



CLSA Canadian
Longitudinal
Study on Aging

ELCV Étude Longitudinale
Canadienne sur le
Vieillessement

**The Canadian Longitudinal Study on Aging
(CLSA)
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Wolfson and CLSA Team**

**CIHR International Advisory Board on Cohort Studies
Toronto, December 8th, 2005**

Overview

- Why CLSA?
- Priority areas of research and policy
- CLSA as a scientific tool
- Potential Contributions of the CLSA
- Design of the CLSA
- What have we accomplished?
- What are we doing now?
- Next steps

Why CLSA?

- People living longer now than ever before
- By 2030, 20% of the Canadian & US population will be 65 and older
- Changing demographics identified as number one priority by the government of Canada and many of the provincial governments

Population Totals in Canada by Age Group and Year

AGE	MALES	BOTH SEXES	FEMALES
80+	229898	670192	440294
75-79	255599	622194	366595
70-74	364298	833991	469693
65-69	497996	1084588	586592
60-64	578596	1190087	611491
55-59	618096	1238387	620291
50-54	673295	1339986	666691
45-49	844194	1674182	829988
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25-29	1282190	2528572	1246382
20-24	1067593	2108978	1041385
15-19	984993	1925780	940787
10-14	980292	1912979	932687
5-9	998293	1953079	954786
0-4	1000393	1953280	952887
1991 TOTALS	13938100	28117600	14179500



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Why CLSA?

- Baby boomers begin turning 65 in 2011
 - Different needs, expectations
 - Implications, challenges for health care system, social programs - ethical, financial, etc.
- Healthy Aging is an issue of greatest interest and importance to the Canadian public and to Canadian policy makers.
- Canada differs from other countries in such areas as health and social policy, health care delivery systems, climate, environment, geography, and retirement policy and pension programs.

Why CLSA?

- Our review identified around 70 longitudinal studies worldwide
 - Majority of these studies were studying people over the age of 65
 - Many of these 70 studies on aging collect lot of information on social factors or retirement but lack detailed information on health, especially clinical and biological measures or vice versa

