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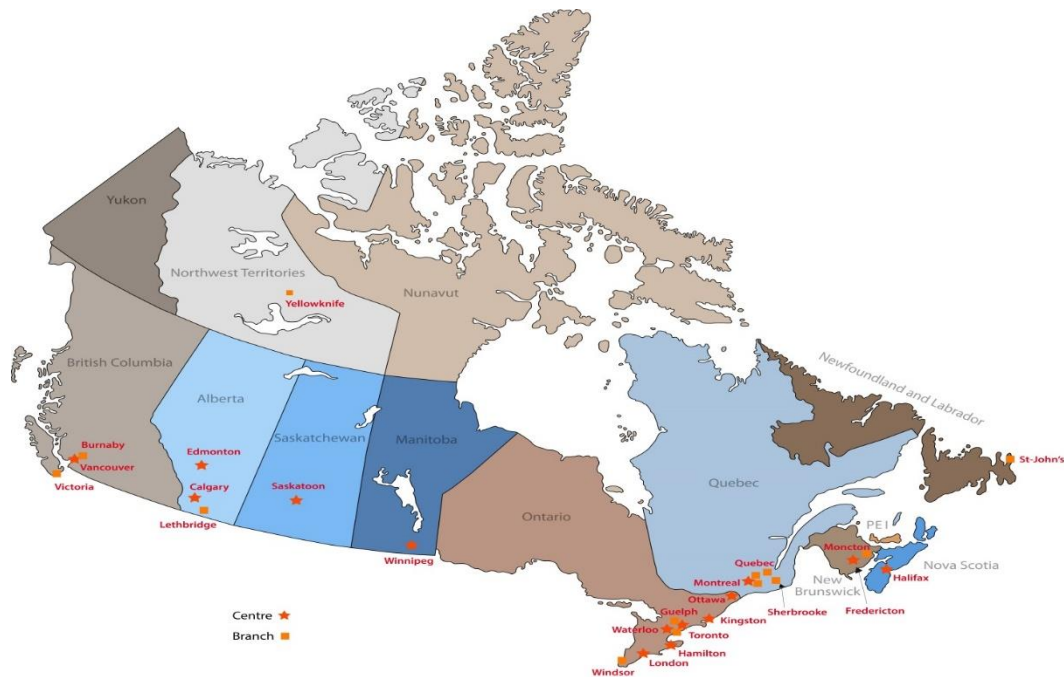
## The Canadian Community Health Survey: what's new in the 2015 cycle?

with **Andrew MacKenzie**  
Statistics Canada

January 25, 2017

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## Our speaker today: Andrew MacKenzie



- Section Chief in the Health, Justice and Special Surveys Branch at Statistics Canada.
- He is responsible for Canada's largest national health survey as well as the development of a new survey to study children's health.
- The Canadian Community Health Survey (CCHS) began in 2000 and uses a raw sample of more 100,000 households per year to produce estimates for 110 health regions across Canada.
- The Canadian Health Survey for Children and Youth began development in early 2014 with extensive user consultations. The pilot test launched in fall 2016. The pilot test data will be available in fall 2017 and the first full cycle will launch in fall 2018.



Statistics Canada  
www.statcan.gc.ca

# Redesign of the Canadian Community Health Survey- Annual Component

CRDCN Webinar series

January 25, 2017



Statistics  
Canada

Statistique  
Canada

Canada 

# Canadian Community Health Survey Program



- Started with Health Information Roadmap -1999
- Indicator framework
  - Health behaviours
  - Health surveillance
  - Access to health care system
- Governing committee – Canadian Population Health Survey Program
  - Health Canada, Public Health Agency of Canada
- Expert groups

# CCHS Objectives



- Health **surveillance** at the national, provincial and sub-provincial levels
- **Analysis** on small populations and rare characteristics
- **Readily available data** to a diversified user community in a timely fashion
- **Flexible** survey instrument

# CCHS 2015 Redesign Objectives



- Five objectives based on critical review of CCHS
  - Study feasibility of adding children less than 12
  - Review content and create long term plan for 2015-2022
  - Transition to household survey frame
  - Revisit sample allocation strategy
  - Add internet collection option – next redesign in 2021

# Objective: Add Children Less than 12

- Feasibility study completed summer 2013
  - Separate survey integrated into CCHS-Annual team
    - Canadian Health Survey on Children and Youth (CHSCY)
  - Canadian Child Tax Benefit (CCTB) as a frame
  - Internet data collection, follow-up by telephone
  - Stratified simple random sample design (i.e. no clusters)
  - Pilot test in Oct 2016, production TBD pending funding



