#### The webinar, "The Canadian Longitudinal Study on Aging: A National Platform and Infrastructure for Researchers and Trainees" will begin shortly.

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- Follow the instructions that appear on your screen and choose your audio preference (VoIP, or computer). To change your audio settings at any point during the webinar, select Audio>Audio Conference from the main toolbar.
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- You can type your questions at any point during the session, but they won't be answered until the end of the presentation.
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### **CLSA** Webinar Series

#### The Canadian Longitudinal **Study on Aging: A National Platform and Infrastructure** for Researchers and Trainees

12 to 1 P.M. ET | September 26, 2017

This webinar, jointly organized with the Canadian Institutes of Health Research (CIHR), will provide an overview of the Canadian Longitudinal Study on Aging (CLSA) for researchers and trainees. With an introduction by Yves Joanette, scientific director of the CIHR Institute of Aging, and presented by Dr. Lauren Griffith, associate scientific director of the CLSA, the presentation will review the platform design and data collection process, describe the available data, and explain the data access application process for researchers, including graduate students and postdoctoral fellows. Christy Costanian, doctoral student in the school of Kinesiology and Health Science at York University, will also share her experience using CLSA data as a trainee, followed by a Q&A session.

#### Register online at http://bit.ly/clsawebinars



Webinars will be broadcast using WebEx Further instructions will be sent by email





## Introducing today's speakers:



#### **Dr. Yves Joanette**

Scientific Director, Institute of Aging (IA), Canadian Institutes of Health Research (CIHR)



#### **Dr. Lauren Griffith**

Associate Scientific Director, Canadian Longitudinal Study on Aging (CLSA)



#### **Christy Costanian**

Doctoral Student (Epidemiology), York University School of Kinesiology and Health Science



### **The Canadian Longitudinal Study on Aging** A national platform and infrastructure for researchers and trainees.

Lauren Griffith, PhD, McMaster University, CLSA Associate Scientific Director

on behalf of CLSA PIs: Parminder Raina, Christina Wolfson and Susan Kirkland and the CLSA Research Team across Canada

> CLSA Webinar Series September 26<sup>th</sup>, 2017

## **Learning Objectives**

- To understand the CLSA study design and become familiar with the CLSA data access process
- 2. To be inspired to use the CLSA research platform













- Background
- Study Design
- Study Content and Data Collection
- Current Status
- Sample demographics
- Data Access



## The CLSA

- Strategic initiative of CIHR; on the Canadian research agenda since 2001
- 3 co-principal investigators supported by more than 160 co-investigators from 26 institutions
- Multidisciplinary biology, genetics, medicine, psychology, sociology, demography, nursing, economics, epidemiology, nutrition, health services
- Largest study of its kind to date in Canada for breadth and depth: following 50,000 participants for ≥20 years



## **Aim and Vision**

- AIM: To examine life/health transitions and capture trajectories to enable the identification of modifiable factors with the potential to inform interventions (prevention/treatment/impact) to improve the health of populations as they age
- VISION: To create a research platform infrastructure to enable state-of-the-art, interdisciplinary population-based research and evidenced-based decision-making that will lead to better health and quality of life for Canadians as they age.

## The Journey so far...





International peer review

IR

Background



## Study Design

## **CLSA Research Platform**

#### 50,000 women and men aged 45 - 85 at baseline



## National in Scope



# **Defining the cohort**

- Men and women living in any of 10 provinces in Canada aged 45-85 at recruitment
  - Capturing baby boomers (born between 1946-1964) plus members of the "silent" generation (i.e. those born before 1945)

# **Recruiting the Cohort**

- 1. Partnership with Statistics Canada
  - Canadian Community Health Survey 4.2 Healthy Aging (2008-09) CCHS 4.2
    - CCHS participant agreement to share contact information with the CLSA – a first for Statistics Canada
- 2. Partnership with provincial Ministries of Health (MOH)
  - Health Card Registration databases
  - Mailouts, return Consent-to-Contact form, CLSA follow up
- 3. Random Digit Dialing
  - Leger Marketing and CLSA CATI