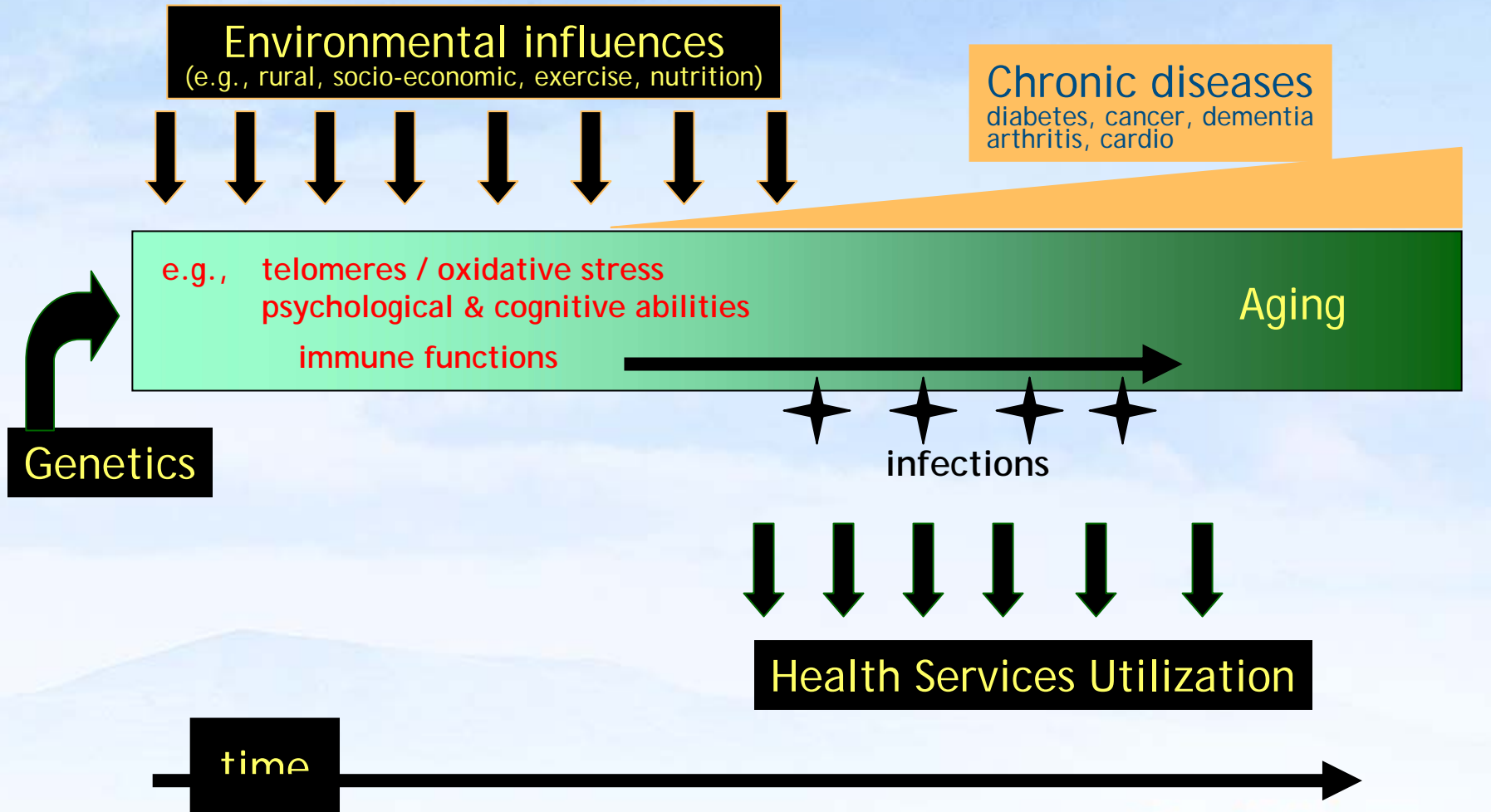
Why CLSA?

- Very few studies have looked at the aging process from a mid-life to old age perspective
- Very few population-based studies that capture the changing individual within a changing context and incorporate multiple levels of inquiry, the cell, the individual and society
- Very few studies have focused on how individuals cope or adapt to changing circumstances and how it impacts their well-being

The Canadian Longitudinal Study on Aging (CLSA)

- One component of the Canadian Lifelong Health Initiative, a strategic initiative of CIHR
 - The Canadian National Birth Cohort
 - The Canadian Longitudinal Study on Aging (CLSA)

Longitudinal study



Life Course as a Framework

- Multiple contexts
- Health development as an adaptive process
- Track patterns over time
- Examine relationships between earlier factors and later outcomes
- Examine pathways, trajectories
- Quantitative traits
- Identify critical, sensitive periods in adult development
- Determine the relative contributions of multiple factors to the pathways, patterns and outcomes



Priority Areas for CLSA

- Cardiovascular
- Brain
- Musculoskeletal
- Respiratory
- Metabolic
- Psychosocial and behavioral environment
- Health and social care environment
- Economic environment



Focus of Measurement

Biomedical

- Activities of daily living/disability/injuries
- Frailty/co-morbidities
- Chronic diseases
- Cognitive function
- Mental Health
- Oral health
- Vision, hearing
- Medications
- Health Care Use
- Institutional care
- Genetics/Biomarkers
- Nutrition

Psychosocial

- Lifestyle/behaviours
- Social networks and social support
- Values and meaning
- Everyday competence, adaptive functioning, coping
- Personality, emotion, psychopathology
- Work to retirement transitions
- Structural inequalities
- Built environments/physical environment
- Economics
- Healthy aging and well being



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CLSA As a Vehicle to Address Scientific Questions