# Objective: Review Content / New Long-term Plan



- 54 of 98 CCHS modules modified – all variable names new
  - Most changes minor; some modules are new / significantly modified
    - Physical activity / Sedentary activity
    - Fruit and vegetable consumption
    - Patient experiences
- Territories now have 2-year themes only; Annual data represent provinces only
- *Final* content plan October 2014
- Rapid Response option still available to meet further needs

# Objective: Household Survey Frame



- CCHS was using a dual frame design
  - Area frame produced by LFS (40% of sample)
  - Telephone frame (60% of sample)
    - Cell phone only households not included, quality is decaying
    - Cell phone only represents around 50% in largest urban areas
- Household survey frame is a major improvement
  - Continuously updated with various admin data

# CCHS Cases 12-17



- Rarity of 12-17 caused heavy selection bias
  - Increased design effects
- CCHS now uses CCTB to sample 12-17
  - Age groups are now: 12-17, 18-34, 35-54, 55-64, 65+
- Similar adjustments to area frame
  - Non-response, out of scope etc.
- Household weights not created for 12-17 cases

# Objective: Revisit Sample Allocation

- Original CCHS sample allocation had 141 HR's
  - 500 units per HR
  - Provinces have reduced number of HR's to 110
  - Odd distributions of sample in some HR's
- Redesigned CCHS sample allocation:
  - Responds to HR boundary changes by provinces
  - Provide similar quality estimates for all province HR's
  - Improve design efficiency to *reduce the design effect*

# Sample Allocation Strategy for 2015+

- Step 1: Power allocation proportional to province size
  - Ensure minimum prevalence of 2% in provinces (3% in PEI)
- Step 2: Power allocation proportional to HR size
  - Ensure minimum prevalence of 10% in HR's
    - 15% in smallest HR's
- Step 3: Apply maximum sampling fraction of 1 in 20
  - Minimum prevalence increases to 25% in 4 HR's

# Objective: Internet Collection



- Internet data collection delayed to 2021
- Exact collection strategy has not been decided
  - Testing ongoing to determine best method to roster a household and randomly select a respondent
- Significant content revisions required to meet standards of electronic questionnaires
- Mode effect study is planned

# Redesigned collection strategy



- Territories only representative over 2 years
- Cell phone numbers used to contact households
- CATI-CAPI proportion is different
- CAPI-CATI transfers (Responsive Collection Design)
- CCTB cases are only CATI

# Using Redesigned CCHS Data



- First release of redesigned CCHS data: March 2017
- 2016 and 2015/16 files will be released September 2017
- Annual data is at provincial level only
  - Regional and Territories data in 2-year file only



# Using Redesigned CCHS Data



- Comparisons not recommended with 2001-2014
  - 2015+ CCHS uses:
    - New frame, sample allocation, weighting and estimation strategy
    - Revised content and new collection strategy
  - With so many changes what do estimation differences mean?
- Documentation explaining changes will be available

# Content comparability



- Even content that has not changed will be subject to the many survey design changes and not necessarily be comparable with past cycles
- Change or no change between years will not necessarily reflect true population changes

# Available Documentation



- Overview of changes during redesign
- Revised user guide
- Usual CCHS release materials
  - Data dictionary, DV guide, layout, questionnaire etc.
- New CANSIM tables, fact sheets
- Variable concordance table will not be provided

# Fact Sheets



- Diabetes
  - BMI (adult & youth)
  - Physical activity (adult & youth)
  - Primary care provider
  - Chronic conditions
  - Smoking
  - Drinking
  - Fruits and vegetables
  - Life satisfaction
  - NEW: Health Behaviour Score
- Discontinued
    - Exposure to second-hand smoke
    - Self-perceived health
    - Perceived life stress

# Health Behaviours Score



- Sum of six indicators:
  - Smoking
  - Fruit and vegetable consumption
  - Heavy drinking
  - Physical activity
- Analysis by: age, sex, income, education, province

# Data Tables (CANSIM / CODR)



1. Health characteristics, by age and sex, 10 provinces. (26 indicators)
2. Health characteristics, by household income quintiles and educational attainment, 10 provinces. (26 indicators\*)

# Indicators on CANSIM/CODR



- Consultation with HC and PHAC led to the choice of 26 core content indicators
- Most are the same as previous years

## New:

- Access to a primary health care provider
- Physically active, 18 and older (based on CPAG)\*
- Physically active, 12 to 17 (based on CPAG)\*

## Modified:

- BMI youth, now WHO standard

## Dropped from table, still available on file (except RAC):

- Pain/discomfort (2), participation/activity limitation, exposure to SHS (4), BMI combined, Flu shot, bike helmet, functional health, Injuries (2)

# Contacts



- CCHS
  - Content manager: Linda Lefebvre
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  - Project Manager: Amanda Wright
- CHSCY
  - Content Manager: Lisa Verdon





# QUESTIONS?