

The webinar, “**Assistive device use among community-dwelling older adults: A profile from the Canadian Longitudinal Study on Aging (CLSA)** ” will begin shortly.

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CLSA Webinar Series



Assistive device use among community-dwelling older adults

Dr. Yoko Ishigami-Doyle, Dalhousie University

12 to 1 p.m. ET | March 29, 2018

There is an increasing recognition that using assistive devices can support healthy aging. Minimizing discomfort and loss of function and increasing independence can have a substantial impact on persons with disabilities, caregivers, and communities, physically, psychologically, and financially.

However, it remains unclear who uses assistive devices and what is the association between device use and social participation. The current analysis used CLSA baseline data from 51,338 older adults between the ages of 45-85. Measures of socio-demographic, health, and social characteristics were analyzed by sex and age groups. Weighted cross-tabulations were used to report associations between independent variables and assisted device use (hearing, vision, and mobility). As the first step to investigate assistive device use among older adults in Canada, characteristics of device users were identified with respect to age, ethnicity, sex, income, education, marital status, health, and social networks.

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Canadian Longitudinal Study on Aging
Etude longitudinale canadienne sur le vieillissement

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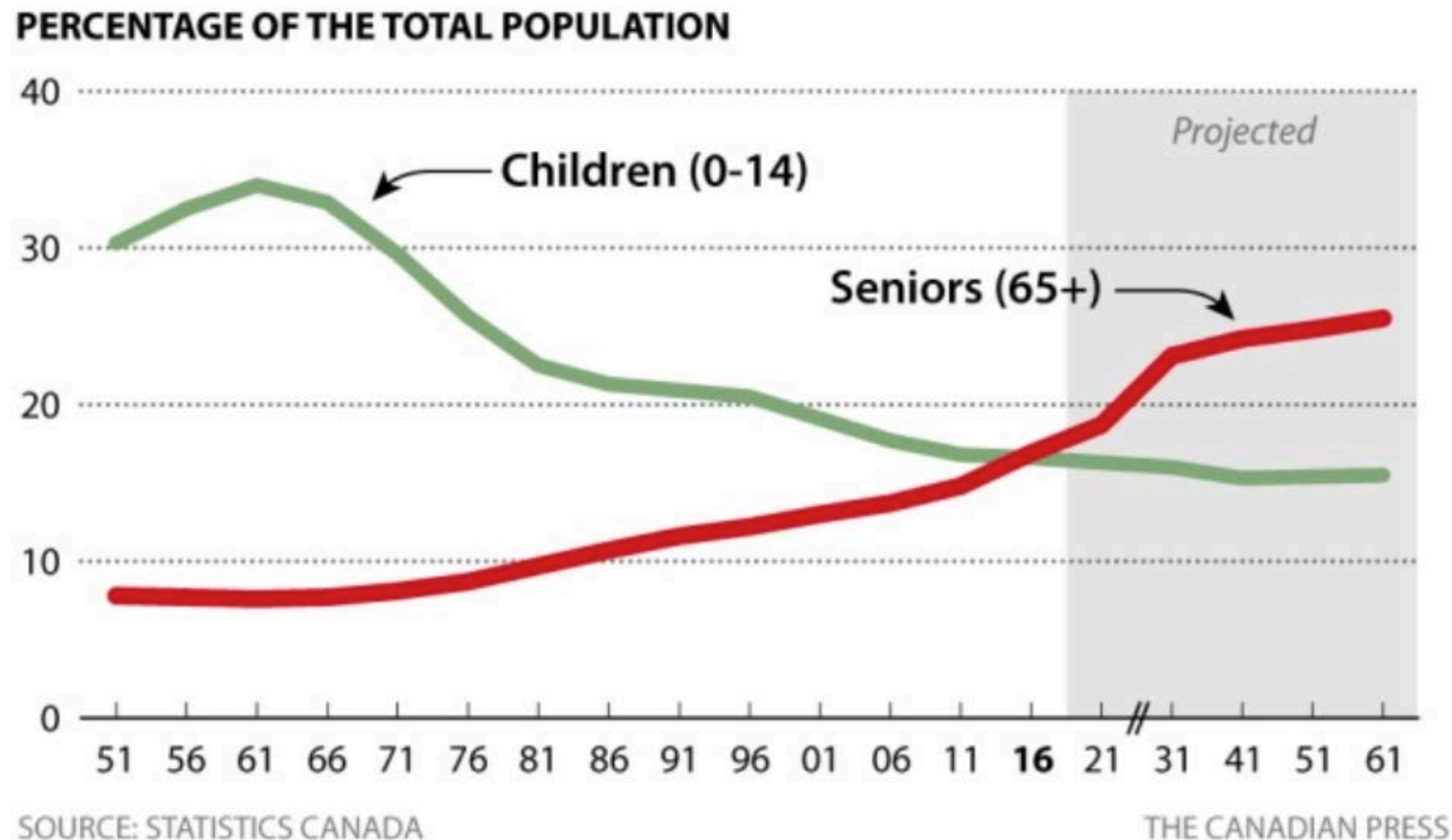
Assistive device use among community-
dwelling older adults:
A profile from
the Canadian Longitudinal Study on Aging
(CLSA)

Yoko Ishigami-Doyle¹, Jeffrey Jutai², and Susan Kirkland¹,

¹Dalhousie University, ²University of Ottawa

Aging population

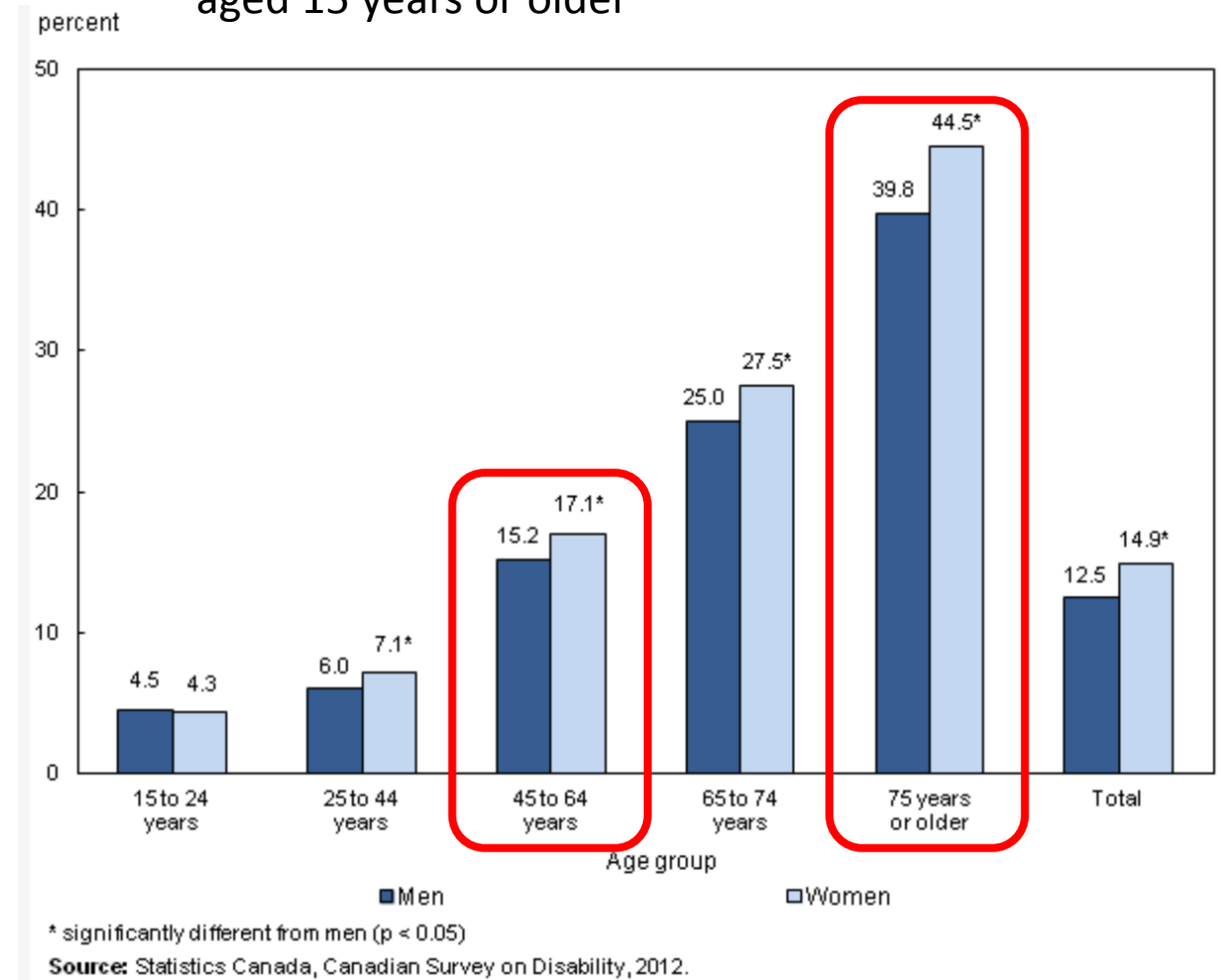
- 65+ years old > 0~14 years old in 2015



Increasing disabilities

- As we age, disabilities increase too.
- The early 40s - the mean age of onset of disability

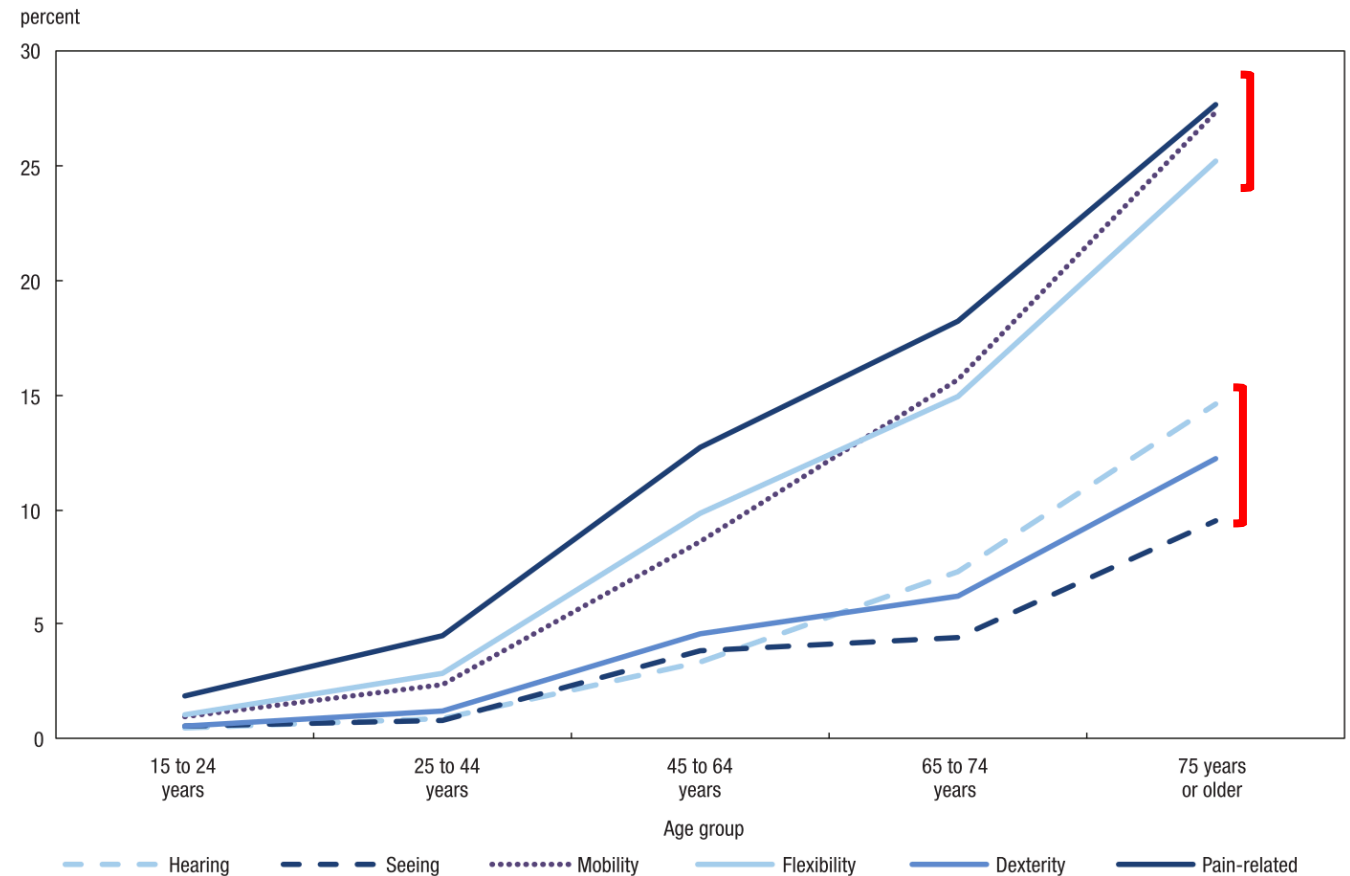
Prevalence of disability, by age group and sex, aged 15 years or older



Increasing disability

- Sensory
 - Hearing
 - Seeing
- Physical
 - Mobility
 - Flexibility
 - Dexterity
 - Pain-related

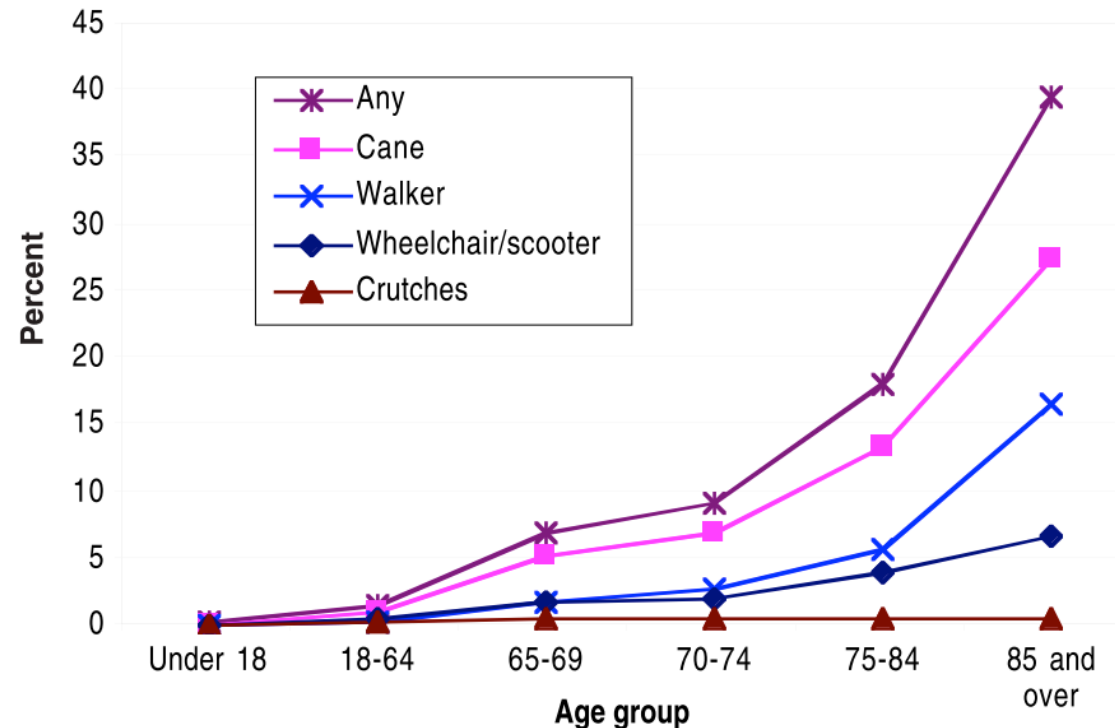
Prevalence of sensory and physical disabilities, by type and age group, aged 15 years or older



Source: Statistics Canada, Canadian Survey on Disability, 2012.

Increasing device use

- The use of assistive devices increases with age
- Not a lot of studies in Canadian contexts



Kaye et al. (2000)

Importance of independent living

- Individuals
 - Work and social life as well as psychological health
 - Social participation as a modifiable determinant of health and successful aging (e.g., Gilmour, 2012)
- Caregivers
 - Work and social life as well as psychological health
 - Time spent on caregiving is related to depression and life dissatisfaction (a CLSA study, Skrastins et al., in preparation)
- Communities
 - Provide 'support' rather than 'care' (Bowes and McColgan, 2006)
 - Affects individuals and formal/informal caregivers

Objectives: Who uses assistive device?