# **Cohort Exclusion Criteria** <u>at Baseline</u>

#### Driven by CCHS 4.2 exclusion criteria 1. to 5.

- 1.Residents of the 3 territories
  - Northwest Territories, Nunavut, Yukon
- 2. Living in an institution
- 3. Living on a First Nation Reserve
- 4. Full time members of the armed forces
- 5. Temporary visa holders
- **CLSA Added Criteria**
- Cognitively impaired (at baseline)
- Unable to communicate in French or English

# Terminology

- Tracking Cohort
  - Target 20,000 participants from all 10 provinces, followed through Computer Assisted Telephone Interviews (60 minutes at baseline)
  - 21,241 recruited\*
- Comprehensive Cohort
  - Target 30,000 participants living within 25 km (or 50 km) of a CLSA Data Collection Site (DCS)
  - Followed through in-home interviews (60 minute) and physical assessments (2-3 hours) at a DCS
  - 30,097 recruited\*

### **Study Content and Data Collection**

## CLSA Questionnaire modules All 51,338 participants

- Age
- Gender
- Education
- Marital status
- Sexual orientation
- Language
- Ethnicity
- Wealth/income
- Veteran Identifier
- Smoking, alcohol
- Nutritional risk
- Physical activity
- Health care utilization
- Medication use
- Supplement use

General health

- Women's health
- Chronic conditions
- Disease symptoms
- Sleep

Health

- Oral health
- Injuries, falls
- Mobility
- Pain, discomfort
- Functional status
- ADL, IADL
- Cognition
- Depression
- PTSD



- Social
  - networkssupport



- participation
- inequality
- Online communication
- Care receiving
- Care giving
- Retirement status
- Labour force participation
- Retirement planning
- Transportation
- Mobility, Migration
- Built environments
- Home ownership

Life Satisfaction

emographic/Lifestyle

### CLSA Data Collection Data Collection Site

#### **Physical Assessments:**

- Height, Weight, BMI
- Bone Density, Body Composition, Aortic Calcification
- Blood Pressure, ECG, c-IMT
- Pulmonary Function
- Vision & Hearing
- Performance testing



#### Cognitive Assessments:

- Neuropsychological Battery
  - Memory
  - Executive function
  - Reaction time



Biospecimen Collection: • Blood

Urine

### **CORE BIOMARKERS: Baseline**

	Category	Ν	Biomarkers	
Available	HEMATOLOGY Data Collection Sites (DCS)	25,425	<ul> <li>Erythrocytes</li> <li>Granulocytes</li> <li>Platelets</li> <li>MPV</li> <li>Hematocrit</li> <li>MCV</li> <li>RDW</li> <li>Hemoglobin</li> <li>MCV</li> </ul>	
lable mid-2018	CHEMISTRY Calgary Laboratory Services (CLS)	27,170	• Albumin• HDL• Alanine aminotransferase (ALT)• LDL• C-reactive protein (CRP)• Non-HDL• Creatinine• Thyroid stimulating hormone• Cholesterol(TSH)• Ferritin• Triglycerides• Free T4• 25-Hydroxyvitamin D• Hemoglobin A1c (n = 26961)	
	GENETICS Genetic and Epigenetic Centre (GEC)	10,000	<ul> <li>Genome-wide genotyping</li> <li>DNA extracted from buffy coat on samples (n = 26,884)</li> <li>820K UK Biobank Axiom Array (Affymetrix)</li> </ul>	
	<b>EPIGENETICS</b> Genetic and Epigenetic Centre (GEC)	1,500	<ul> <li>DNA methylation</li> <li>DNA extracted from PBMCs</li> <li>850K Infinium MethylationEPIC BeadChip (Illumina)</li> </ul>	
Avai	METABOLOMICS Kyoto, Japan	1,000	Mass spectrometry	

Updated July 14, 2017

## **Baseline Demographics**

### Socio-demographic Characteristics unweighted

	Tracking	Comprehensive	Total
Age			N=51,338
45-54	5,832 (27.5)	7 <i>,</i> 595 (25.2)	13,427 (26.2)
55-64	6,564 (30.0)	9 <i>,</i> 856 (32.7)	16,420 (32.0)
65-74	4,634 (21.8)	7,362 (24.5)	11,996 (23.4)
75-85	4,211 (19.8)	5,284 (17.6)	9,495 (18.5)
Sex			
Female	10,835 (51.0)	15,320 (50.9)	26,155 (50.9)
Male	10,406 (49.0)	14,777 (49.1)	25,183 (49.1)
Language			
English	17,483 (82.3)	24,291 (80.7)	41,774 (81.4)
French	3,758 (17.7)	5,806 (19.3)	9,564 (18.6)
Born in Canada	18,513 (87.2)	24,644 (81.9)	43,099 (84.1)