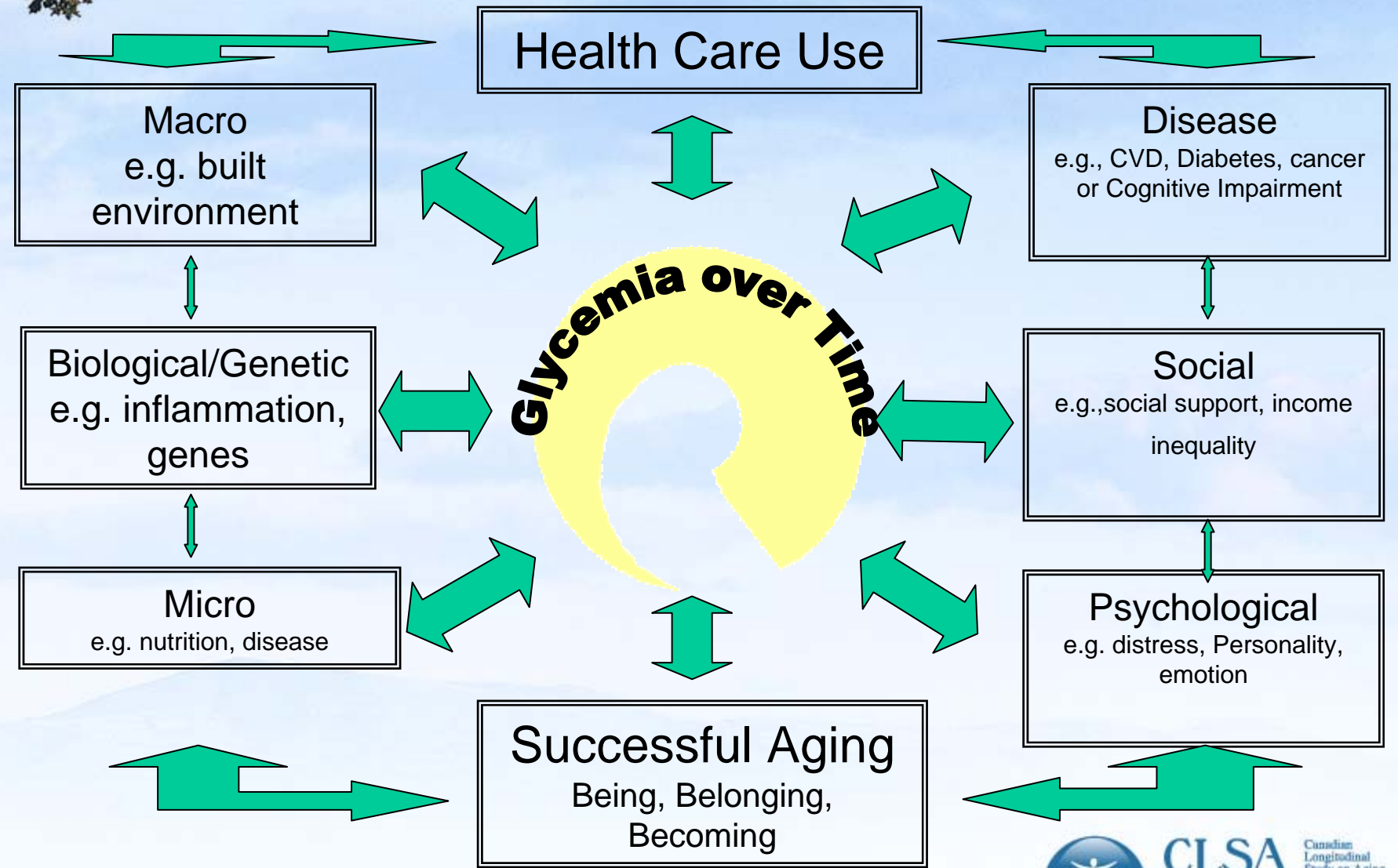


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Risk Factors

Adaptation

Consequences



CLSA As a Vehicle to Address Policy Questions

Examples

- What is the impact of health on work, retirement and post-retirement transition?
- What is the impact of public and private pensions on retirement/post retirement transitions?

