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Physical Examination Survey Collaborations: The CHMS and NHANES Experience

National Conference on Health Statistics

Jeanine Bustros, Director, Statistics Canada

Cliff Johnson, Director DHANES / NCHS

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Two surveys – one goal

NHANES main objective:

The **National Health and Nutrition Examination Survey (NHANES)** is a program of studies designed to assess the health **and nutritional status** of adults and children **in the United States**. The survey is unique in that it combines interviews and physical examinations. **NHANES** is a major program of the **National Center for Health Statistics (NCHS)**.



Brief Description of CHMS

- National estimates: n= 5500
- Covers 96% of the Canadian population
- Collection in 2007-09 (age 6 -79); in 2009-11 (age 3-79)
- 2 year of collection, 16 sites
- Direct measurements in a mobile examination centre



The Journey

- Long standing relationships between StatCan with NCHS for health studies - interchange
- Shared vision from senior leaders of both organisations
- Willingness to help and make things happen - all staff at all levels
- Recognition for the need for international data comparison and research.



The collaboration

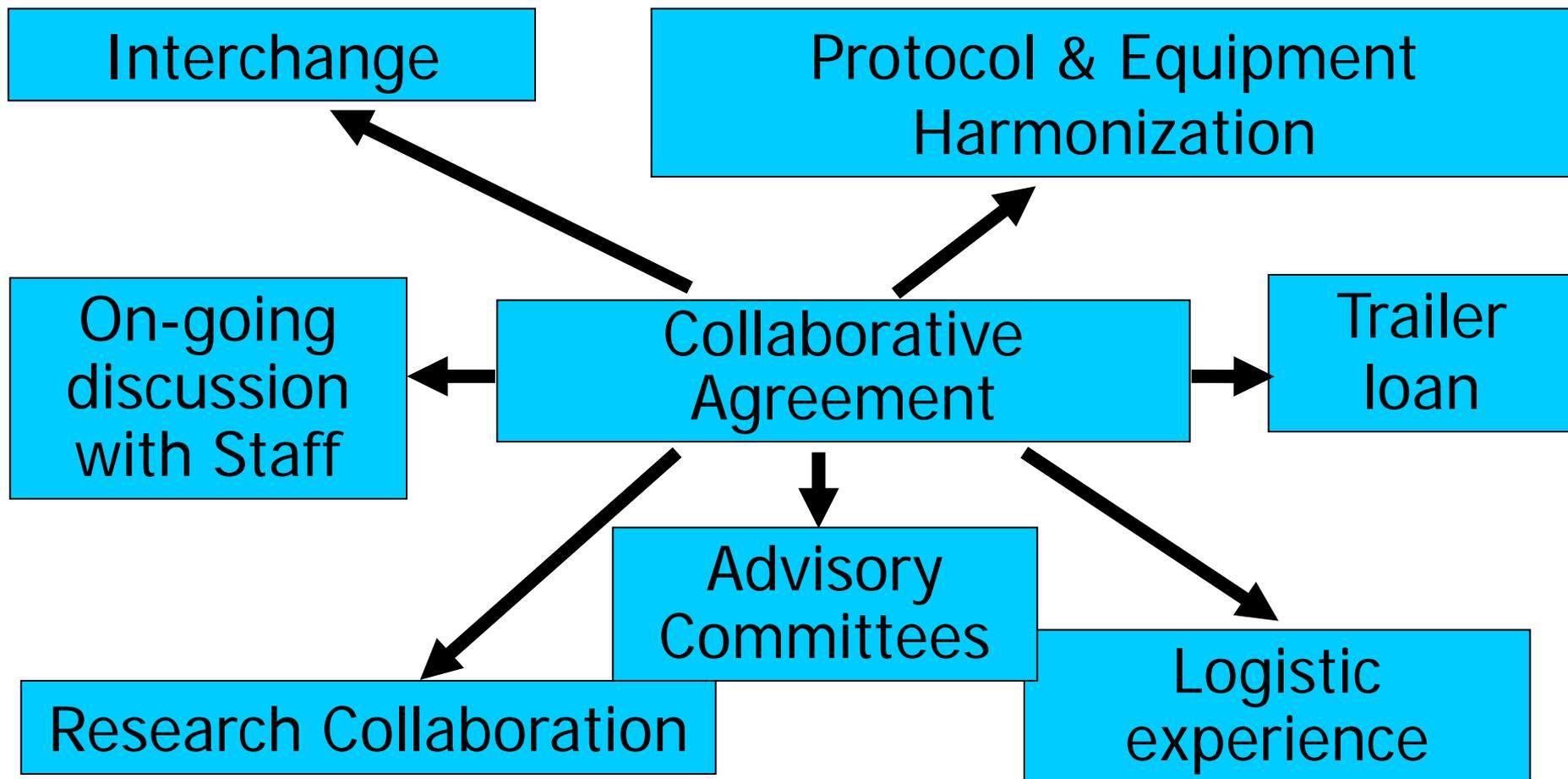
- Collaboration goes back to the inception of the CHMS in 2003
- CHMS staff attended NHANES annual retraining session
- CHMS and NCHS staff met for “general learning” sessions
- CHMS staff participated in NHANES dry-runs
- CHMS staff assisted with trailer set-up
- NCHS visited trailer manufacturer
- NCHS assisted with trailer and equipment set-up in Ottawa



