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When needs are equal: Does supply of long term care differ between young and old users?

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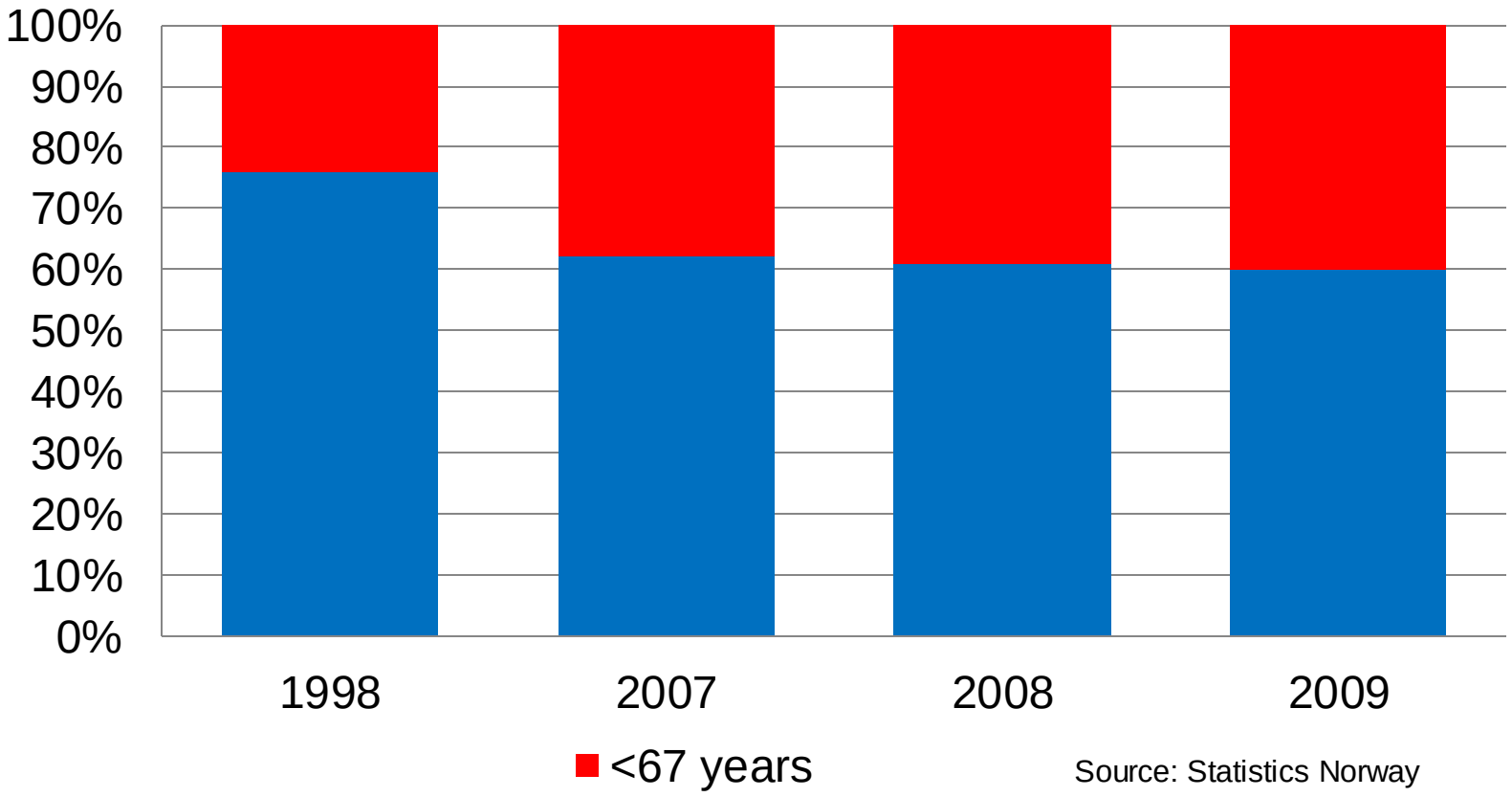
Background and research question

- The expected increase in the share of elderly citizens will increase the demand for LTC services
- However, most of the growth in Norwegian municipal LTC-services over the last 10-15 years does not stem from growth in the elderly population but from an increase in the number of young users.

Running cost for LTC, by age group (%)



Source: Statistics Norway

- How is the relationship between supply of LTC and age, after controlling for needs
  - H1: Elderly users receive more LTC services for equal needs than younger users
    - Municipal care services are better equipped to provide services for the elderly
  - H2: Young users receive more LTC services than elderly users
    - Trends and policy pressure towards increased rights for young, disables users have caused better services for this group compared to the elderly

Institutional setting

- LTC responsibility:
  - 429 municipalities
  - Average size 11000 inhabitants, median 5500 inhabitants
- Municipalities are multitask governments
- Funding for municipalities
  - Local taxes that are equalized
  - General, need based grants from the central state
    - Funding formula: Age structure, socio-economics factors
  - Own grants for rural areas