Study Design

- 50,000 individuals
- 20 year follow-up
- Women and men aged 40 and over at baseline
 - Born between 1946 (59y) and 1964 (41y)
 - Inclusion of “pre” and “post” boomers
- Community dwelling at baseline
- Repeated assessment every 3 years
- Linkage to existing databases

The Data

- Questionnaires administered over the phone or in person to all 50,000
- Subgroup of 30,000 individuals selected to undergo in-depth “comprehensive” assessment over the course of the study
 - within a reachable distance of study sites that can support the data collection
 - able to “reassemble” the 50,000 to provide valid and reliable information on the full sample

Data collection: Basic

- Questionnaire data (50,000)
 - Telephone interviews
 - Common core of questions
 - Basic demographics, social, economic, nutrition, lifestyle
- Linkage to existing data bases (50,000)
 - Administrative: physician services, hospitalizations
 - Homecare, community services, mental health services
 - Mortality
 - Environmental, neighbourhood indicators
- Infrastructure
 - Computer assisted telephone interviews
 - Web based interviews



Data collection: Comprehensive

- Comprehensive assessment (30,000)
 - Additional questionnaire based information via in-person interviews
 - Social, behavioural, economic, nutrition, lifestyle
 - Clinical assessment
 - Medical, neuropsychological, physical measures
 - Blood and urine samples
 - Blood chemistry panel, biomarkers, genetics, genomics
- Infrastructure
 - 6 sites across the country with the capability of high volume throughput

Study Design



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Accomplishments to date

- Established network of researchers
 - McMaster, McGill and Dalhousie
 - Support from 26 academic institutions across Canada
 - 180 co-investigators
 - 80 investigators played a major role in the content development
 - International Collaborations
- Statistics Canada, Health Canada, PHAC, HRSD
- Support from CIHR and its Institutes (IA)

Accomplishments to date

- Development of protocol
- Refinement of protocol
 - Mini protocols
 - Reframing of cohort design
- Ethical, Legal and Societal Issues
- Phase 1 feasibility studies

Ethical, Legal and Social Issues (ELSI)

ELSI Committee

- Lawyers
- Ethicists
- Philosophers
- Geneticists
- Epidemiologists
- Social scientists
- Privacy commissioner

Provides “arms length” advice

- Workshops
- Commissioned papers
- Expert panels to advise PIs on practical issues



CLSA Feasibility Studies

Participant Recruitment and Retention Studies

- Study 1: Views of Canadians towards participation in a longitudinal, population-based study
- Study 2: Test consent to release coordinates of participants in the CCHS
- Study 3: Identification of the optimal consent process
- Study 4: Identification of possible alternative sample frames
- Study 5: Evaluation of tools to assess capacity to consent to observational research
- Study 6: Development of optimal process for the baseline interview

Data Collection and Data Flow Studies

- Study 7: Feasibility of proposed blood and urine sample collection/shipping/storage and analysis strategies
- Study 8: Strategies to enhance data linkage with health care utilization data bases and disease registries
- Study 9: Development and evaluation of disease identification algorithms
- Study 10: Issues related to the return of clinical information to study participants and/or general practitioners
- Study 11: Assessment of logistics of data collection methods data transfer and security

Timeline



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What's next?



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Phase 2: Identification and development of measurement tools

- Phase II proposal due March, 2006
 - Content related feasibility studies
 - Validity, reliability testing and translation of selected measures
- Launch Phase II studies in May, 2006

Canadian Foundation for Innovation

- Application to Canadian Foundation for Innovation (National Infrastructure Fund) due Feb. 15th, 2006
 - Infrastructure for study coordination
 - Infrastructure for IT
 - Infrastructure for bio-sample storage
 - Infrastructure for data collection
 - Equipment (clinical, questionnaire, biological)
 - Space and renovations
- McMaster, Dalhousie, and McGill in partnership with 6 institutions across Canada

Future Milestones

- Phase III: March 2007 to March 2008
 - Pilot full protocol
- CLSA Launch: Fall 2008