- Describe the profile of **hearing, vision, and mobility** device users in Canada with regard to socio-demographic and health characteristics as well as social network characteristics
- Show distributions of populations for each characteristic

Methods – Data and participants

- Participants: 45-85 years old (N=51338)
- Data: collected at baseline (2010-2015)
 - CLSA Tracking (n=21241)
 - Randomly selected from 10 provinces (AB, BC, MB, NB, NL, NS, ON, PEI, QC, SK)
 - CLSA Comprehensive (n=30097)
 - Randomly selected from within 25-50Km of data collection sites (Victoria, Vancouver, Surrey, Calgary, Winnipeg, Hamilton, Ottawa, Montréal, Sherbrooke, Halifax, and St. John's)

Methods – Exclusion criteria

- Excluded
 - Residents in the three territories, in some remote regions, in federal First Nations reserves, and other First Nations settlements in the provinces
 - Full-time members of the Canadian Armed Forces
 - Individuals living in institutions
 - Individuals who were temporary visa holders or had transitional health coverage
 - Individuals unable to respond in English or French
 - Individuals with cognitive impairment at baseline

Methods – Measure of **hearing** device use

- “Do you use any aids, specialized equipment, or services for persons who are deaf or hard of hearing, for example, a volume control telephone or TV decoder?”
 - **YES**
 - NO
- (FYI) Types of hearing devices (the list read to participants)
 - hearing aid, volume control TV, closed caption TV or decoder, amplifier, computer to communicate, other phone related device, visual or vibrating alarm, cochlear implant, TTY or TTD, message relay service

Methods – Measure of **vision** device use

- “Besides glasses or contact lenses, do you use any aids or specialized equipment for persons who are blind or visually impaired, for example, magnifiers or Braille reading materials?”
 - **YES**
 - NO
- (FYI) Types of vision devices (the list read to participants)
 - Magnifiers, larger reading print materials, a computer with braille, large print or speech access, a white cane, talking books, closed circuit devices (e.g., CCTVs), recording equipment or portable note-takers, a guide dog, and braille reading materials

Methods – Measure of **mobility** device use

- “During the past 12 months, have you used any of the following assistive devices?”
- Types of mobility devices (a part of the list read to participants)
 - **cane/walking stick**
 - **walker,**
 - **leg braces or supportive device**
 - **wheelchair,**
 - **motorized scooter**

Methods

- Measures of various characteristics

- Measures

- Socio-demographic characteristics

- Ethnicity, marital status, education, total household income

- Health characteristics

- Number of chronic conditions, home care, perceived health

- Social network characteristics

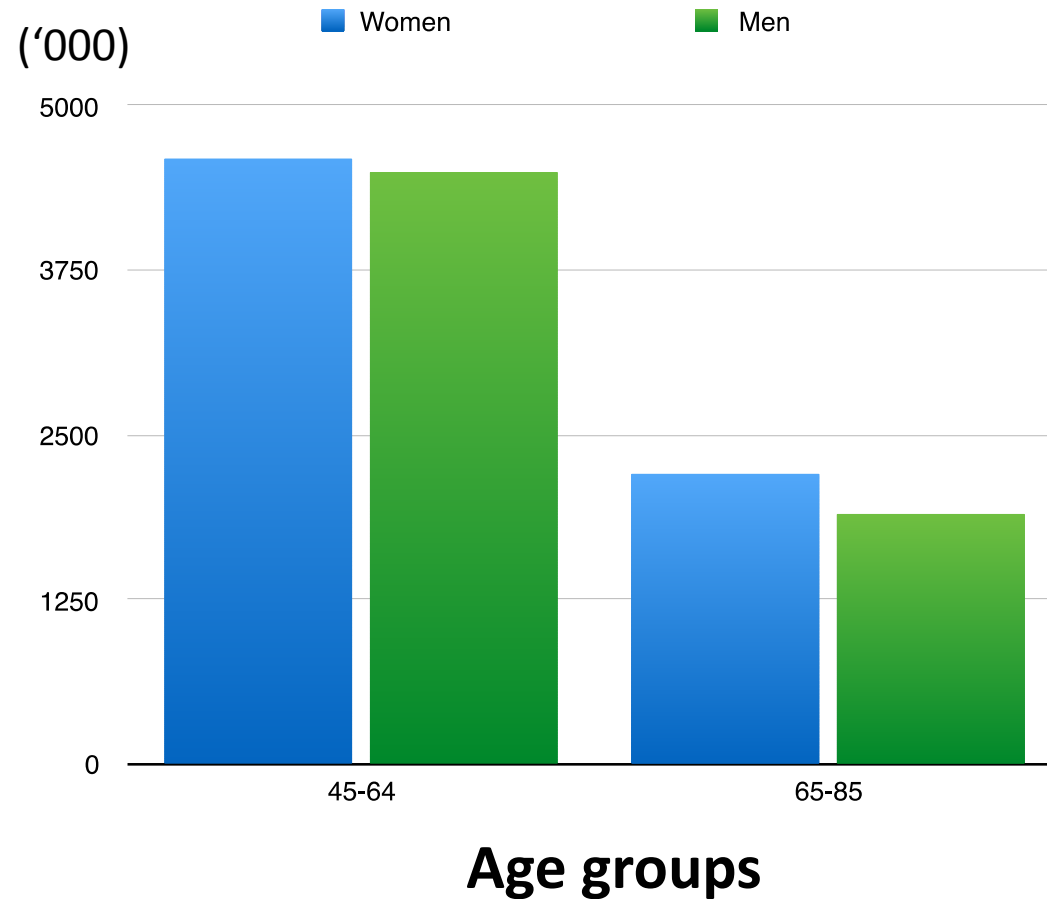
- Living arrangement, social participation, social isolation (loneliness)

- Analysis

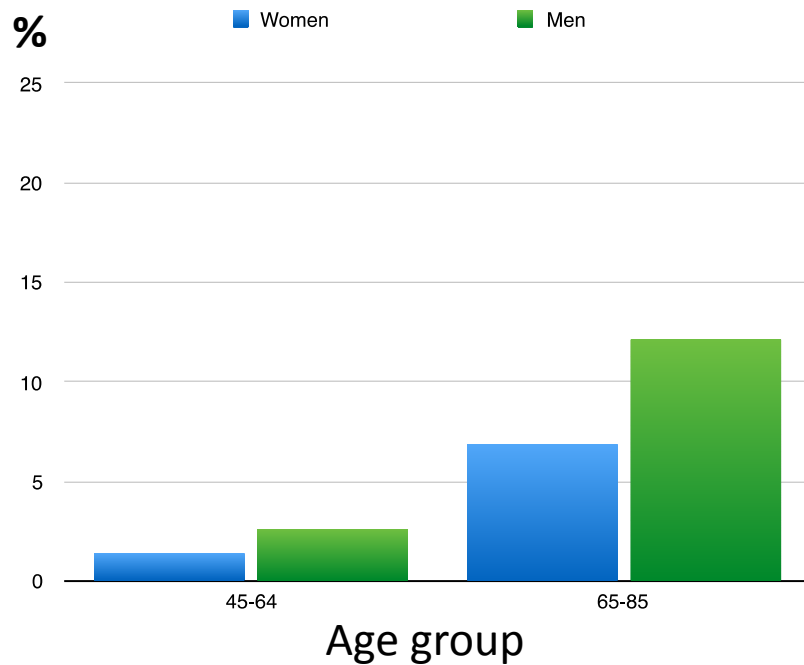
- Weighted cross-tabulations

- Rates of device users given characteristics

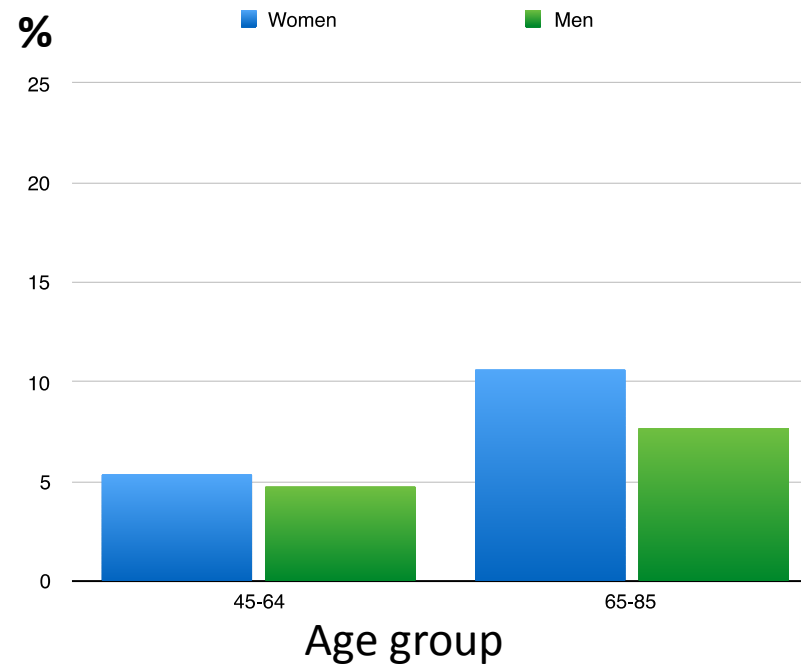
Estimated Canadian population in the CLSA



