$  years invited to attend CHAP sessions in pharmacies over 10 weeks
- Trained volunteers delivered the program with support from pharmacists, community nurses and local organisations
- BP measurement and feedback to family physicians
- Process measures: community mobilization/engagement/contribution; FP, pharmacist, volunteer surveys; participation and risk status of older adults

# Study flowchart



# Study communities: baseline

	CHAP (n=20)	Control (n=19)
Mean population size (SD)	20,337 (10,507)	27,360 (13,281)
Mean percentage of residents $\geq 65$ years of age (SD)	16.8 (4.1)	16.5 (3.4)
Average median total income (\$CAN) of population $\geq 15$ y (SD)	22,507 (4,115)	22,204 (3,419)
Mean number of FPs (SD)	16.7 (8.1)	19.1 (7.9)
Mean number of pharmacies (SD)	7.3 (3.3)	7.8 (3.2)
Mean admission rate for MI, CHF and stroke per 100 people $>65$ yrs in 2001 (SD)	7.8 (1.4)	8.1 (1.2)

# Implementation of C-CHAP

- RFP was publicized in each of the 20 intervention communities in January 2006 to identify a local organization that would lead CHAP implementation
- 26 submissions received, 20 selected
- Seniors Centres, Hospitals, Victoria Order of Nurses, YMCAs, Community Care Access Centres, Not-for-profit home care organizations, Meals on Wheels and Neighbourly Services, District Stroke Centres, Community Centres

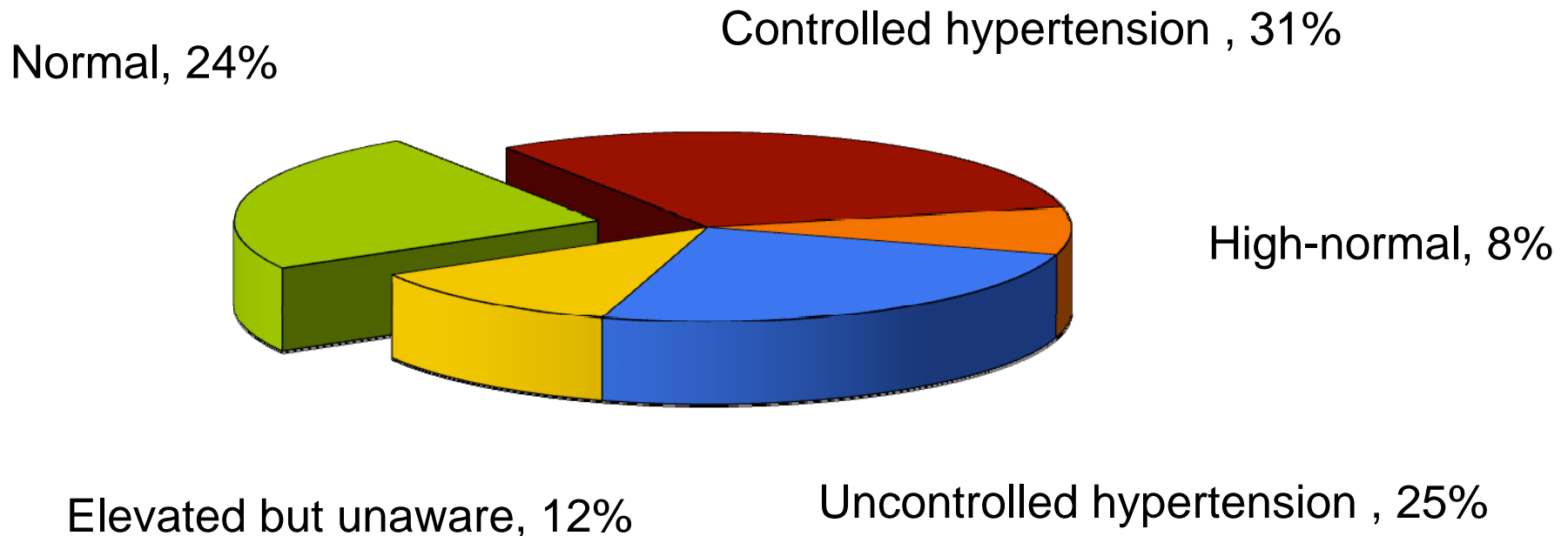
# C-CHAP: Implementation

- 20 communities successfully launched CHAP
- 214/341 physicians 'actively participated'
- 129/145 pharmacies held sessions
- 577 volunteers recruited & trained (547 supported sessions)
- 1,265 sessions held
- 27,358 assessments
- 15,889 participants
- Approximately 25% (n=15,889) of older adults in communities attended at least one CHAP session