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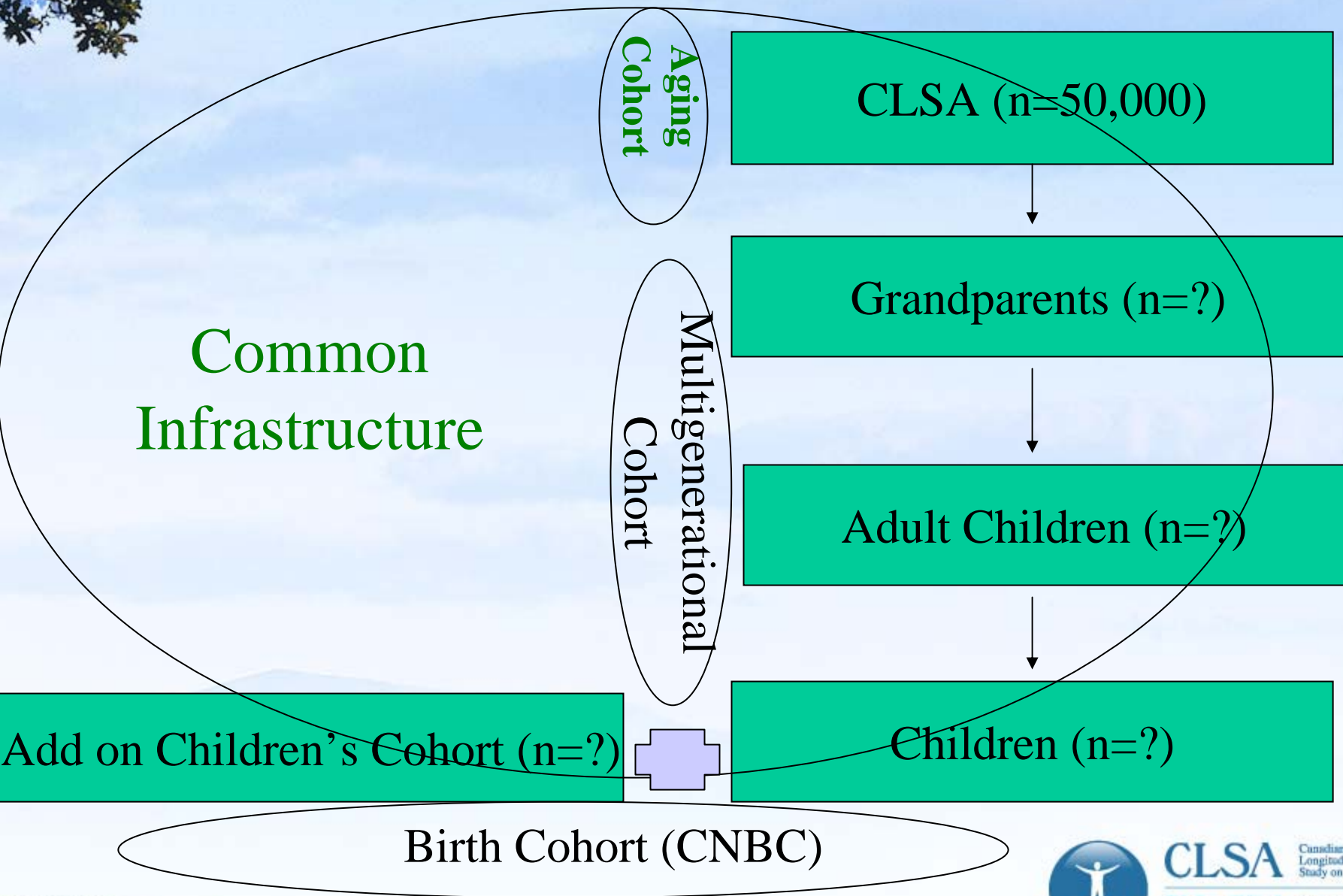


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Integrated CLHI Platform





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