The collaboration (cont.)

- Agreement for trailer acquisition between CDC and StatCan
- Collaborative Agreement between NHANES and PHMD
- NHANES staff agreed to sit on CHMS Advisory committees (Expert, Physician, Lab and QA)
- Research collaboration started with the release of CHMS data in January 2010

Current Structure of CHMS and NHANES Collaboration





Benefits of Partnership

- Data harmonization
- Avoid duplication of efforts
- Acquisition efficiency
- Capital asset sharing
- Staff professional development
- Data comparability
- Building International Research activities



Common Elements

Two surveys, so much in common

- Cluster sample
- Relatively small sample size
- Extensive communication with respondent , and with the media
- Household interview
- Mobile Examination Centre (MEC)
- Common content
- Lab in the MEC
- Biospecimen collection : blood, urine
- Biostorage: whole blood, serum, plasma, urine and DNA
- As much as possible, same protocols



Differences

Two surveys, so many differences

- Experience : 50 years vs 3-4 years
- Population → NHANES 0+; CHMS 3-79
- Decentralised vs Central Statistical Agency
- Content limited by 2 trailers in CHMS; 4 trailers in NHANES
- CHMS doesn't collect dietary information
- Collection contract vs internal interviewer
- Laboratories



Differences (cont.)

- Refusal conversion
- Medical advisor on collection site
- Collection method (ACASI)
- Respondent fees and remuneration
- Winterisation of the trailers: CHMS - Collection in the north during winter
- Web content and Data access



Climate Challenges

U.S.A.



CANADA





International comparison

- 'Health' is an evolving science – today gold standard, may no longer be the case tomorrow.
- Issues related to analysis in an evolving collection environment.
- Concerns when dealing with laboratory data – bias due to equipment and assays



International comparison (cont.)

Requirement to do cross-over studies:

- Who? StatCan or NCHS or other
- Resources : financial and human
- Legislation, privacy and data sharing
- Ethics
- Response burden
- Competing priorities



NHANES and CHMS data comparison

- Analysis has started – Height, weight, VIt D, etc.
- More on this topic at the afternoon session
- There is a need to compare the data – Americans and Canadians have similar lifestyles but different health care systems. The joint collaboration between NHANES and CHMS will benefit the researchers from both countries as more international health research is conducted.

Thank You NHANES
(CDC/NCHS)





Additional information

For more information on the CHMS:

Phone: 1-888-253-1087

E-mail: chms-ecms@statcan.gc.ca.

Web: www.statcan.gc.ca/chms.

For more information on the NHANES:

Web: <http://www.cdc.gov/nchs/nhanes.htm>