### CLSA Participants by Province unweighted

Drovinco	Tracking	Comprohensive	Tatal
Province	Tracking	comprehensive	IOlai
British Columbia	2613 (12.3)	6254 (20.8)	8867 (17.3)
Alberta	2103 (9.9)	2958 (9.8)	5061 (9.9)
Saskatchewan	1382 (2.7)	0	1382 (2.7)
Manitoba	1477 (7.0)	3114 (10.4)	4591 (9.0)
Ontario	4705 (22.2)	6417 (21.3)	11122 (21.7)
Quebec	3601 (17.0)	6057 (20.1)	9658 (18.8)
New Brunswick	1355 (2.6)	0	1355 (2.6)
Nova Scotia	1546 (7.3)	3075 (10.2)	4621 (9.0)
Prince Edward Island	1138 (2.2)	0	1138 (2.2)
Newfoundland	1251 (5.9)	2219 (7.4)	3470 (6.8)

# Data Access -Baseline Data



## **Data and Biospecimen Access**

- The CLSA was designed as a research study but is funded as a research <u>platform</u>
- Data and biospecimens available to the research community
- Who:
  - Researchers based in academic settings and research institutes in Canada and \*elsewhere can apply
  - Graduate students and postdoctoral fellows based at Canadian institutions or trainees studying elsewhere funded by a Canadian agency
- \*As yet, biospecimens cannot be released to researchers outside Canada

# What do you get?

- Alphanumeric data on all 51,338 participants
  - Additional raw data on certain variables may be requested (cognition, ECG, spirometry, etc.)
- De-identified open text for selected variables
- Sampling weights
- Additional data (i.e. linked Air Pollution, Meteorological data, Forward Sortation Areas) may be requested

## **Data Access Steps**

Application process via <a>access@clsa-elcv.ca</a>

- 1. Submit application (pre-set deadlines) Next deadline is October 16, 2017
- 2. Administrative and Statistical Review
- 3. Review by Data and Biospecimen Access Committee
- 4. Notification of applicant
- 5. CLSA Access Agreement preparation and signatures, ethics approval
  - Security, confidentiality and scientific requirements
- 6. Raw data provided to approved applicant

# **Data Access Timeline**



• Plan on a receiving data 6 months after submission deadline

# How much does it cost?

- Costing
  - Partial Cost Recovery Model
- Alphanumeric data
  - \$3,000 for a straightforward alphanumeric dataset
  - Graduate student No cost for dataset to be used solely for thesis research
  - Postdoctoral fellow No cost for <u>one</u> dataset to be used solely for the postdoctoral project
- Bio specimen costing
  - In development

# Data Access – Resources for Researchers & Trainees





Collaborate and Innovate

Find out how the CLSA platform is being used

.

Approved Projects

## **Information for Researchers** & Trainees



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Q

Canadian Longitudinal Study on Aging Étude longitudinale canadienne sur le vieillissement

#### About Us Participants Partners Researchers Data Access Stay Informed

#### Researchers

#### Protocols

Data Collection Tools

Physical Assessments

Data Support Documentation

**Approved Project Summaries** 

Data Access

Researchers

The CLSA provides documents online to facilitate understanding of the study and how we are gathering and managing the data.

#### Protocols

CLSA Protocol - Executive Summary CLSA Protocol - Full Study Design and Baseline (2008) CLSA Protocol - First Follow-up (2015)

The protocols listed are based on the applications CLSA submits to CIHR for each funding cycle. As the CLSA data collection progresses, occasionally, some measurements are changed. Updated versions of the protocols will be posted as necessary. Please refer to the Data Collection Tools section to review the specific questions and measurements gathered at each phase of the study.

#### **Data Collection Tools**

Over the course of 20 years, the CLSA will be conducting full data collection every three years. At each major data collection event, the questionnaires and physical assessments remain largely the same for consistency, but there will be some additions to the data collection to further enhance the CLSA platform.