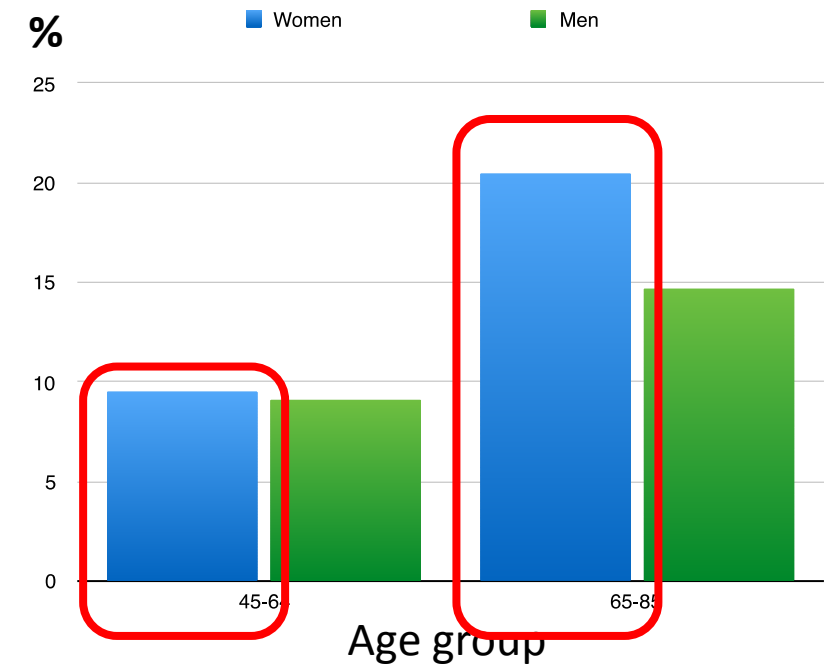
Canadians using assistive devices



Hearing



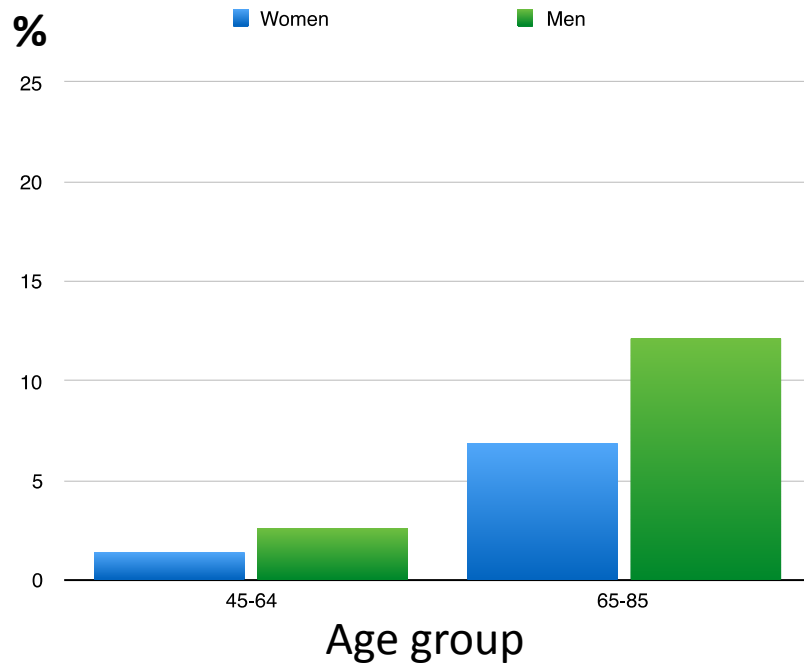
Vision



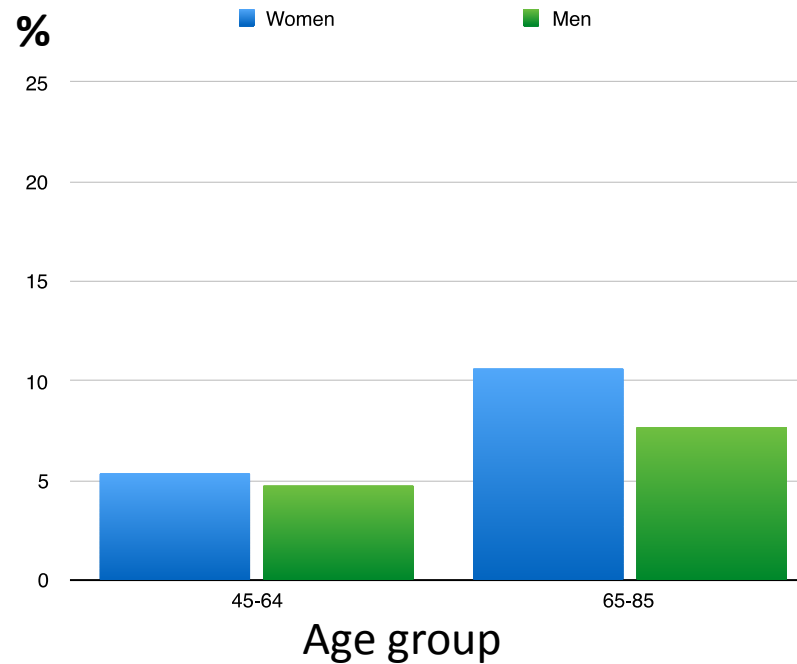
Mobility

Canadians using assistive devices

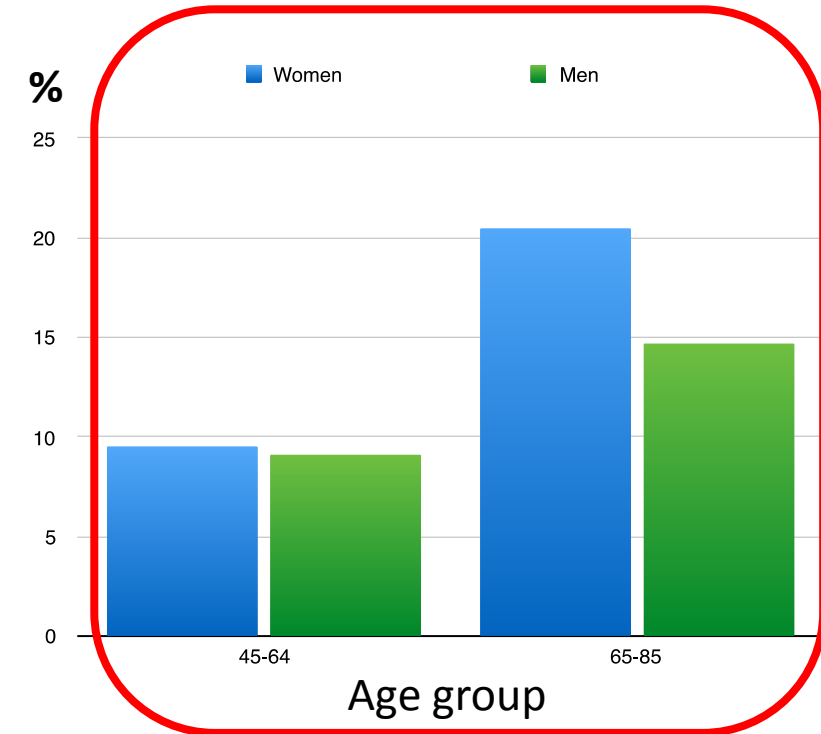
Type of device



Hearing



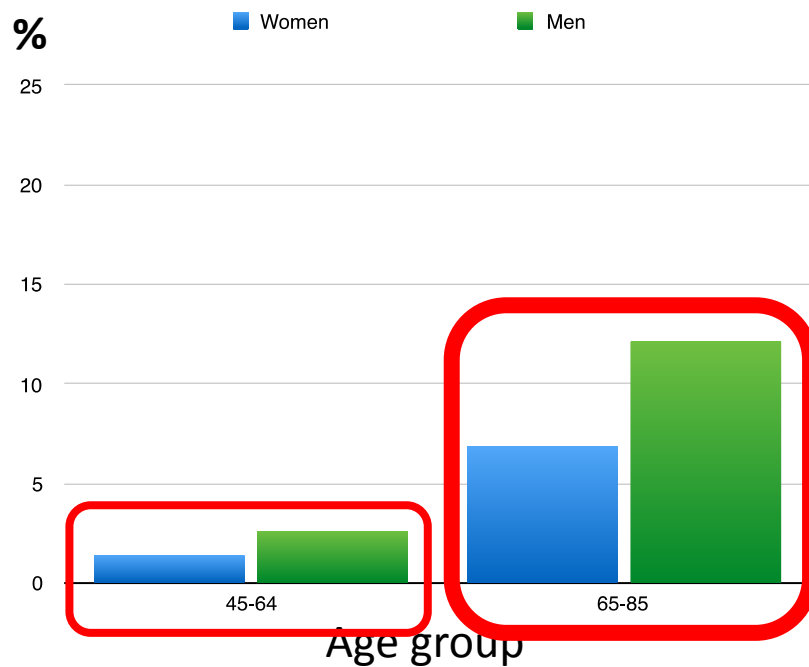
Vision



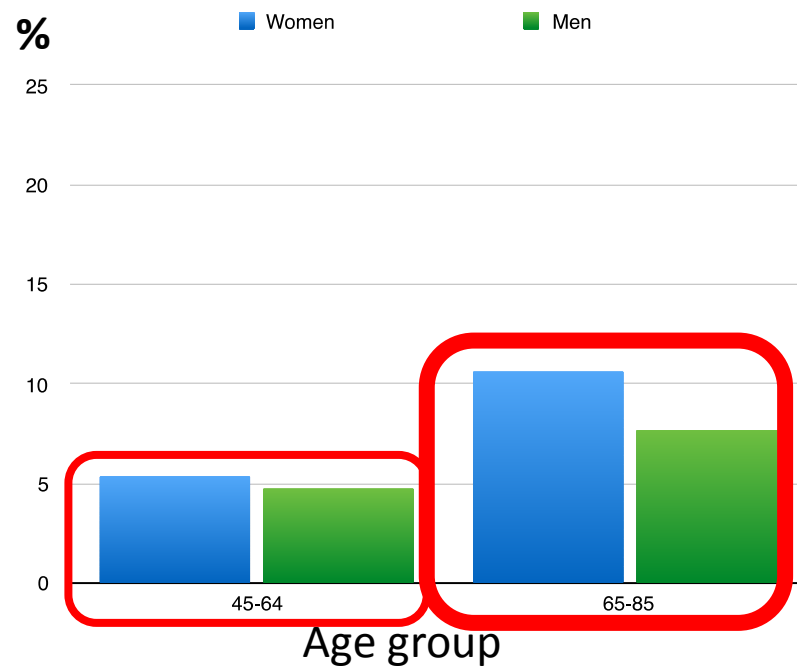
Mobility

Canadians using assistive devices

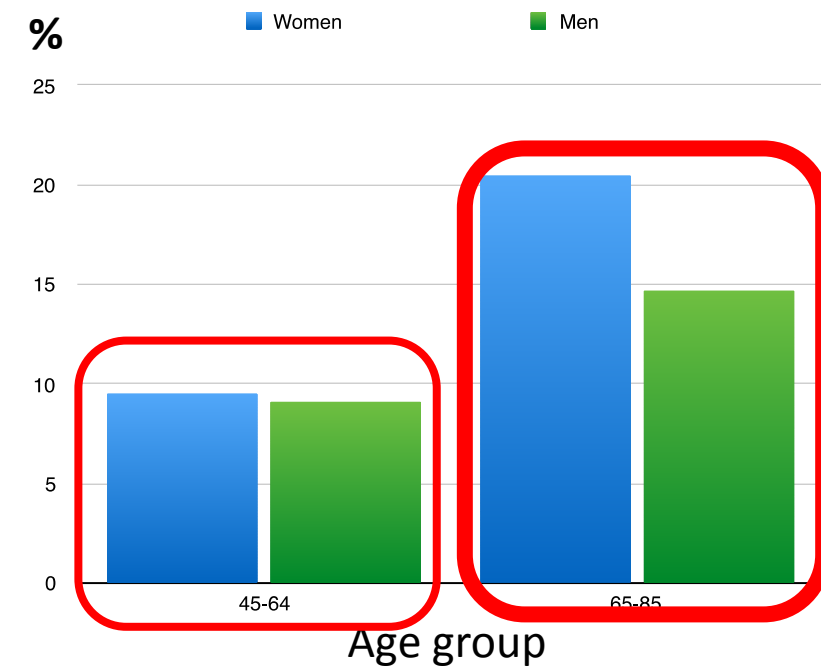
Age-group, type of device



Hearing



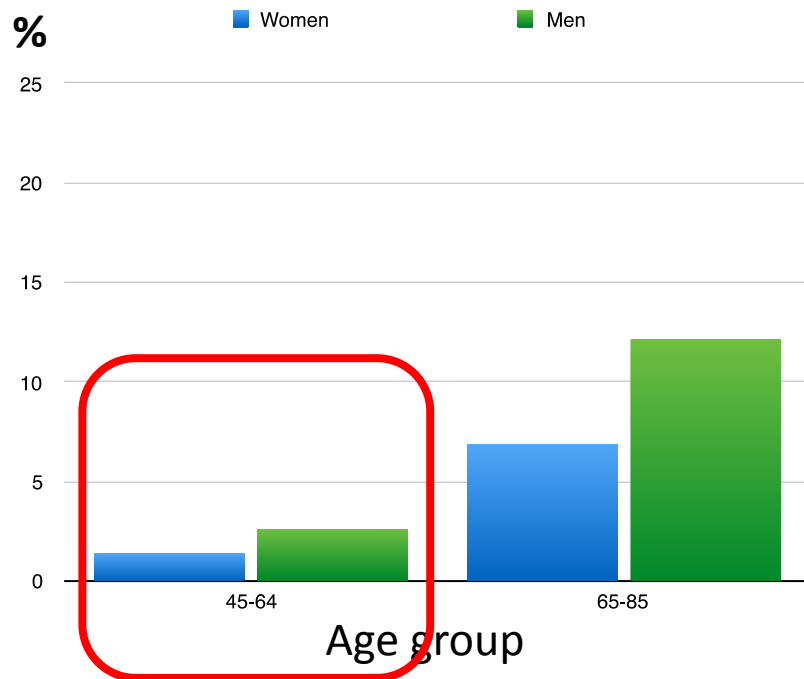
Vision



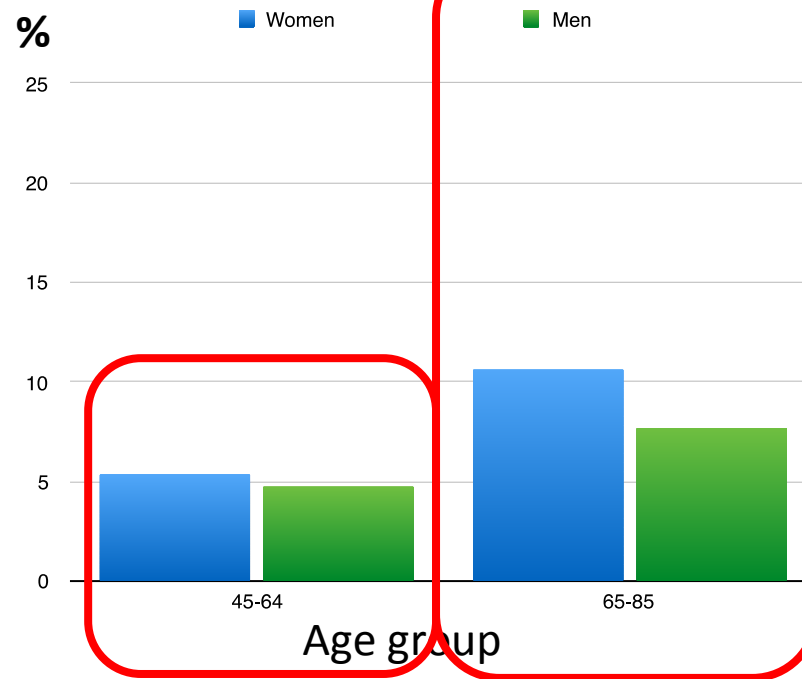
Mobility

Canadians using assistive devices

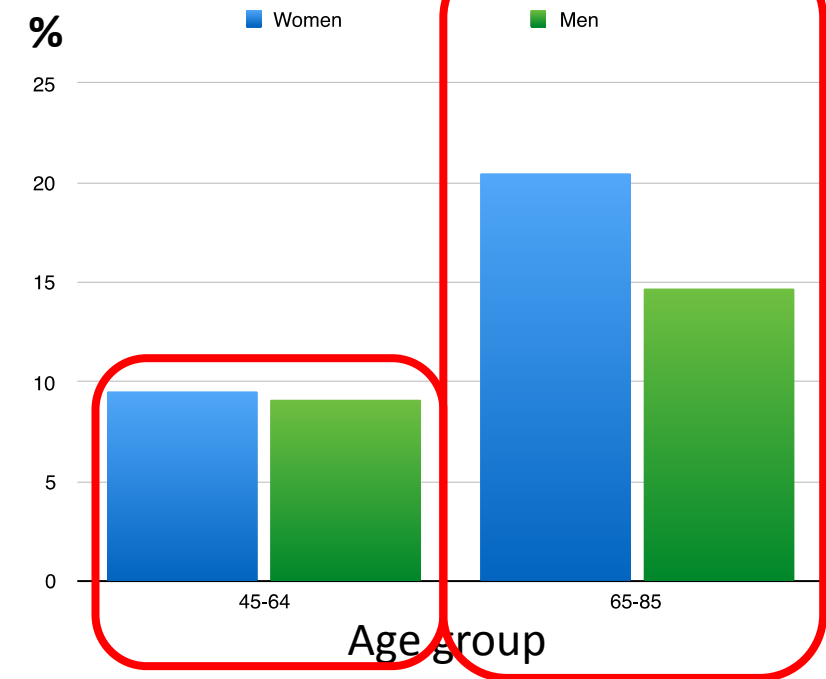
Sex, type of device



Hearing



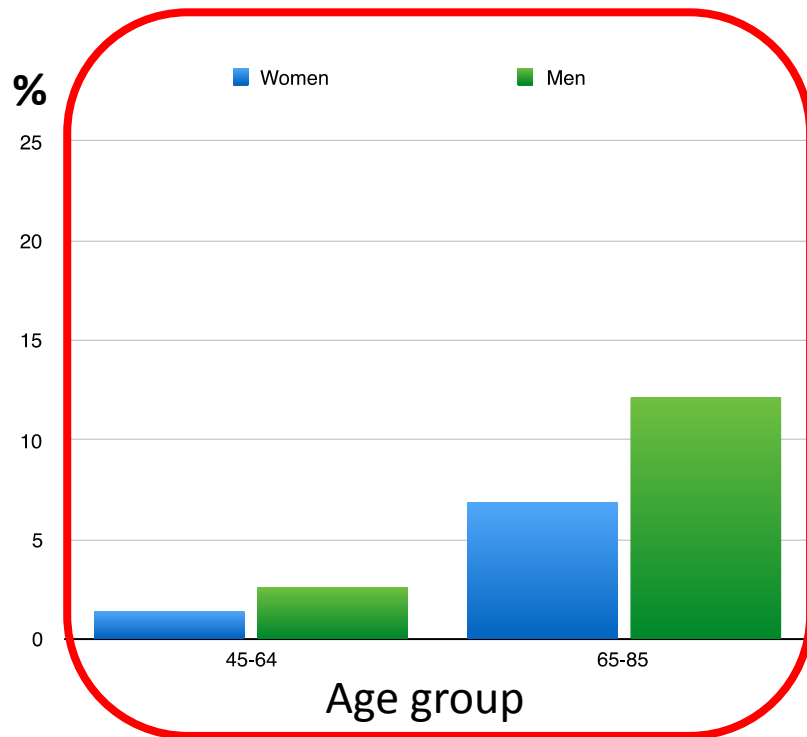
Vision



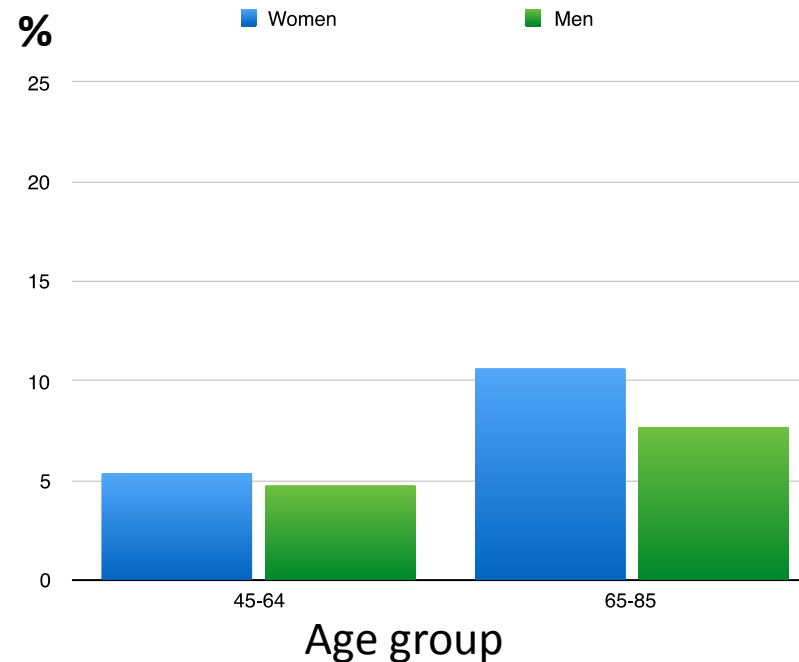
Mobility

Canadians using assistive devices

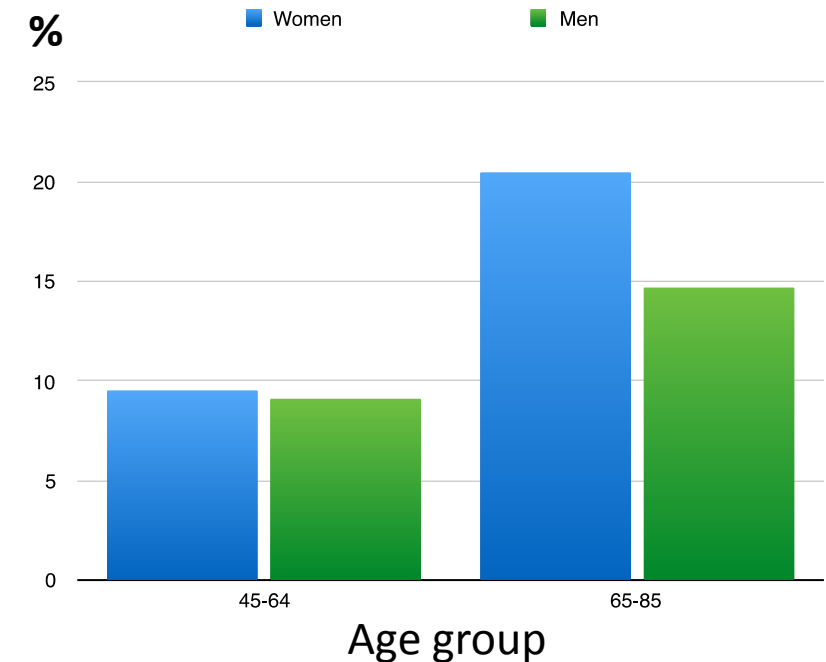
Sex, type of device



Hearing



Vision



Mobility

What to expect..

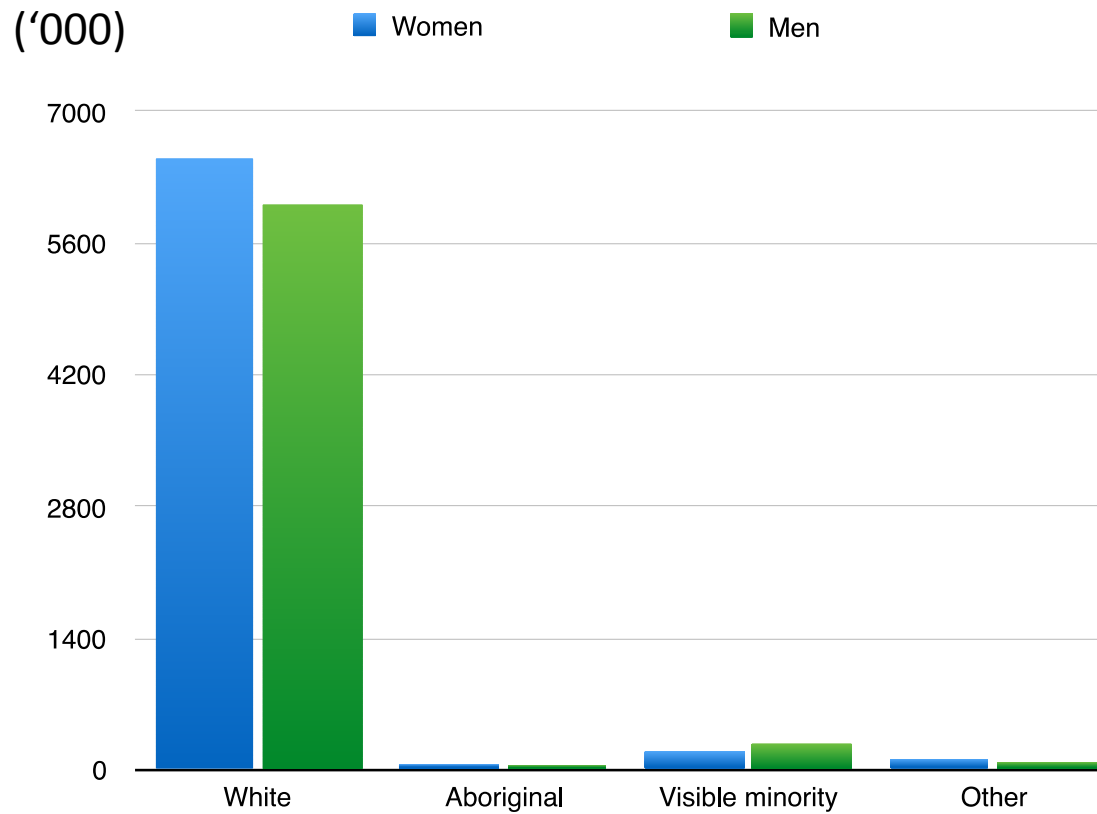
- Scio-demographic characteristics
 - Ethnicity, marital status, education, total household income
- Health characteristics
 - Number of chronic conditions, home care, perceived health
- Social network characteristics
 - Living arrangement, social participation, social isolation (loneliness)
- Distributions **Canadians** for characteristics by sex or age (on the left)
- % of **device users** for characteristics (on the right)
- Common profiles of device users
 - Most frequent and least frequent users
- In depth examination if 'different' from other device user profile

Ethnicity

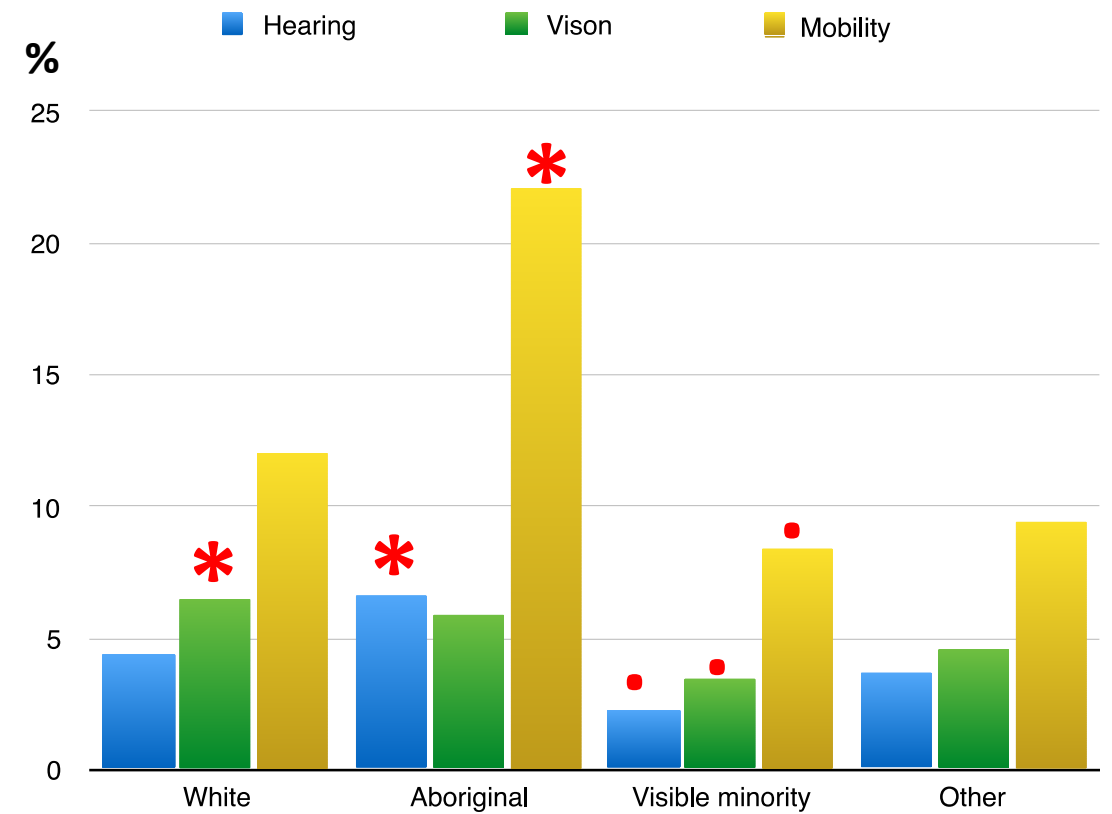
- “People living in Canada come from many different cultural and racial backgrounds. Are you...?”
 - White, Chinese, South Asian, Black, Filipino, Latin American, South Asian, Arab, West Asian, Japanese, Korean, North American Indian, Inuit, Metis, and Other.
- Groups
 - White
 - Aboriginal
 - Visible minority
 - Other