# C-CHAP Participant Characteristics

<b>Characteristic (Self-Reported)</b>	<b>Overall CHAP Program (n = 15,889)</b>
Age (y): Mean (SD)	71.9 (9.7)
Female (%)	60
Diagnosed with Diabetes (%)	15
Diagnosed with High Cholesterol (%)	41
Diagnosed with Hypertension (%)	54
History of Transient Ischemic Attack (%)	8
High Blood Pressure (Systolic $\geq 140$ mmHg; $\geq 130$ mmHg if Diabetes, %)	37
Smokers (%)	9
Physically Inactive (%)	20
Low Fruit & Vegetable Intake (< 5 servings/day, %)	27
Body Mass Index (>25, %)	63
High Alcohol Consumption (2 or more drinks/day, %)	10
Low Fruit & Vegetable Intake (< 5 servings/day, %)	27

# BP status of C-CHAP participants (n=15,064)



**76% of participants high-risk for future CVD and stroke morbidity and mortality (uncontrolled or controlled hypertension, elevated but unaware, or high-normal blood pressure).**

# Awareness to Action: CHAP+AP

## Key Objectives

- To support delivery of a robust, year-round, sustainable CHAP model in the 20 CHAP communities
- To develop tools and best practices toward wide adoption and ongoing quality improvement of CHAP across the province and Canada

# CHAP+AP: Overview

- Pharmacy or other community-based sessions held 2-5 times/month
- Recruitment of participants:
  - Patients identified as high risk in C-CHAP invited via personalized letters from their FP
  - Other high-risk individuals identified and referred by FP to CHAP+AP via a ‘prescription or ‘ticket’ system
  - Community-wide advertising

# CHAP+AP

## New components

- CHAP+AP sessions less-frequent, but on-going
- Targeting patients at higher risk of stroke or CVD (BP  $\geq$ 140/90 or 130/80 if diabetes present)
- Enhanced components to help high risk older adults address modifiable risk factors for stroke and other chronic diseases, as well as ensure access to accurate out-of-office BP measurement:
  1. creation of a personalized action plan to support changes in modifiable risk factors; Heart and Stroke Foundation (H&SF) BP Action Plan e-tool will be piloted
  2. peer mentorship support to assist in management of hypertension and altering lifestyle factors through time; education and referral to existing health promotion programs and resources
  3. pharmacist consultation - targeted review of BP medication or MedsCheck

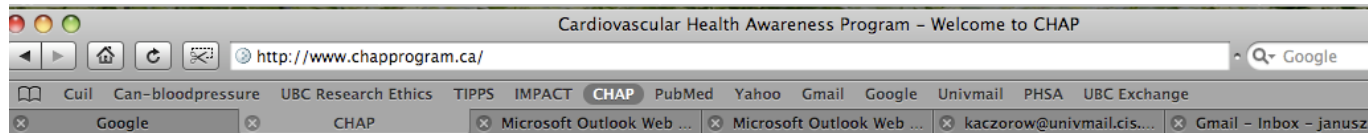
# CHAP+AP


## Preliminary Data

<b>Communities Involved in CHAP</b>	N=20
<b>Number of Assessments and Feedback to Family Physicians</b>	N=2166
<b>Number of Trained Volunteers</b>	N=137
<b>Number of Pharmacies and Community Settings</b>	N=102
<b>Number of Participating Physicians</b>	N=99

# More Information

[www.chaprogram.ca/](http://www.chaprogram.ca/)





## A Community Approach to Better Cardiovascular Health!


Cardiovascular Health Awareness Program  
Programme de sensibilisation à la santé cardiovasculaire

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### Welcome to CHAP



The Cardiovascular Health Awareness Program (CHAP) is designed to support prevention of cardiovascular disease and stroke in communities. The program relies on the participation of family physicians, pharmacists, volunteers, community organizations and senior residents. Older adults are invited to attend volunteer-led sessions in local pharmacies for cardiovascular risk assessment, including blood pressure (BP) monitoring. Participants take home a copy of their cardiovascular risk profile, as well as resources on modifiable risk factors; program results are sent to each participant's family physician and regular pharmacist to enhance care.

#### Quick Links

- [Check My Results](#)
- [Program Schedules](#)
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- [Cardiovascular Health Resources](#)
- [Information for Pharmacists](#)
- [Become a Volunteer](#)
- [CHAP Coordinators](#)