Questionnaires

#### Physical Assessments

To ensure that physical assessment data are collected, processed, and stored in a consistent, professional, and structured manner at all CLSA sites across the country. Standard Operating Procedures (SOPs) help maintain the integrity of the data collection and data management

## **Data Preview Portal**

#### DataPreview Portal

#### SMART TIPS

- Click the 'Help' button on the right to see a step-by-step guide to using the DPP
- Use the main Search Bar on this page to search for predetermined Areas of Information or Scales only
- For a more detailed search, select 'Variable Properties' under the 'Variable' tab on the left. Expand 'Name' and 'Label' to view search boxes for Variable Names and Variable Labels

Variable Dataset	All - e.g. Psychological distress and emotions, Satisfaction with Life Scale					
> Variable properties						
> Additional information						
✓ Areas of Information	Variables (32) Datasets (3	2) 10 ~ «	<pre>&lt; 1 2 3 &gt; &gt;&gt; 1 - 10 of 32</pre>			
<ul> <li>Socio-demographic and economic characteristics</li> </ul>	Name	Label	Dataset			
<ul> <li>Lifestyle and health behaviours</li> </ul>	SLS CONDNEG COM	SWLS scale: Disagree life conditions excellent	COM			
<ul> <li>Health status and functional limitations</li> </ul>	SLS CONDNEG TRM	SWLS scale: Disagree life conditions excellent	TRM			
<ul> <li>Diseases</li> </ul>	SLS CONDPOS COM	SWLS scale: Agree life conditions excellent	COM			
<ul> <li>Symptoms and signs</li> </ul>	SLS CONDPOS TRM	SWLS scale: Agree life conditions excellent	TRM			
<ul> <li>Medication and supplements</li> </ul>	SLS COND COM	SWLS scale: Life conditions excellent	COM			

×

## **Need More Information?**

About Us Participants Partners	Researchers Data Access Stay Informed		
Data Access	FAQs Data Access	Still have questions? Email us: <u>access@clsa-elcv.ca</u>	
Data Release Timelines	How do I get access to the data?		
Data Access Application Process	Which data formats are available?		
Data Access Application Documents	What do I do if I would like to obtain biospecimens?		
Data and Biospecimens	What if the	re appears to be an error or omission in my data?	
FAQs <ul> <li>Data Access Questions</li> </ul>	Can I apply	for data as an international researcher?	
<ul> <li>DataPreview Portal Questions</li> <li>Application Questions</li> </ul>	What are the fees for access to CLSA data?		

# **CLSA Approved Projects**

# Selected Approved Trainee Projects 2017

- <u>A Model of Health: Using data</u> modelling techniques to improve health outcomes for older Canadian adults by optimizing the development and delivery of physical activity interventions Simon Fraser University
- Potential metabolic and functional benefits of a comprehensive evaluation of physical activities for Canadian adults University of New Brunswick
- Impact of the Lifestyle Factors on the Health Aging of Individual Simon Fraser University
- <u>Examining multimorbidity among</u> <u>middle-aged Canadians</u> University of Manitoba

- Frailty and mobility limitations in older Canadians with musculoskeletal diseases compared to other chronic medical conditions McMaster University
- <u>Characterization of cardiovascular</u> <u>disease burden and health of</u> <u>Canadian cancer survivors</u> University of Alberta
- Exploring the complexity, management and health-related outcomes of disability, frailty and multimorbidity among communitydwelling older adults in Canada McMaster University

## **Keywords – All projects**



# **Take Home Messages**

• This large cohort was designed, assembled and data collection is ongoing

Baseline data and biospecimens have been collected

- Alphanumeric data from questionnaires, physical assessments and basic hematology results on 51,338 participants from across Canada are now available
  - These data are free for student thesis research and for postdoctoral fellow projects



### **CLSA Funders and Partners**



## **Extra Slides**

First Follow Up 2015-2018

## First Follow-Up: <u>New</u> Content Added

- \*Child maltreatment
- \*\*Elder abuse
- Epilepsy screening
- Decedent interview
- Unmet health-care needs



- Preventive health behaviours (screening, vaccination, etc)
- Enhanced hearing, oral health and transportation modules
- Gender identity questions
- Subjective cognitive decline
- Loneliness