Ethnicity

Distribution of population



% device users

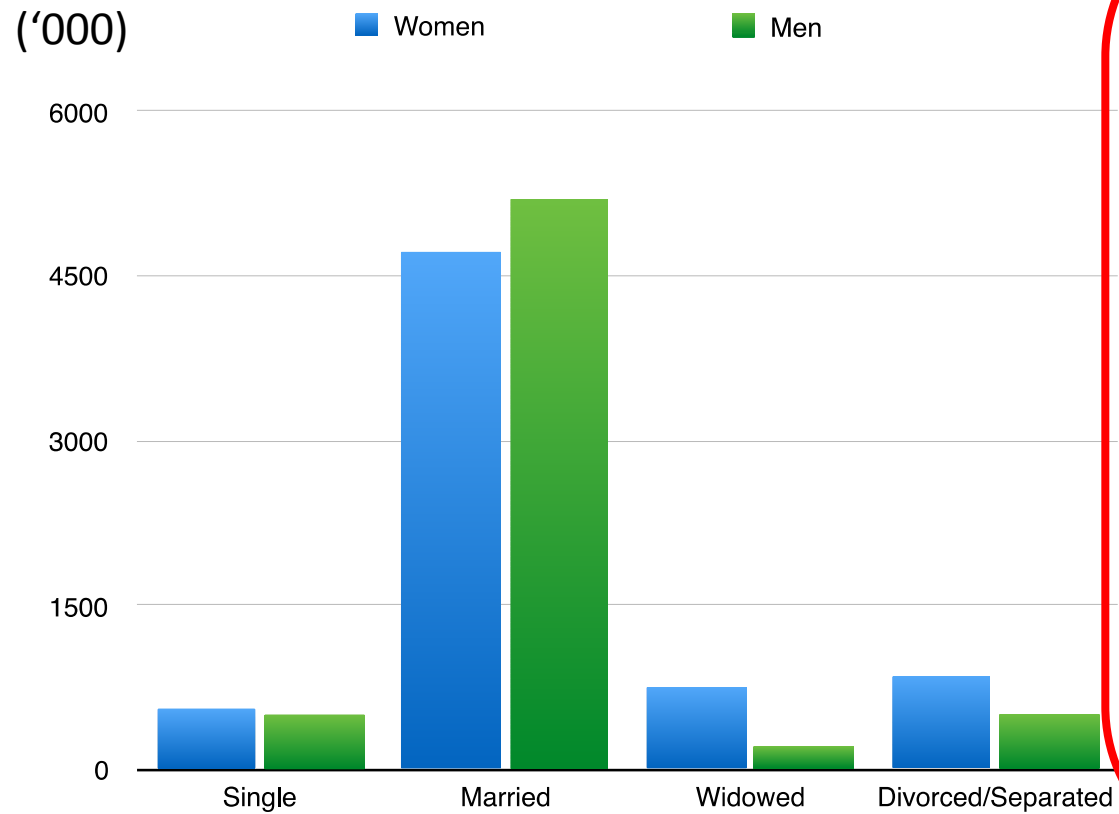


Marital status

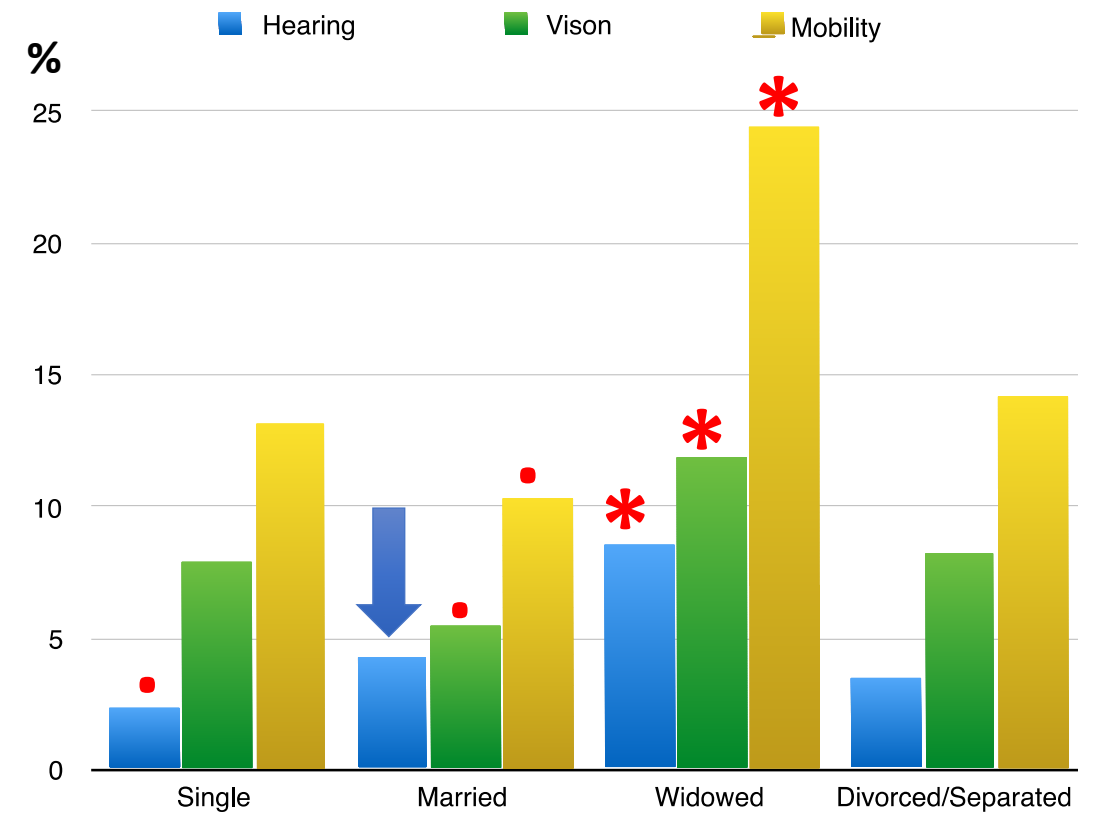
- “What is your current marital/partner status? “
 - Single, never married or never lived with a partner
 - Married/Living with a partner in a common-law relationship
 - Widowed
 - Divorced
 - Separated

Marital status

Distribution of population

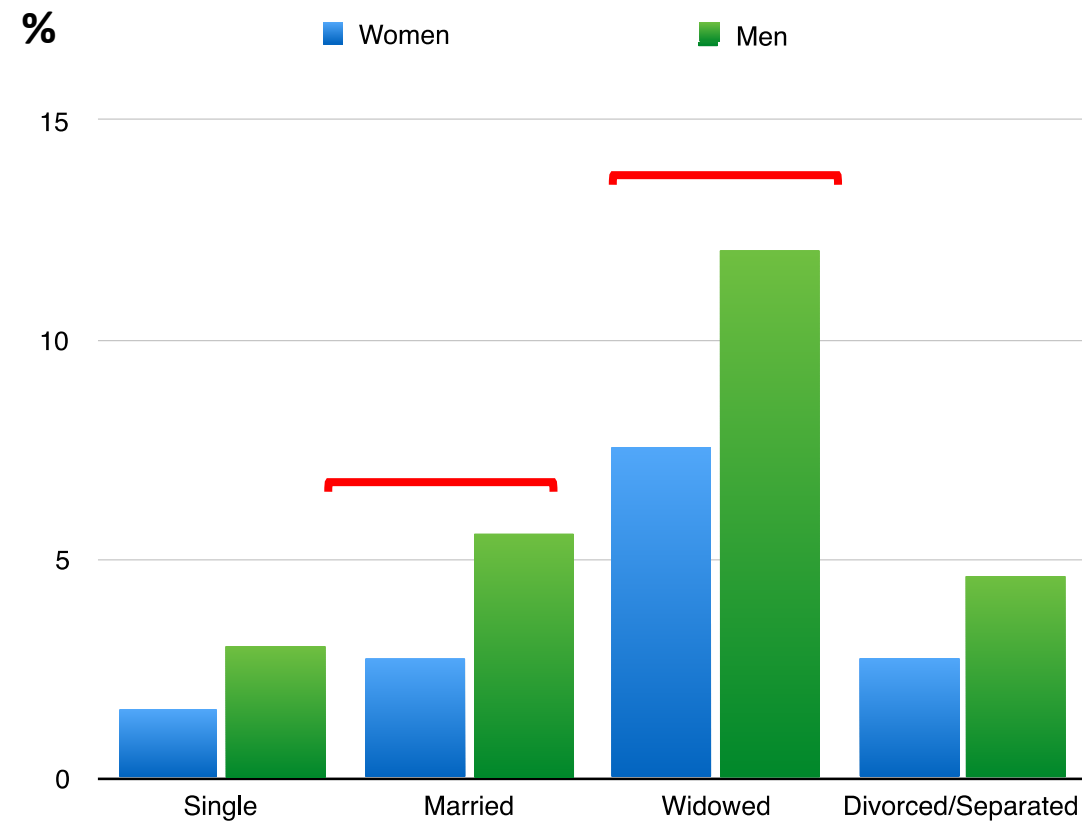


% device users



Marital status

Hearing

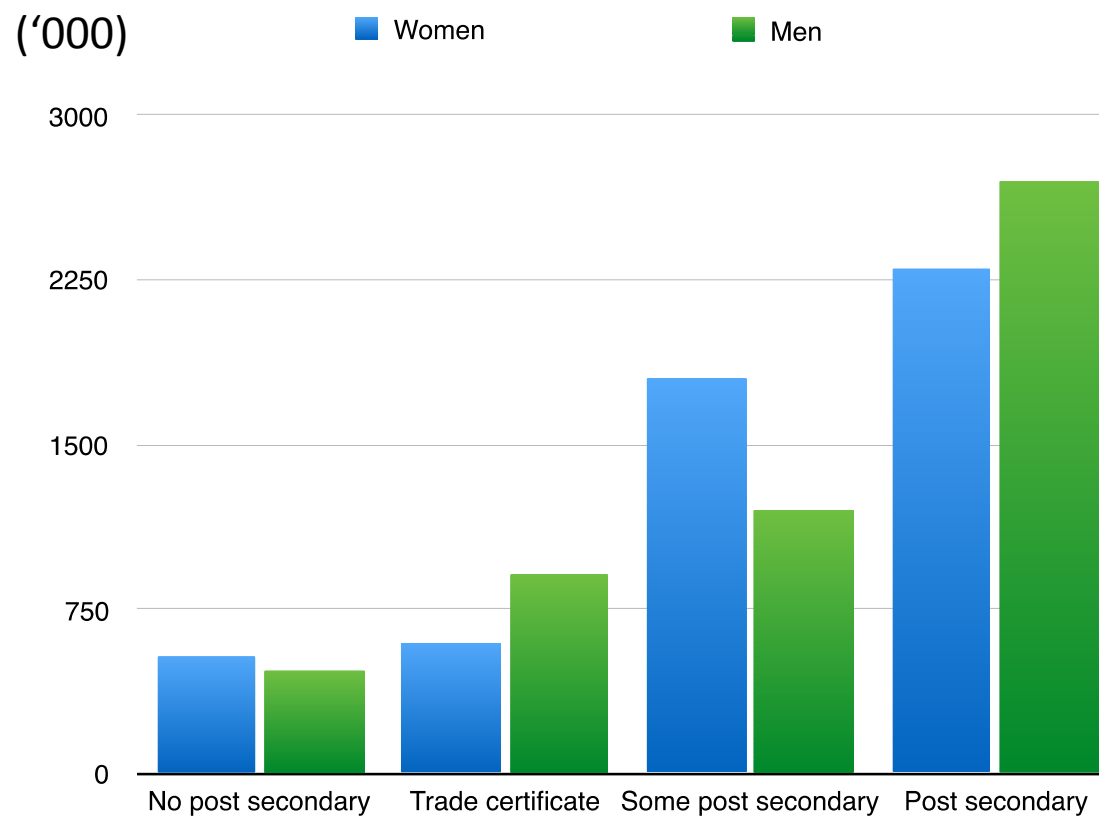


Education

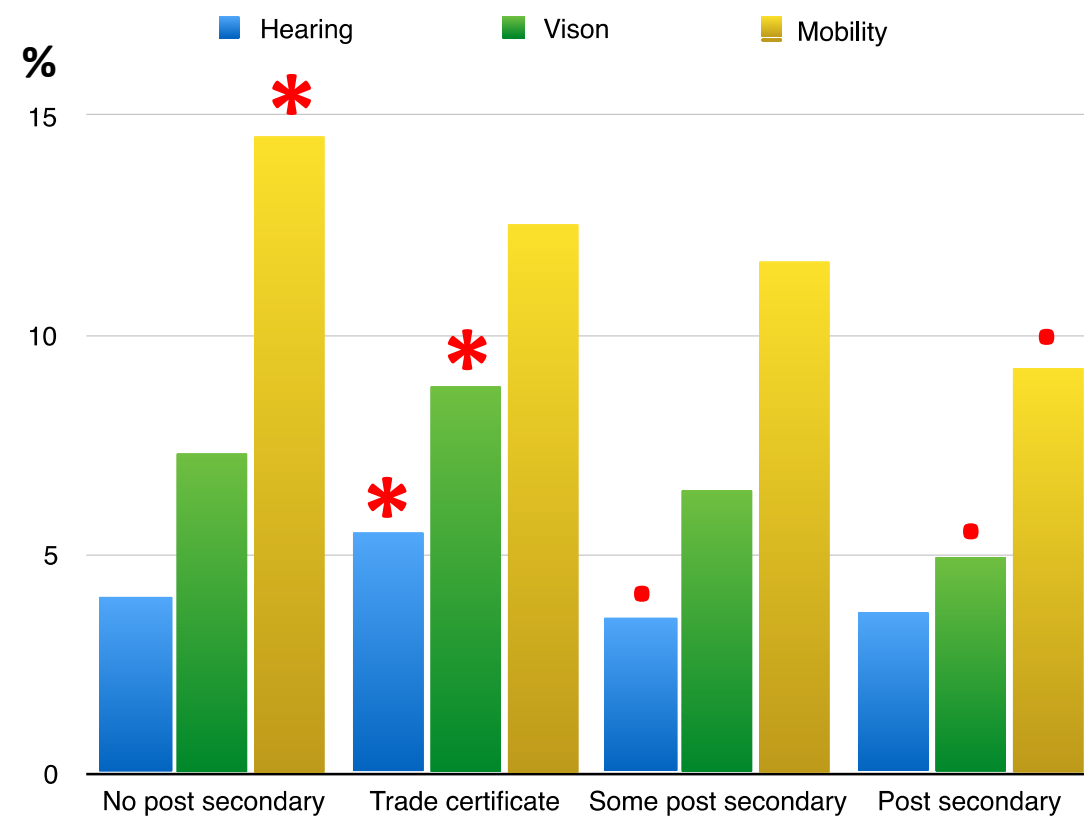
- “What is the highest degree, certificate, or diploma you have obtained?”
 - No post-secondary degree, certificate, or diploma
 - Trade certificate or diploma from a vocational school or apprenticeship training
 - Non-university certificate or diploma from a community college, CEGEP, school of nursing, etc.
 - University certificate below bachelor’s level
 - Bachelor’s degree
 - University degree or certificate above bachelor’s degree

Education

Distribution of population

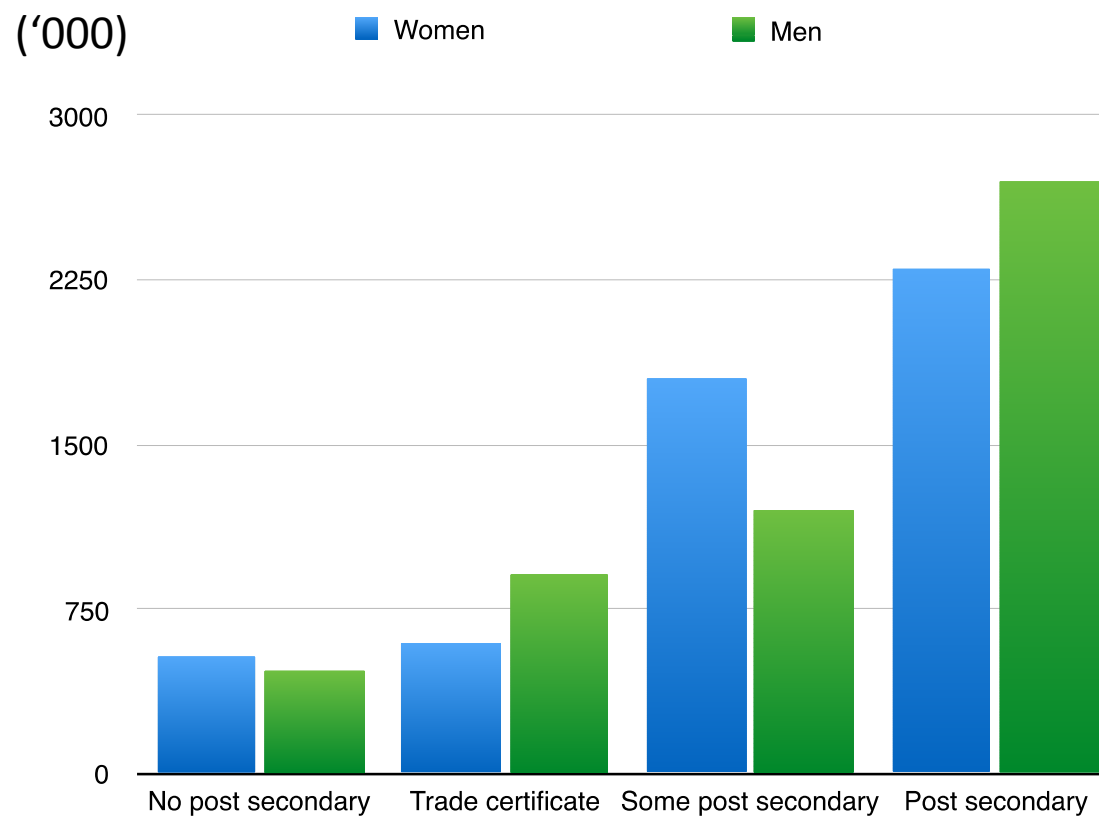


% device users

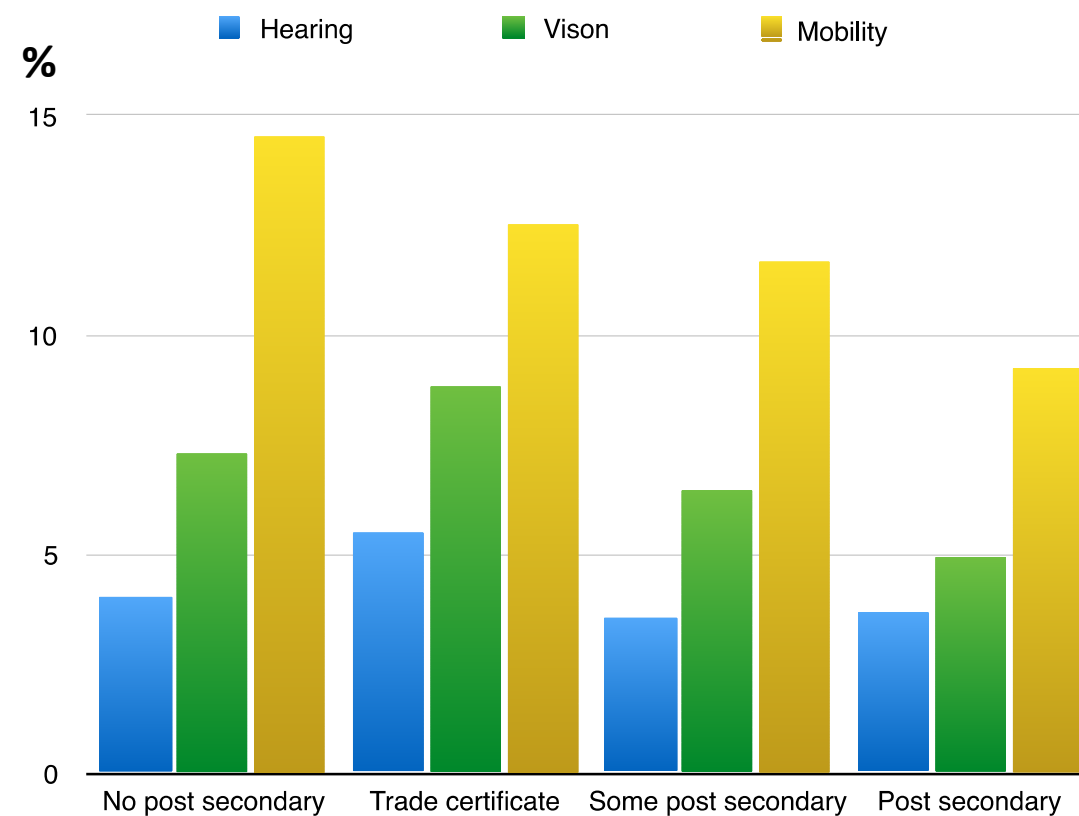


Education

Distribution of population



% device users

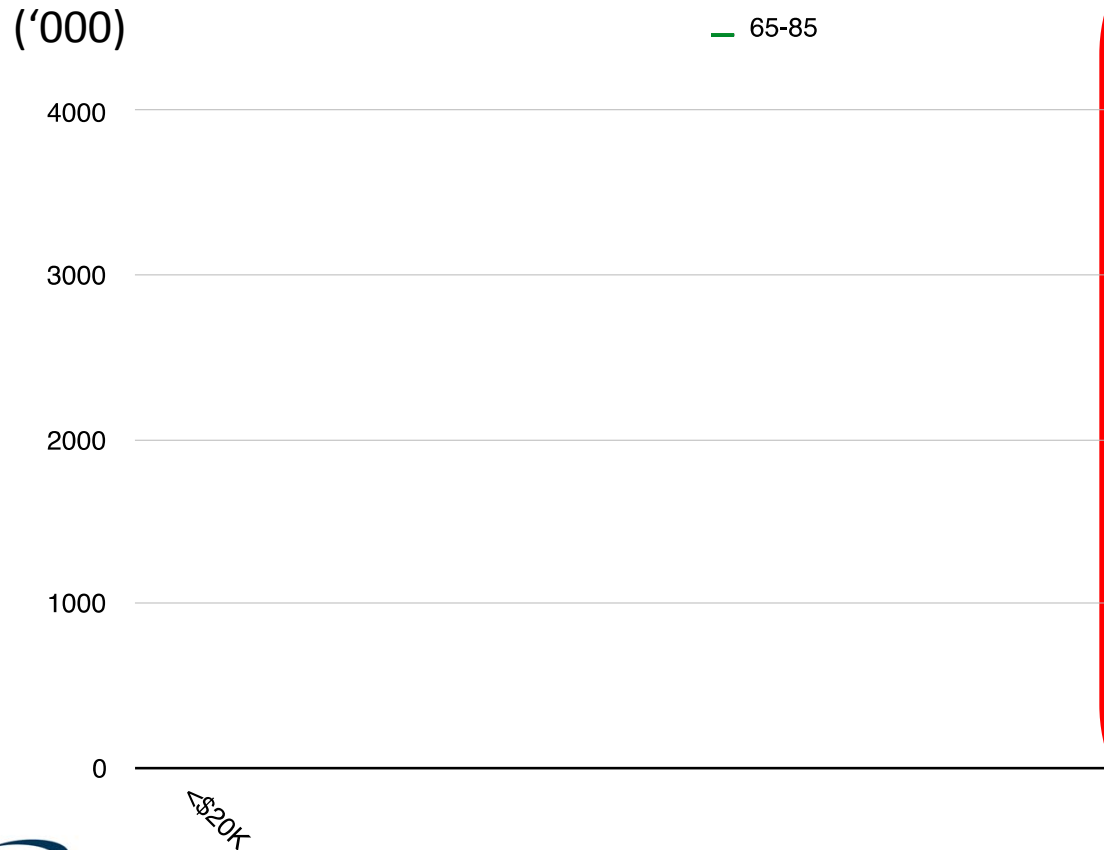


Total household income

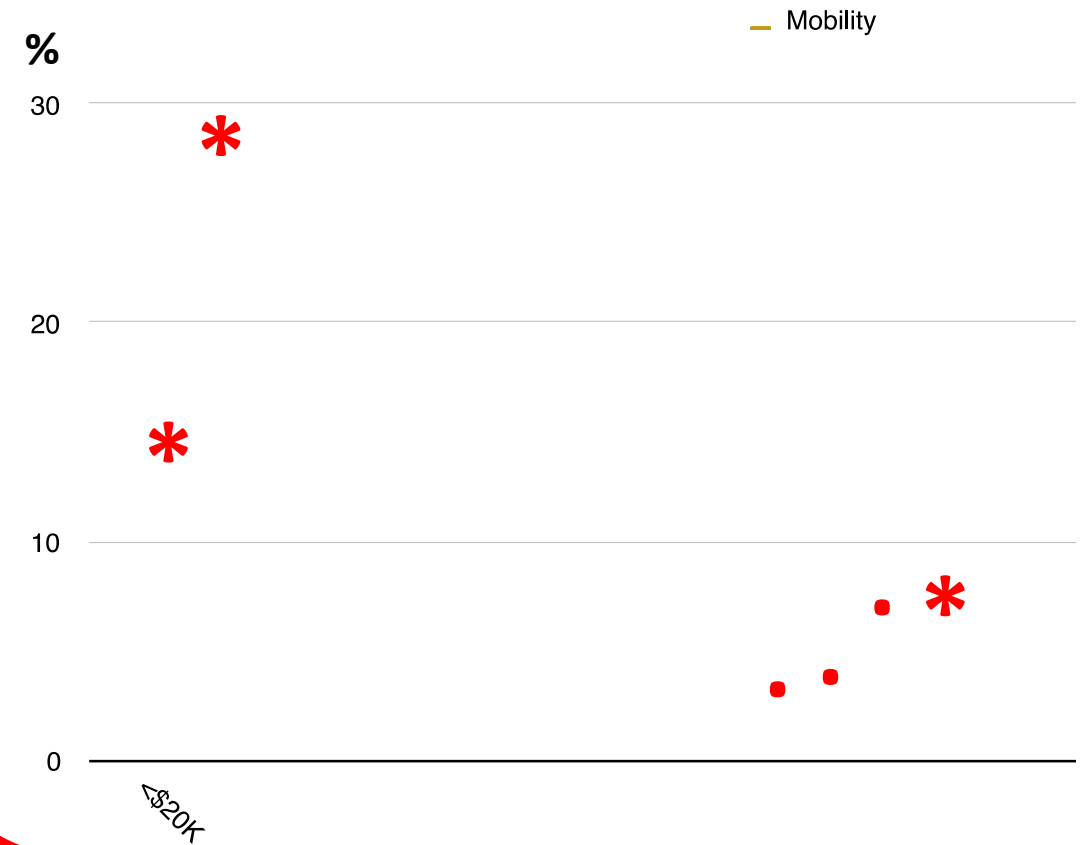
- “What is your best estimate of the total household income received by all household members, from all sources, before taxes and deductions, in the past 12 months?”
 - Less than \$20,00
 - \$20,000 or more, but less than \$50,000
 - \$50,000 or more, but less than \$100,000
 - \$100,000 or more, but less than \$150,000
 - \$150,000 or more
 - Unknown