\*Childhood Experiences of Violence Questionnaire. Walsh et al 2012 \*\*National Initiative for the Care of the Elderly (NICE)

## **Follow up considerations**

- Keeping participants engaged
- Tracing participants who have moved
- Attention to changes in life circumstances that may affect ability to participate

- Cognitive, sensory, mobility impairment

 Ensuring that changes in content permit the ongoing examination of transitions and trajectories

## Passive Data Collection Work in progress

- Linkage is an important CLSA strategy
  - Great potential for collecting information that is difficult to get from participants due to time, accuracy limitations; and/or may even be unknown to participants
  - Potential to obtain historical data prior to CLSA entry
- Types of databases
  - Individual level administrative provincial health databases
  - Vital statistics/disease registries
  - Population level databases of community characteristics, climate, pollution

## **Leveraging Big Data :**

## The Canadian Longitudinal Study on Aging (CLSA)

**Christy Costanian** 

York University, Toronto, Canada



# Outline

- Background
- Project Objectives
- CLSA Data Access Procedure and Timeline
- Outputs
- Take Home Messages



# Background

#### **RESEARCH INTERESTS:**

Chronic Disease and Aging

•Women's Health (Menopause, Intersection of reproductive and later health outcomes)

- •Life Course Epidemiology
- Health Behavior
- Survival and Longitudinal Data Analysis

#### **EDUCATION:**

Ph.D. in Epidemiology	2018 (expected)
York University, Canada	
M.Sc. in Epidemiology and Biostatistics	2012
American University of Beirut (AUB), Lebanon	
B.Sc. in Biology (pre-med)	
American University of Beirut (AUB), Lebanon	2010



# Background

#### **MENTORS:**





**MOST CITED RESEARCH:** 

Abla Mehio Sibai 🖾 , Christy Costanian, Rania Tohme, Shafika Assaad and Nahla Hwalla





H. Edgell



A. Zeki Al-Hazzouri

#### A. Sibai

prevention

H. Tamim

Physical activity in adults with and without diabetes: from the

'high-risk' approach to the 'population-based' approach of

BMC Public Health 2013 13:1002 https://doi.org/10.1186/1471-2458-13-1002 © Sibai et al.; licensee BioMed Central Ltd. 2013

#### C. Ardern



Diabetes Research and Clinical Practice Volume 105, Issue 3, September 2014, Pages 408-415



Prevalence, correlates and management of type 2 diabetes mellitus in Lebanon: Findings from a national population-based study

Christy Costanian ª 옷 쩔, Kathleen Bennett <sup>b</sup>, Nahla Hwalla <sup>c, e</sup>, Shafika Assaad <sup>d</sup>, Abla M. Sibai <sup>a</sup>, e 옷 쩔

#### Show more

ELSEVIER

https://doi.org/10.1016/j.diabres.2014.06.005

Get rights and content



### **Project Objectives**



**CLSA PLATFORM** 





\*Slide obtained from the CLSA webinar series on Advancing Opportunities for Research on Health and Aging: An Update on the Canadian Longitudinal Study on Aging, delivered by Dr. S. Kirkland on June 21, 2016.

### **Preparing the Application**

- Assign research team members and roles : PI vs. trainee
   sent application as PI when actually trainee(oops)!
- PI is the one who has to submit application and follow up on correspondence with CLSA
- Obtain ethics approval for project from your institution BEFORE submitting application (this takes more time than you think!)



### Preparing the Application (Cont'd)

 Straightforward; have to be certain which variables are needed and will be used

#### Ensure application is complete and signed before submitting to CLSA

#### A3. Project Timeline / Échéancier du projet

What is the anticipated time frame for this proposed project? In planning for your project, please consider in your time frame at least six (6) months from the application submission deadline to the time you receive your dataset. /

Quel est l'échéancier prévu du projet proposé? Lors de la planification de votre projet, veuillez prévoir au moins six (6) mois à compter de la date limite de soumission de votre candidature pour recevoir votre ensemble de données.