Total household income

Distribution of population

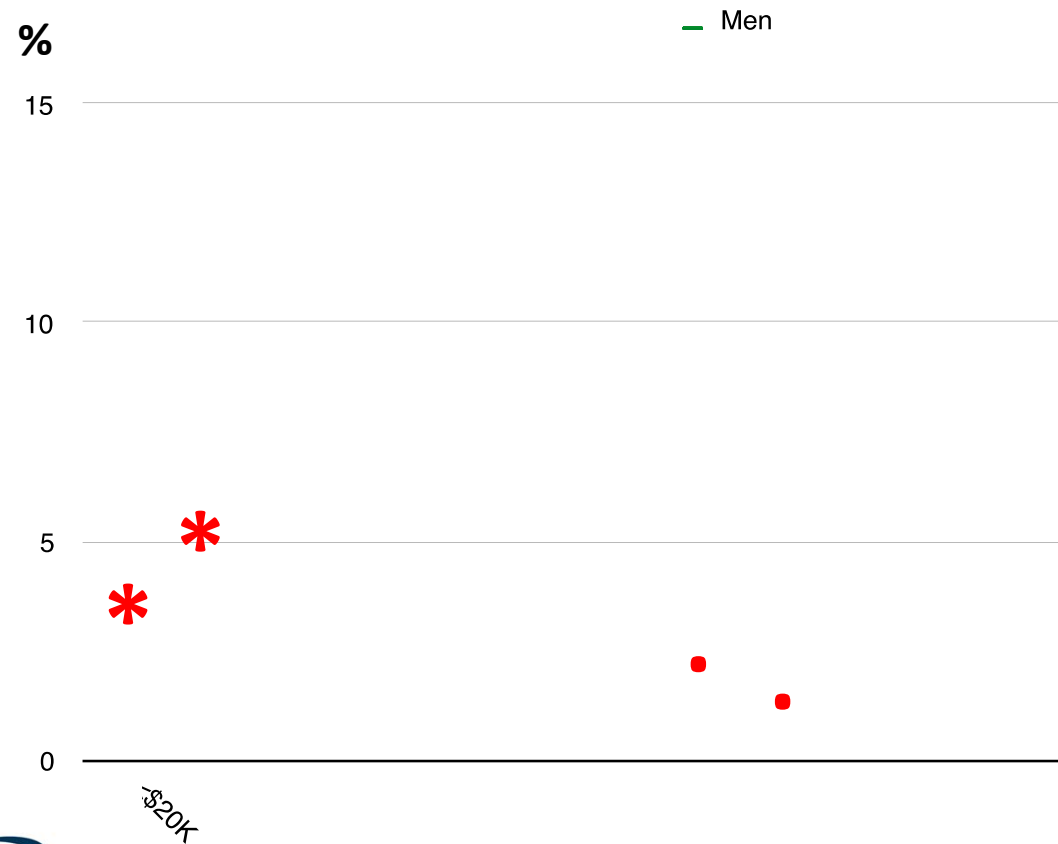


% device users

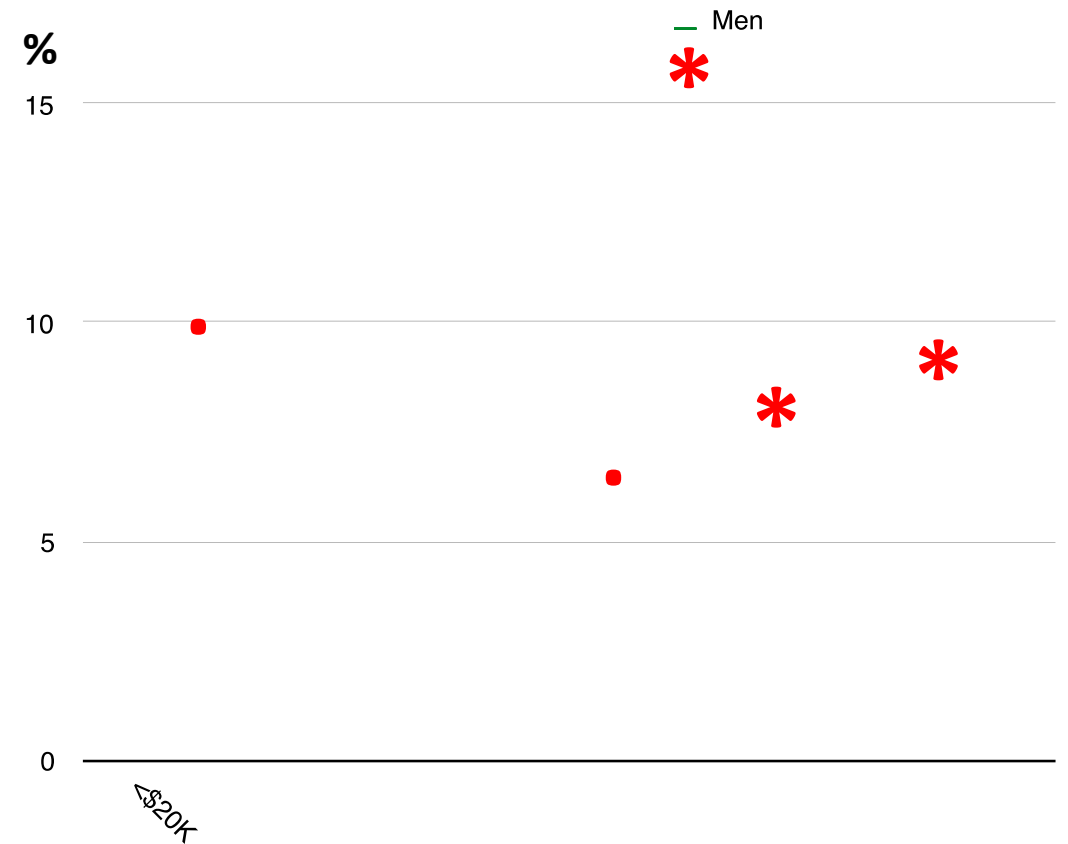


Total household income

Hearing



45-64 years old



65-85 years old

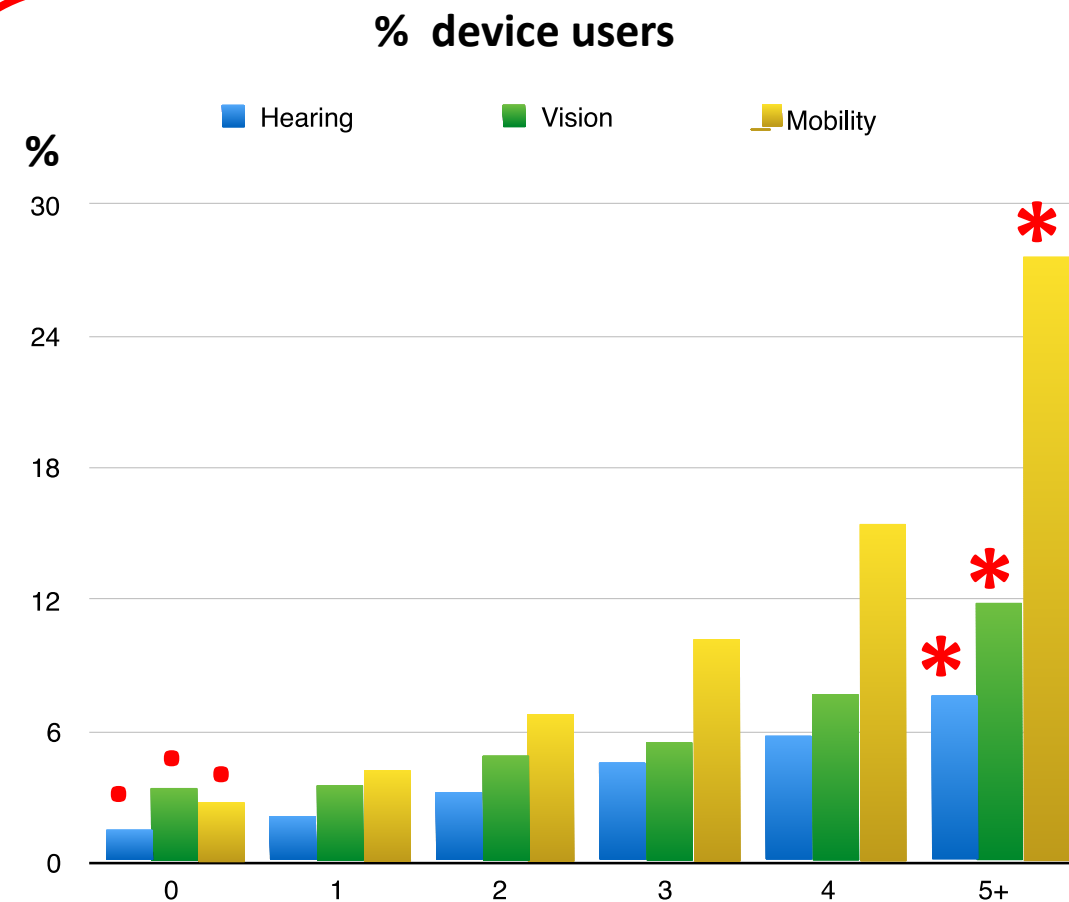
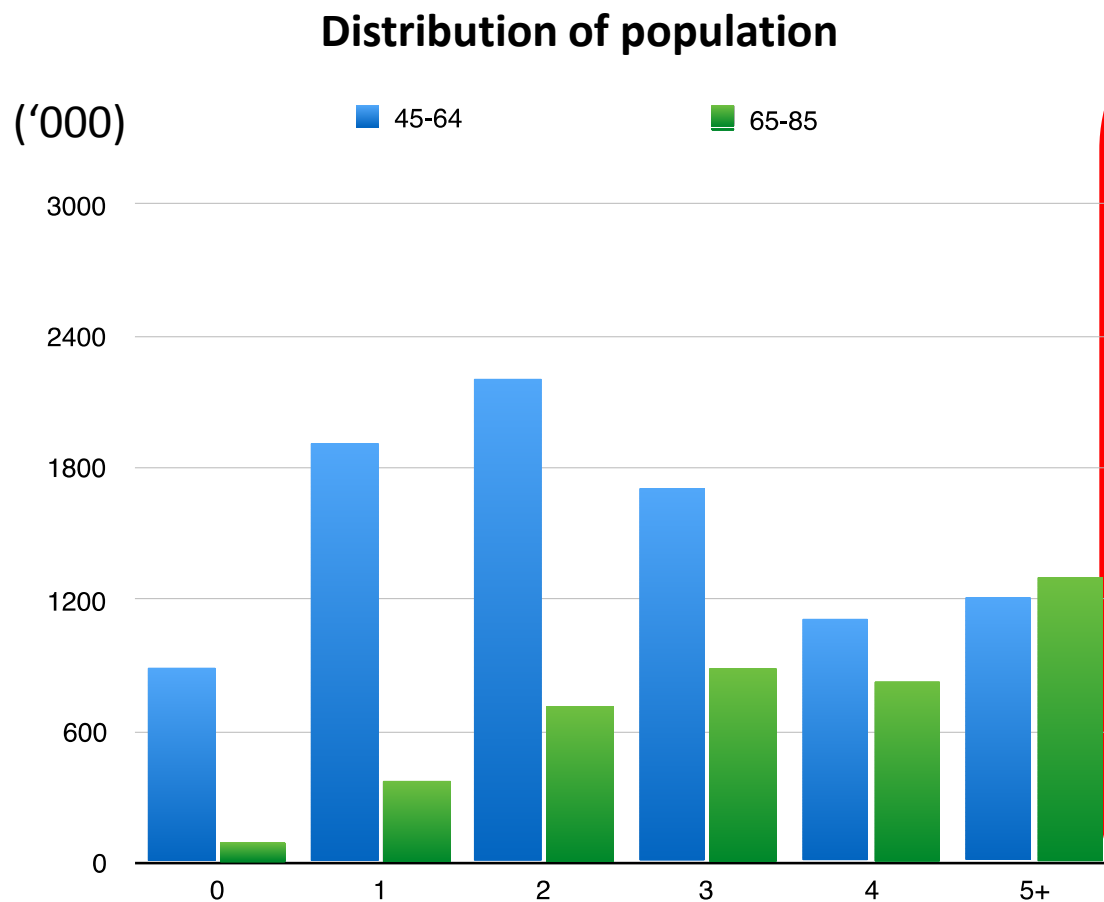
Number of chronic conditions

- “Now I’d like to ask about any chronic health conditions which you may have. We are interested in "long- term conditions" which are expected to last, or have already lasted 6 months or more and that have been diagnosed by a health professional. “
- Has a doctor ever told you that you have?

Number of chronic conditions

- Osteoarthritis
- Arthritis
- Respiratory
- Cardiac / Cardiovasculular
- Neurological
- Gastrointestinal
- Vision
- Cancer
- Mental health
- Others
- Infections

Number of chronic conditions



Home care

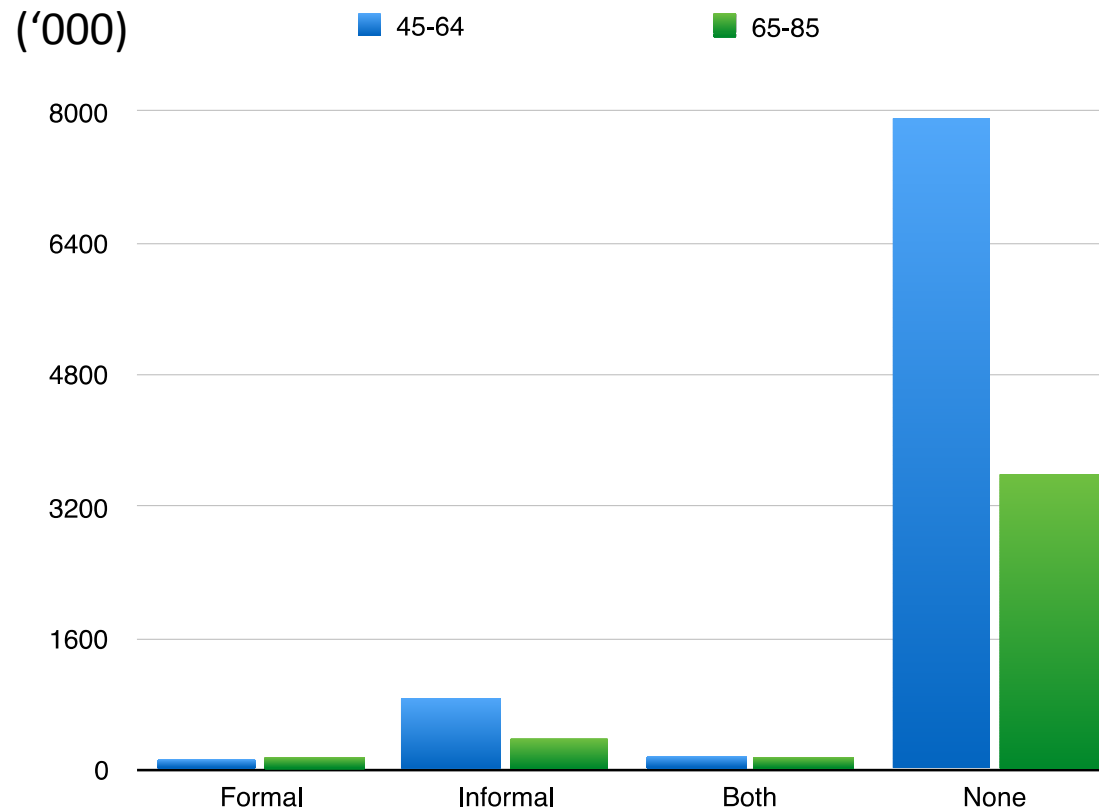
- Formal home care
 - “Now some questions on home care services you may have received because of a health condition or limitation that affects your daily activities. These services include health care, homemaker, or other support services received at home. Please include only services provided by professionals or paid workers. Exclude assistance from family, friends or neighbours. “
 - “Did you receive short-term or long-term professional assistance at home, because of a health condition or limitation that affects your daily life, for any of the following activities? “
 - **Personal care, medical care, managing care, housework/home maintenance, transportation, meal**

Home care

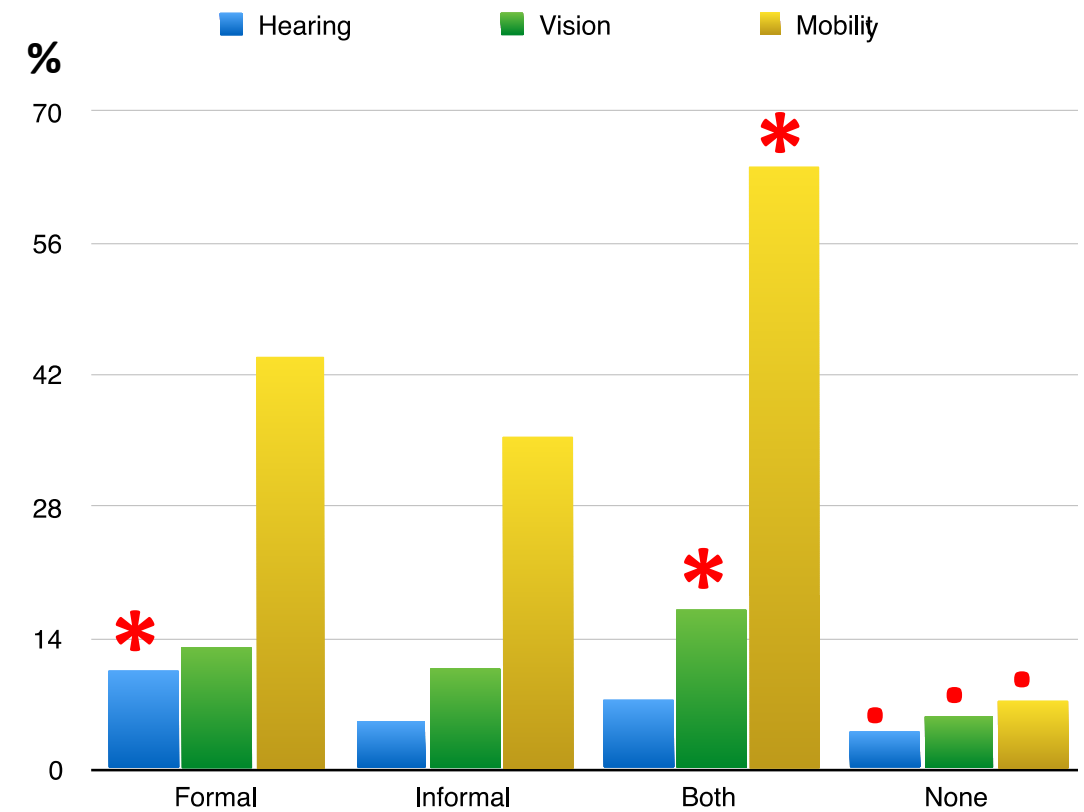
- Informal home care
 - “The following questions are about different types of assistance that you may have received because of a health condition or limitation that affects your daily activities. Please include only assistance from family, friends, or neighbours. Exclude assistance from paid workers or volunteer organizations.”
 - “During the past 12 months, did you receive short-term or long-term assistance from family, friends, or neighbours because of a health condition or limitation that affects your daily life, for any of the following activities? “
 - **Personal care, medical care, managing care, housework/home maintenance, transportation, meal**

Home care

Distribution of population



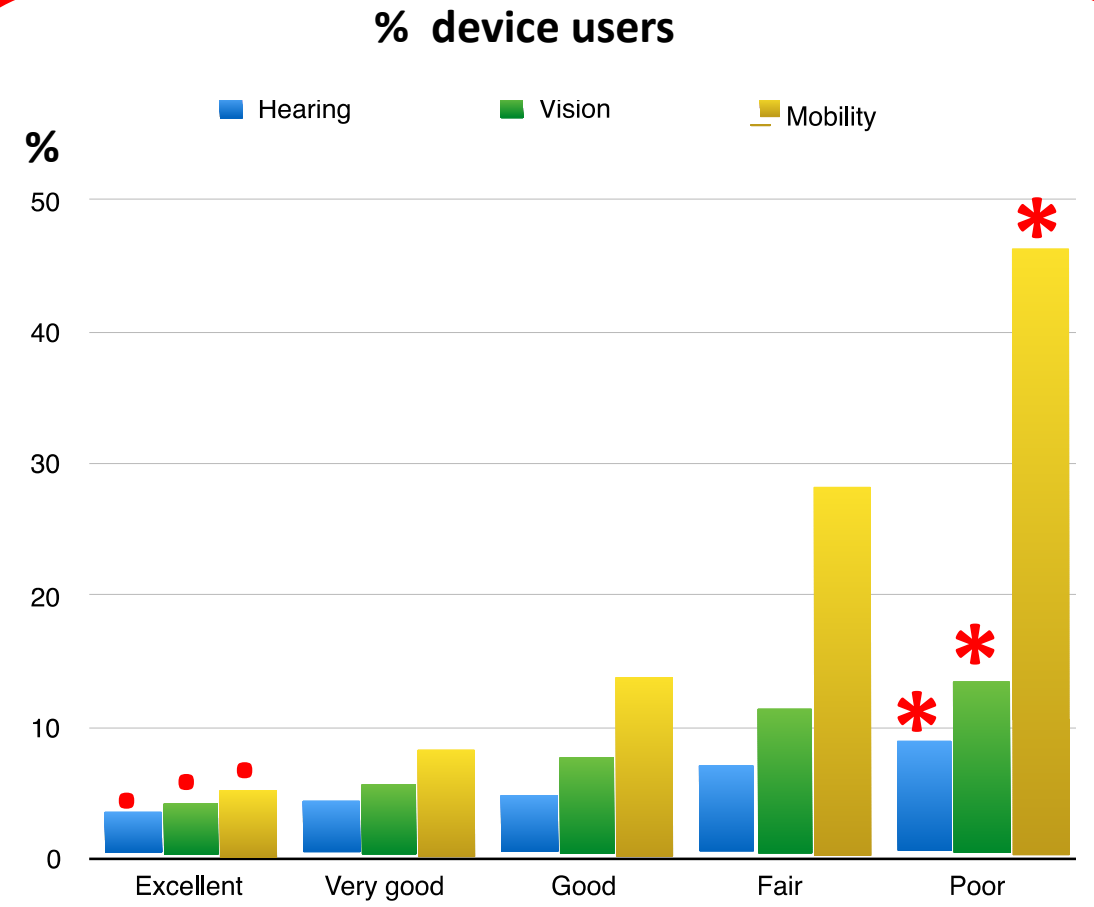
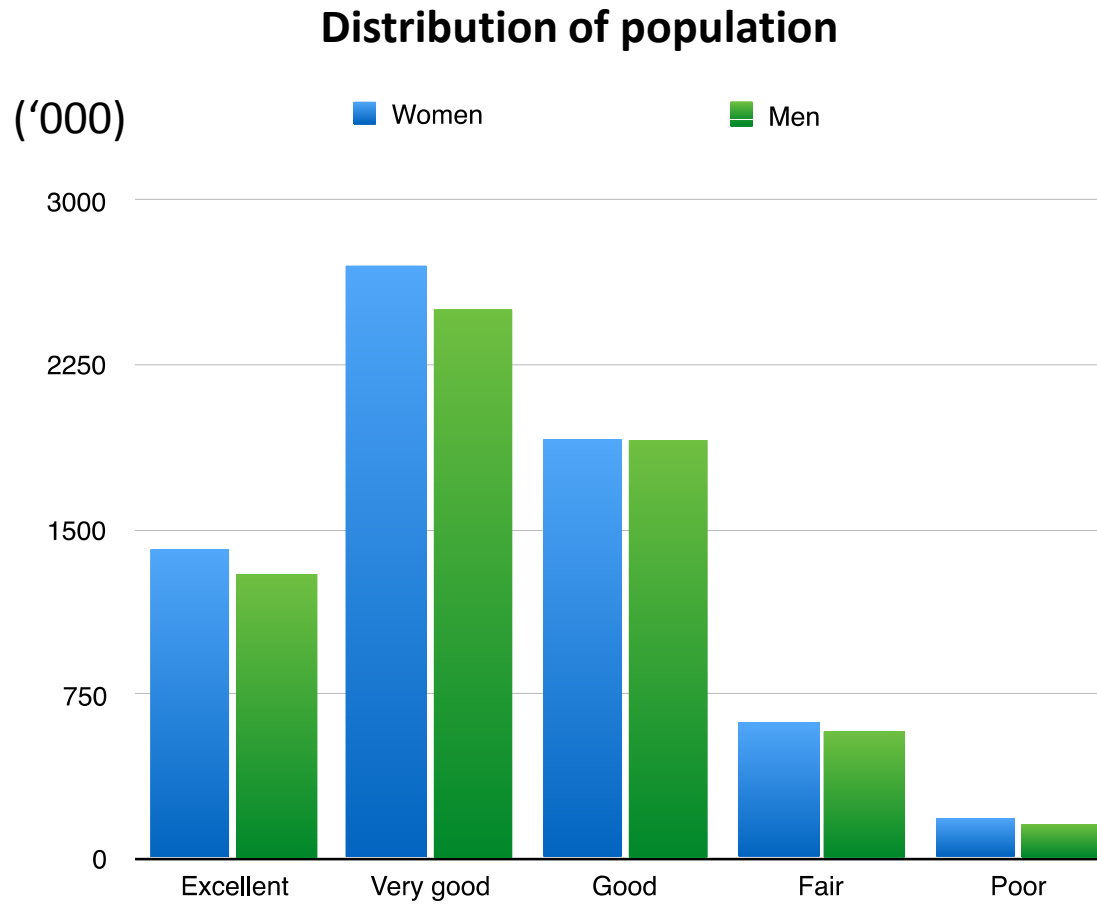
% device users



Perceived health

- “In general, would you say your health is excellent, very good, good, fair, or poor?”
 - Excellent
 - Very good
 - Good
 - Fair
 - Poor