Proposed project duration / Durée proposée du projet :

#### A4. Project Description / Description du projet

Project Description / Description du projet Please adhere to word count and page limits. / Veuillez respecter le nombre de mots et la limite de pages

Project Title / Titre du projet :

Epidemiology of Menopause in Canada

#### Lay Summary / Résumé non scientifique

Please provide a lay language summary of your project (maximum 150 words) suitable for posting on the CLSA website if your application is approved. Please ensure that the lay summary provides a stand-alone, informative description of your project. /

Veuillez fournir un résumé non scientifique de votre projet (150 mots maximum) pouvant être publié sur le site Web de l'ÉLCV si votre demande est approuvée. Assurez-vous de fournir un résumé détaillé et complet de votre projet.

Menopause is a common, important event in every woman's life. The age at natural menopause (ANM) is critical for women's health, given the physiological consequences of earlier and later timing of menopause. Although hormone replacement therapy (HRT) has a clear role in the treatment of vasomotor symptoms (VMS) that occur during menopause, debate on its risks and benefits persists. More than a decade ago, HRT use rates have plummeted, however few data exists on its current rates in Canada. The predictors of age at menopause and HRT use vary across populations, however little is known about them in Canada. Using data from the CLSA, this study will 1) determine the prevalence and characteristics of women who have used HRT...

Word Count / Nombre de mots



150

#### Keywords / Mots clés

Please provide 3-5 keywords describing your project. / Veuillez fournir 3 à 5 mots clés décrivant votre projet.

Menopause, HRT use, Women's Health

#### SECTION A: QUESTIONNAIRES / QUESTIONNAIRES

Interview module Module de l'entrevue	Tracking (Telephone Interview) Évaluation de surveillance (Entrevue téléphonique)	Comprehensive (Face-to-face Interview - In-home or DCS visit) Évaluation globale (Entrevue en personne - à domicile ou à un site)	
Age / Âge (AGE)	$\square$	$\times$	
Sex / Sexe (SEX)	$\mathbf{X}$	$\mathbf{X}$	
Socio-Demographic Characteristics / Caractéristiques socio- démographiques (SDC)			
Country of birth / Pays de naissance			
Province of residence / Province de résidence	$\mathbf{X}$	$\times$	
Urban / Rural Classification <sup>1</sup> / Classement des zones urbaines / rurales <sup>1</sup>	$\square$	$\boxtimes$	
Ethnicity / Ethnicité	$\mathbf{X}$	$\boxtimes$	
Culture / Culture	$\square$	$\mathbf{X}$	
Language / Langue	$\mathbf{X}$	$\mathbf{X}$	
Religion / Religion		$\mathbf{X}$	
Marital status / État matrimonial	$\mathbf{X}$	$\mathbf{X}$	
Sexual orientation / Orientation sexuelle			
Home Ownership / Propriétaires (OWN)			
Education / Éducation (ED)	$\mathbf{X}$	$\boxtimes$	
Veteran Identifiers / Anciens combattants (VET)			
Height and Weight / Taille et poids (HWT)		See Section B: Physical Assessments / Voir Section B : évaluations physiques (WGT, HGT)	
Smoking / Consommation de tabac (SMK)	$\square$		









• Link expires in 7 days

- CLSA Data Access Officer, Dr. Istvan Molnar-Szakacs (Ish), shared download link for dataset containing data in .csv format and data dictionary in excel format
- Folder with data can be downloaded as many times as the number of research team members who sign the CLSA Access Agreement

**TIP:** Data dictionary is clear, however better to personalize dataset by labelling variables used in analysis



WHO\_HRTYR\_YR\_TRM WHO\_HRT\_TRM HRT\_USE\_DURATION EVER\_HRT\_USE



December 2016- June 2017: Data handling and analysis

#### February 17, 2017:

Received CLSA Data release update : "We have added sampling weight strata variables to be used in conjunction with the existing weights as outlined in the sampling weights documentation available on our website."



1-2 years

Final

Report

#### WGHTS\_GEOSTRAT\_TRM

Variable for sampling strata weights had become available. Contacted Data Access Officer on Feb 25, 2017, and Ish provided sampling strata variable as data release update within a couple of days.



TIP: Manuscripts for publication must be submitted to the CLSA prior to submitting to the journal for review by CLSA Scientific Management Team.