Perceived health

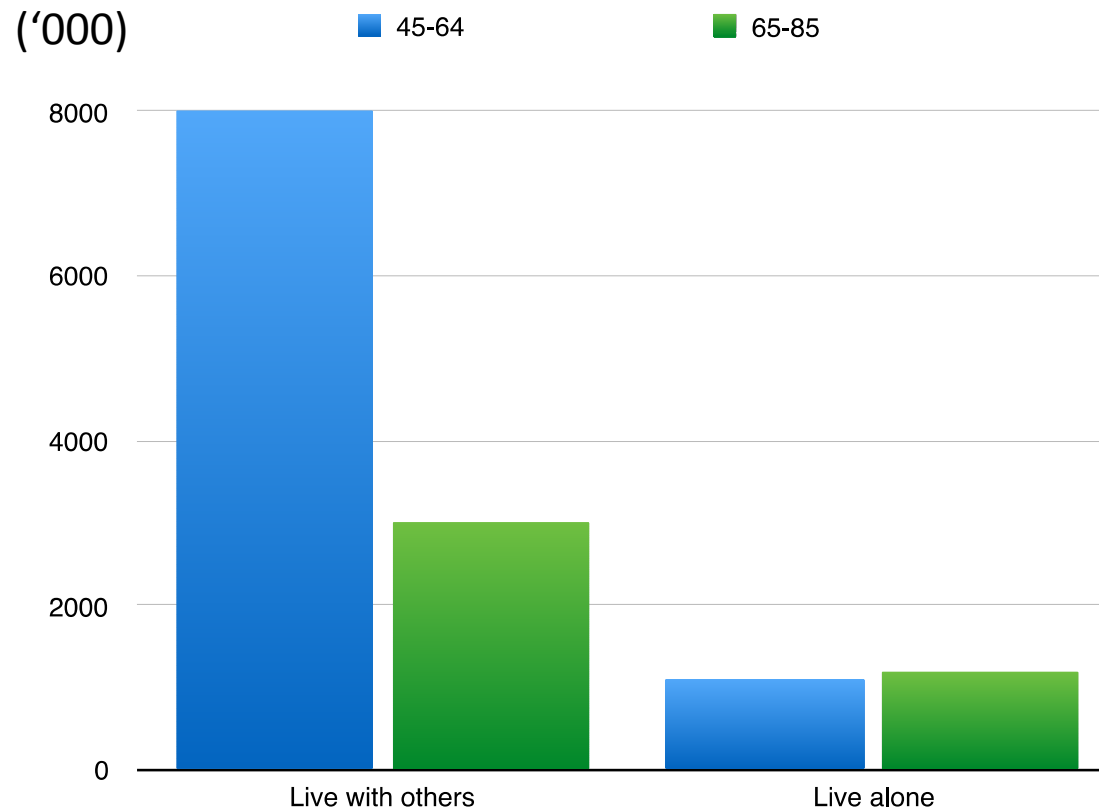


Living arrangement

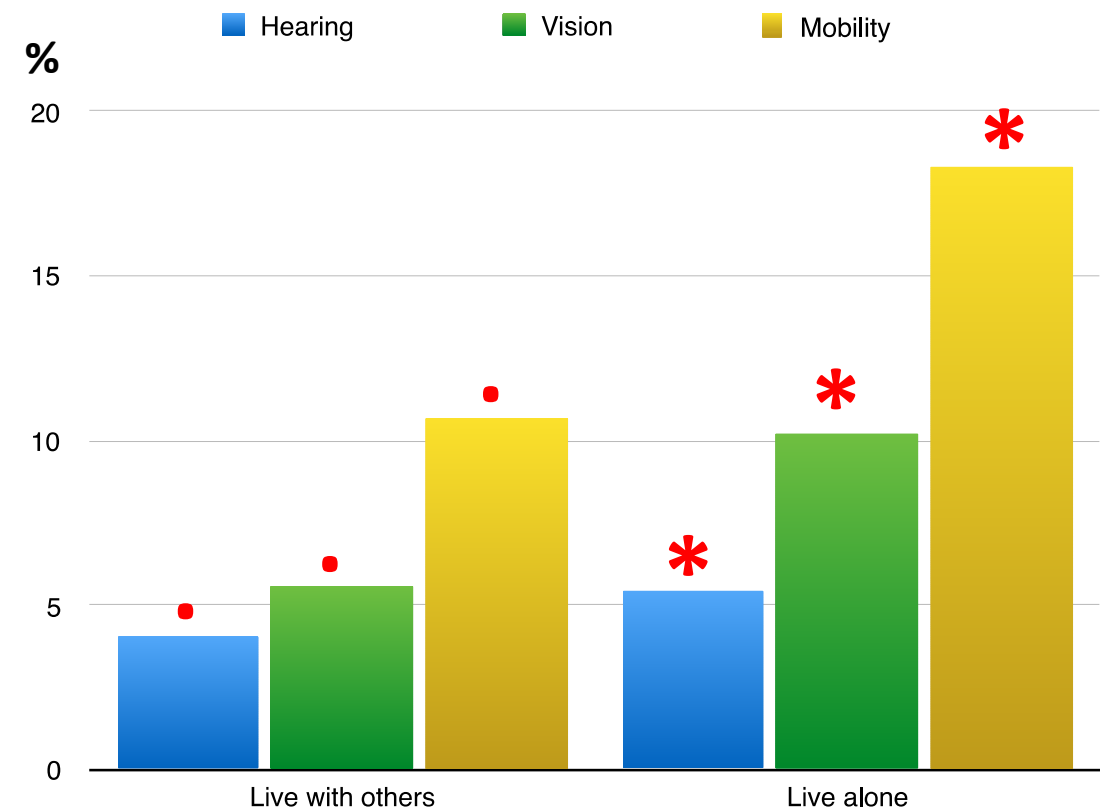
- “How many people, not including yourself, currently live in your household?”

Living arrangement

Distribution of population

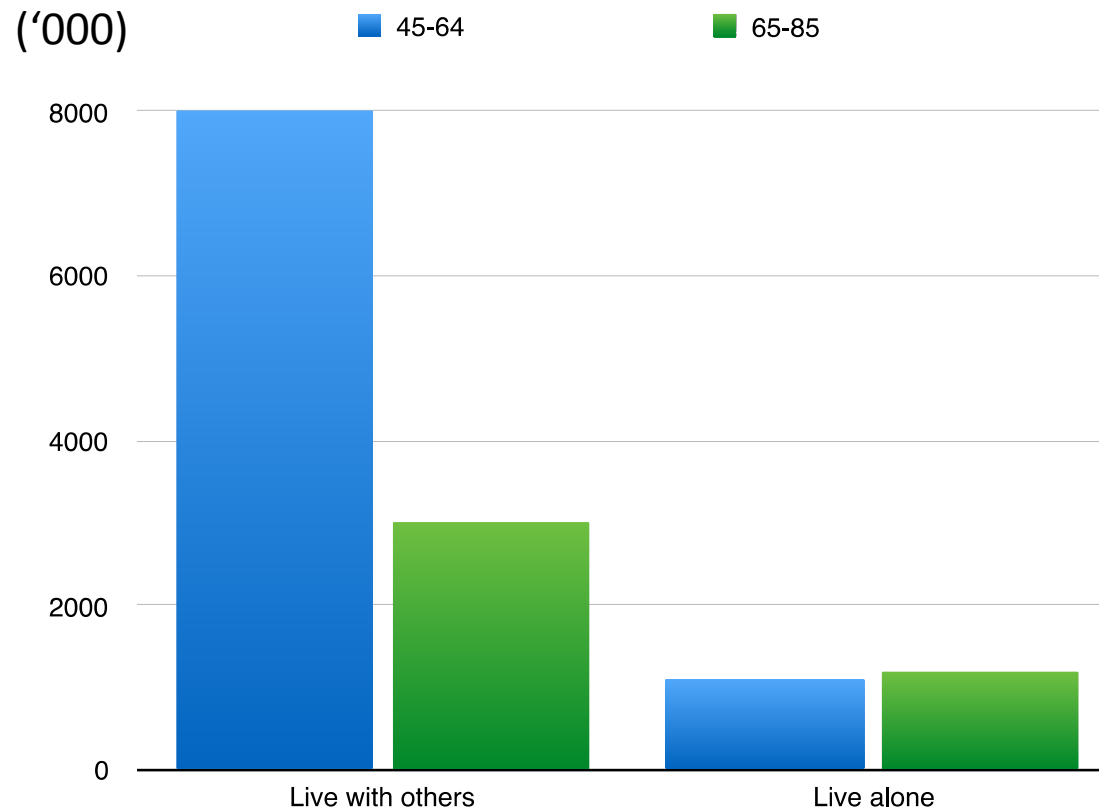


% device users

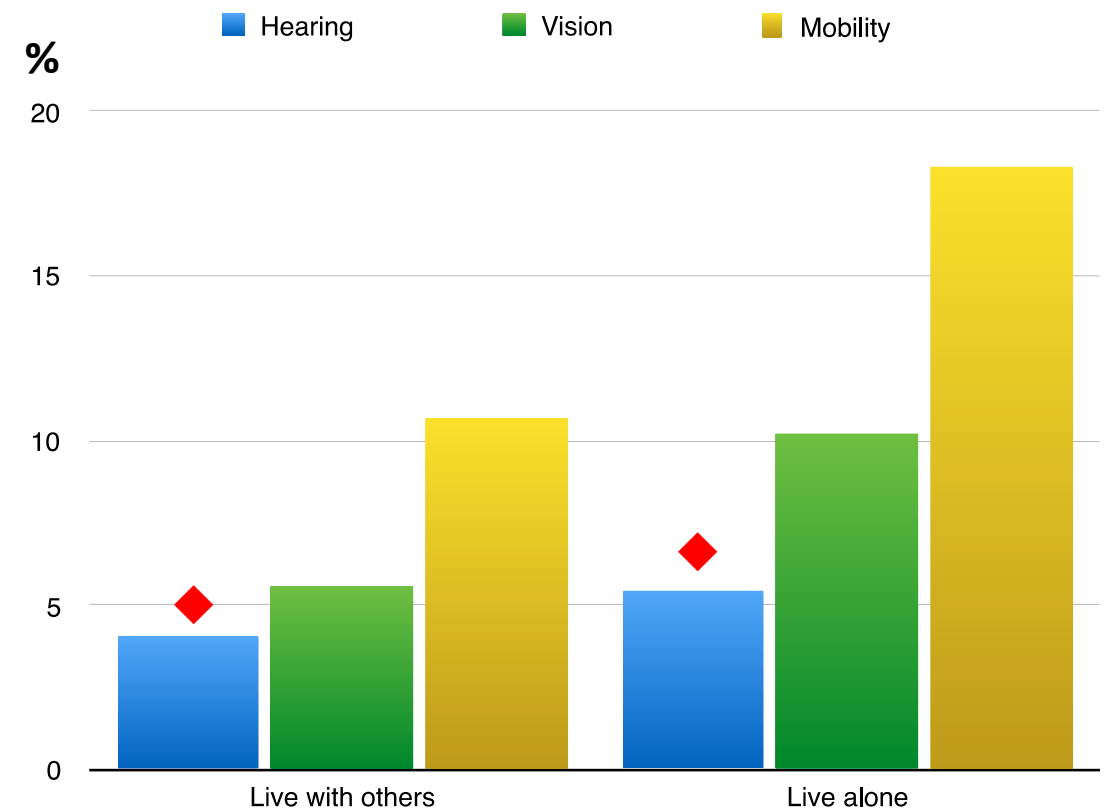


Living arrangement

Distribution of population



% device users



Social participation

- At least once a day
- At least once a week
- At least once a month
- At least once a year
- Never

- “In the past 12 months, how often did you participate in ...?”

(Gilmour , 2012) • Frequent > at least weekly

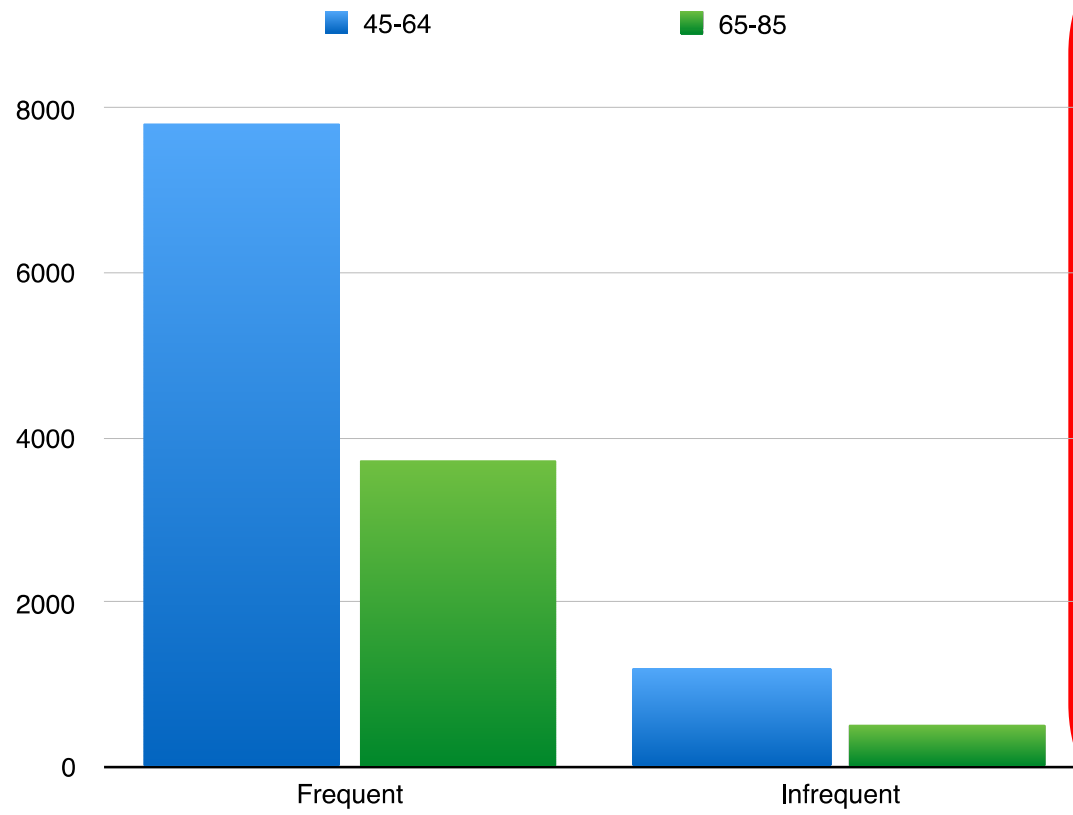
- Family or friendship based activities outside the household
- Church or religious activities
- Sports or physical activities
- Any other recreational activities involving other people

Frequent > at least monthly

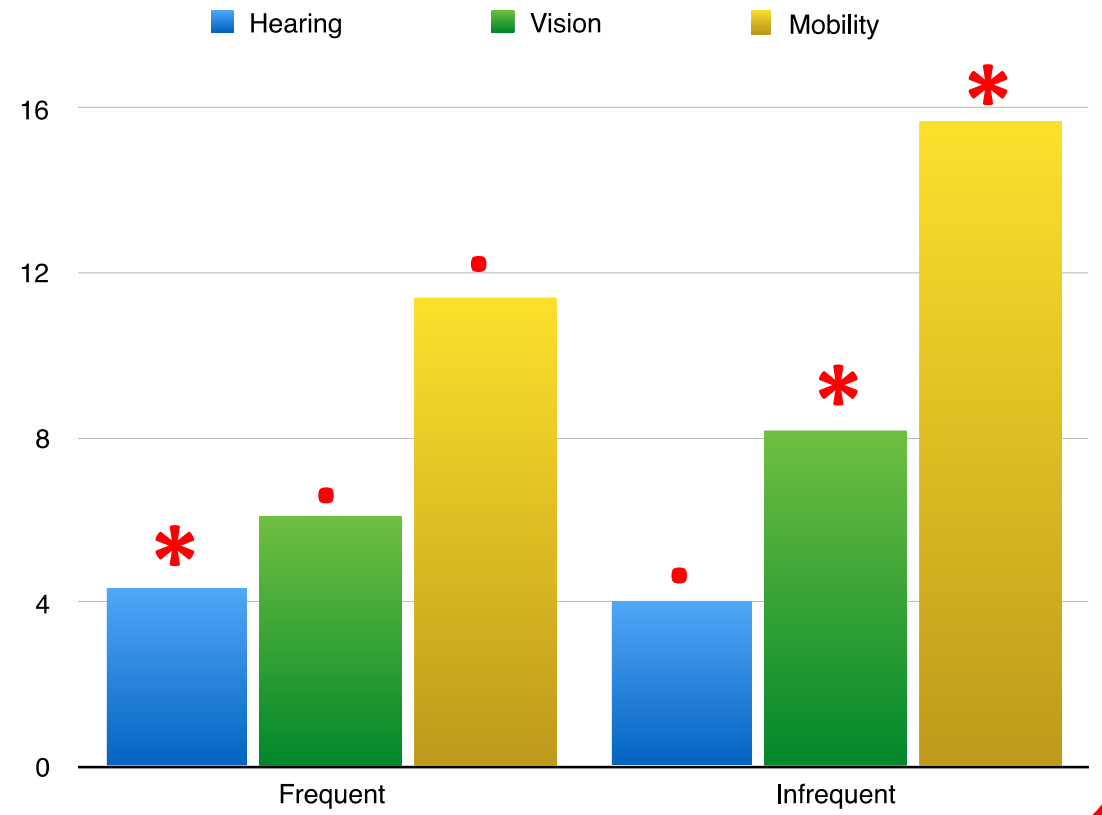
- Educational and cultural activities
- Service club or fraternal organization activities
- Neighbourhood, community or professional association activities
- Volunteer or charity work