### **Output: Paper 1**

Menopause: The Journal of The North American Menopause Society Vol. 25, No. 1, pp. 000-000 DOI: 10.1097/GME.000000000000954 © 2017 by The North American Menopause Society

#### Hormone therapy use in the Canadian Longitudinal Study on Aging: a cross-sectional analysis

Christy Costanian, MSc, Heather Edgell, PhD, Chris I. Ardern, PhD, and Hala Tamim, PhD

#### Abstract

Objective: The aim of the study was to assess the prevalence and factors associated with hormone therapy (HT) use among Canadian women.

Methods: Baseline data from the Tracking cohort of the Canadian Longitudinal Study on Aging (CLSA) was used for this analysis. The main outcome was HT use among women aged 45-85 years, defined as current, past, and never users. Multinomial logistic regression models were used to examine the differences between current, past, and never HT users in terms of sociodemographic, health behavior, and health-related variables.

**Results:** Overall, 9.5% of the sample reported current use of HT, whereas 21.9% reported past use. The main factors associated with a lower likelihood of current HT use were older age (>80 y), nonwhite ethnic background, current employment, regular smoking, obesity, and breast cancer. By contrast, alcohol consumption, and the presence of allergies or mood disorders were positively associated with current HT use.

Conclusions: These findings provide a recent national picture of HT use in Canada that may be used to inform opportunities for improved physician-patient communication regarding menopause management.

Key Words: Canada - Hormone therapy - Menopause - Prevalence.



### **Outputs: Paper 2**

Menopause: The Journal of The North American Menopause Society Vol. 25, No. 3, pp. 000-000 DOI: 10.1097/GME.000000000000990 © 2017 by The North American Menopause Society

#### Age at natural menopause and its associated factors in Canada: cross-sectional analyses from the Canadian Longitudinal Study on Aging

Christy Costanian, MSc,<sup>1</sup> Hugh McCague, PhD,<sup>2</sup> and Hala Tamim, PhD<sup>1</sup>

#### Abstract

ongitudinal Study on Aging tudinale canadienne sur le vieillissement

Background: Early onset of menopause is associated with long-term disease and higher mortality risks. Research suggests that age at natural menopause (ANM) varies across populations. Little is known about factors that affect ANM in Canadian women.

Objective: This study aims to estimate the median ANM and examine factors associated with earlier ANM among Canadian women.

Methods: Baseline data from the Tracking cohort of the Canadian Longitudinal Study on Aging was used for this analysis. The relation of sociodemographic, lifestyle, and health-related factors with ANM was examined among 7,719 women aged 40 and above. Nonparametric Kaplan-Meier cumulative survivorship estimates were used to assess the timing of natural menopause. Univariate and multivariate Cox proportional hazard regression models were used to characterize ANM and its association with relevant covariates.

**Results:** Overall, median ANM was 51 years. Having no partner, low household income and education levels, current and former smoking, and cardiovascular disease were all associated with an earlier ANM, whereas current employment, alcohol consumption, and obesity were associated with later ANM.

Conclusions: These findings provide a national estimate of ANM in Canada. These findings show the importance of lifestyle factors and health conditions in determining menopausal age. These factors might help in risk assessment, prevention and early management of chronic disease risk during the menopausal transition.

Key Words: Canada - Education - Factors - Menopause - Smoking - Weight.

### **Take Home Messages**

- Ensure that research team's roles are clearly assigned
- Follow data release update emails
- Ensure that ethics approval is valid throughout study duration
- Be mindful of project timeframe and deadlines (final report)
- CLSA: a great platform to use with a rewarding trainee experience



### Acknowledgements

- CLSA Scientific Management Team:
- Drs. Parminder Raina, Susan Kirkland and Christina Wolfson
- CLSA Operations Committee
- Ms. Roxanne Cheeseman
- Dr. Istvan Molnar-Szakacs, CLSA Data Access Officer
- Ms. Katherine Galley, CLSA Interim Communications Manager
- Ms. Laura Lawson, CLSA Communications Manager
- CLSA participants



# Thank you!

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# **Upcoming CLSA Webinars**





Osteoarthritis – Not Just a Nuisance Condition of Old Age: An Overview of Findings from the Canadian Longitudinal Study on Aging

**Dr. Elizabeth Badley and Dr. Anthony Perruccio** 

October 12, 2017 | 12 p.m. ET

#### **Register: bit.ly/clsawebinars**