Social participation

Distribution of population

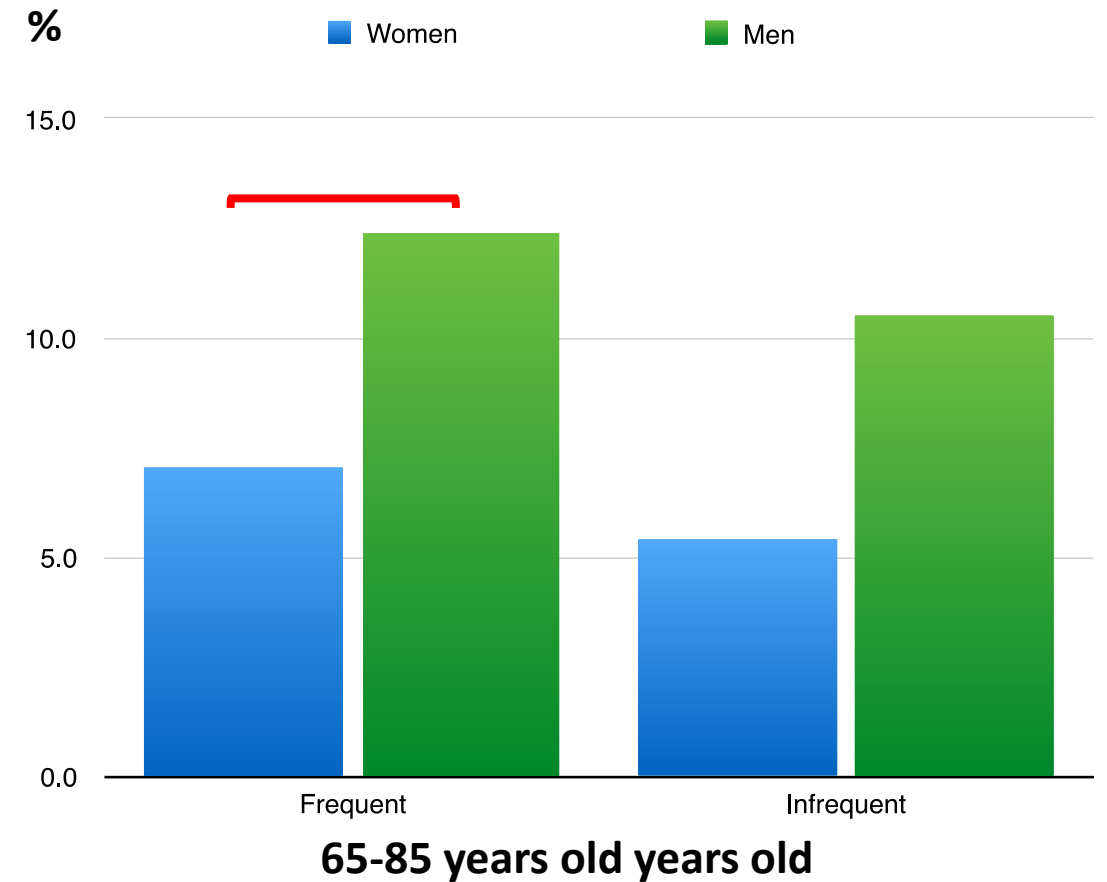
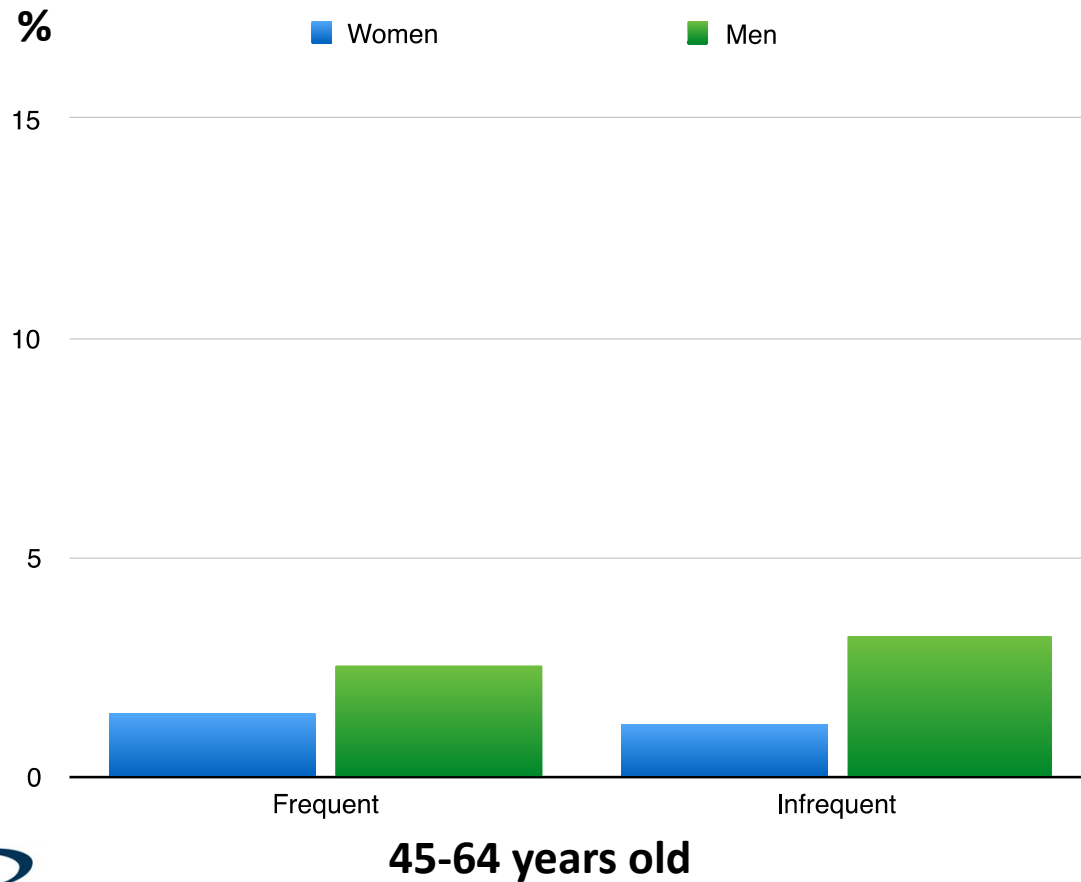


Rates device users



Social participation

Hearing



Social isolation

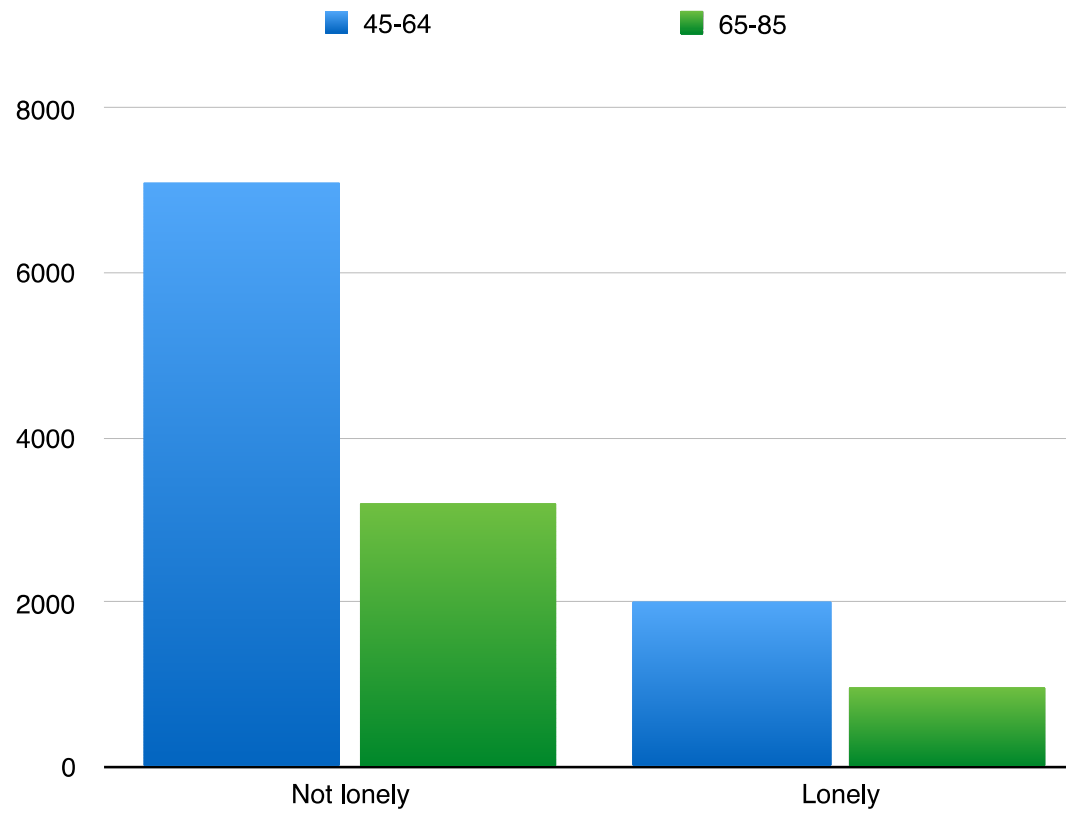
- “How often did you feel lonely [in the past week?”
 - All of the time (5-7 days)
 - Occasionally (3-4 days)
 - Some of the time (1-2 days)
 - Rarely or Never (less than one day)

Lonely

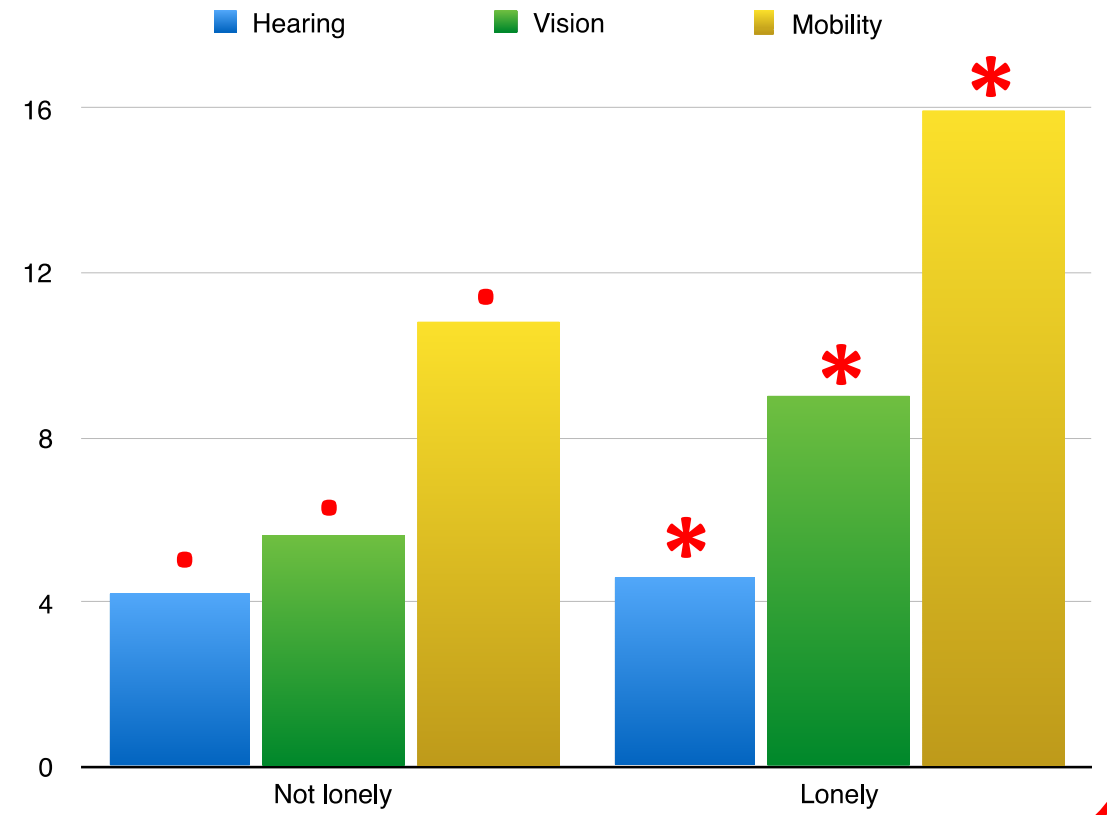
Not lonely

Social isolation

Distribution of population

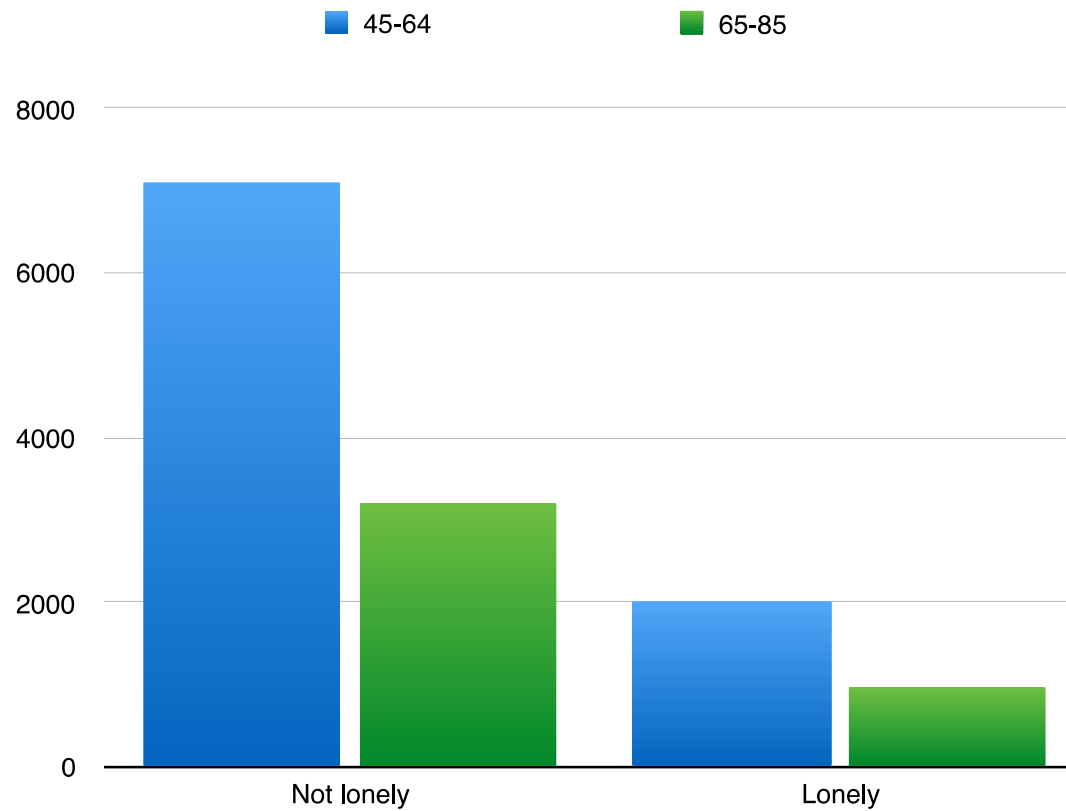


% device users

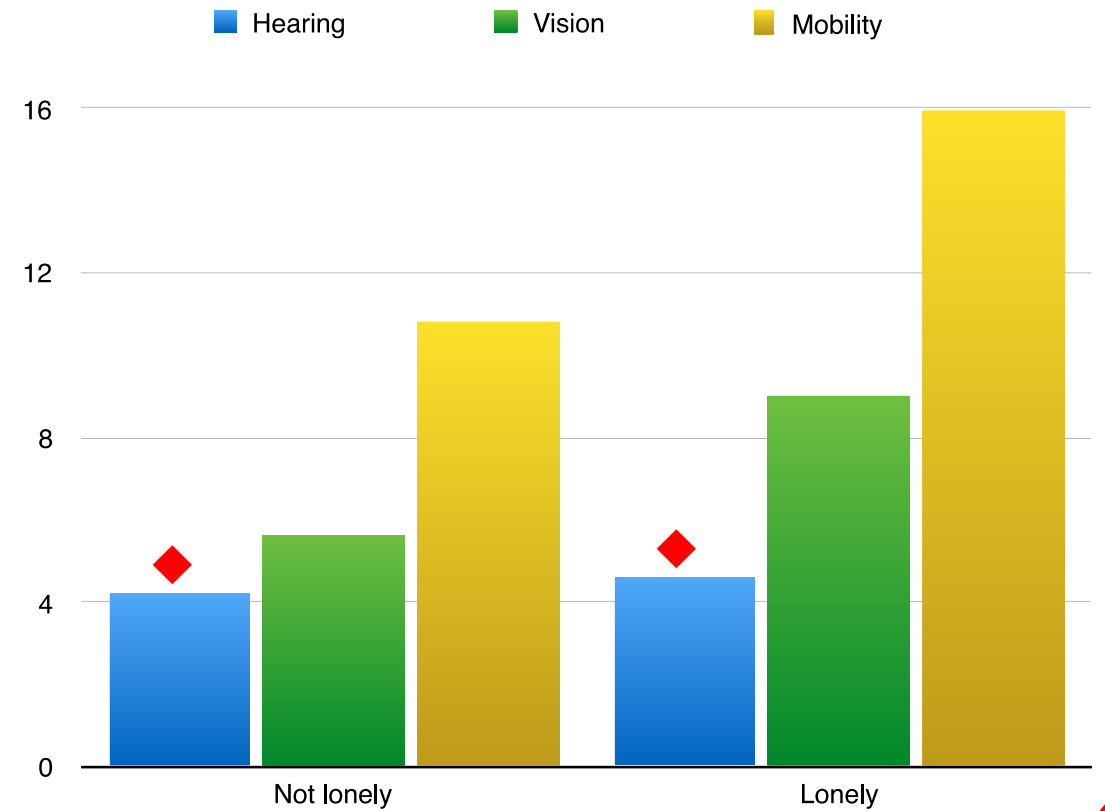


Social isolation

Distribution of population



% device users



Summary - Who?



Summary - Which device?



Summary

- Lower education
- Poor health
 - Chronic conditions
 - Formal care
 - Perceived poor health
- Living alone
- Feeling lonely



Summary



	Vision , Mobility	Hearing
Sex	Women	Men
Social participation	Infrequent	Frequent
Marital status	Widowed	Widowed, Married
Living arrangement	Live alone	Live alone, live with others
Social isolation	Lonely	Lonely, not lonely

Limitations

- Cross-sectional study
- Sex vs. gender
- Ethnic representativeness

Future direction

- Determine the use of assistive devices among people whose health needs are unmet
- Examine whether using assistive devices helps people to maintain social participation.

Questions?

Thank you!

Upcoming CLSA Webinars



“Grip Strength as an Indicator for the Assessment of Health Equity Among Older Adults”

Dr. Yukiko Asada

April 24, 2018 | 12 p.m. EST

Register: bit.ly/clsawebinars