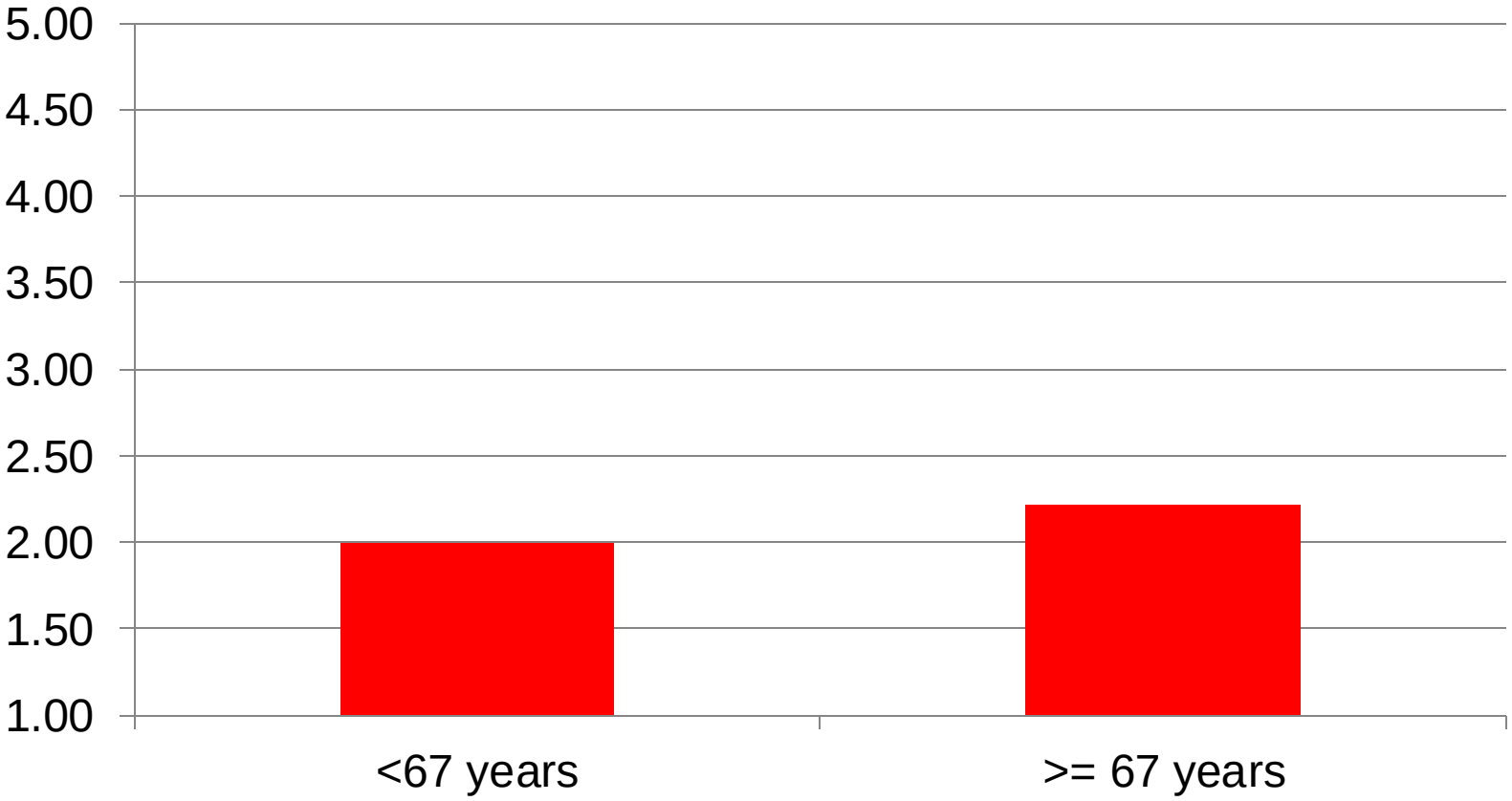
Data

- In 2007 an individually based register for LTC was implemented in Norway.
- This register (IPLOS) gives detailed and standardized information about all seekers and/or recipients of LTC in the municipalities
- We will describe users of LTC based on need and use of services
- Cross section from 31st December 2010:

  350 000 users

- The register provides 17 different variables, in 5 groups, that are used as operationalizations of needs
  - Activity of daily living (hygiene, dressing, etc)
  - Instrumental activities of daily living (cooking, etc)
  - Cognitive impairment
  - Take care of own health
  - Social functionality
- In this study two alternative specifications:
  - Average of all items
  - Average for all except for cognitive impairment. Cognitive impairment incl. as separate variable

Average need level (1-5 scale), by age group



- Services are divided into four groups:
  - Place in institution
  - Home nursing (in hours per week)
  - Respite services (in hours per week)
    - Day or night stays, rehabilitation stays, etc
  - Practical assistance (in hours per week)
    - Cleaning, food preparation, etc

Average supply of services, by age groups

Type of service	< 67 years	>=67 years	P-value (T-tests)
Institution (%)	1.6	14.0	P<0.001
Home nursing (hours)	1.2	1,1	P<.0010
Respite services (hours)	1.6	0.3	P<0.001
Practical assistance (hours)	2.1	0.4	P<0.001

- The model :

  *Supply of LTC = f (Need, Age, Need*Age, Controls)*

  Control variables:
  - Municipal income level
  - Age structure at municipal level
  - Level of private help/living with others

- Logarithmic transformations

Results

- Probability for getting a place in an institution
  - Higher for women than for men
  - Increases with need
  - Increases with age
  - Effect of age for a given level of need: Positive – users at lower ages are underrepresented in institutions

- Home nursing (hours per week)
  - No effect of gender
  - Increases with need
  - Increases with age
  - Effect of age for a given level of need: Positive – users at lower ages get fewer hours for a given level of need

- Respite services (hours per week)
  - No effect of gender
  - Increases with need
  - Decreases with age
  - Effect of age for a given level of need: Negative – users at lower ages get more hours of respite services for a given level of need

- Practical assistance (hours per week)
  - No effect of gender
  - Increases with need
  - Decreases with age
  - Effect of age for a given level of need: Negative – users at lower ages get more hours of respite services for a given level of need

Conclusions

- When needs are equal: Does supply of long term care differ between young and old users?
- Yes, but not systematically related to age
  - Traditional LTC-services like institution and home nursing: Old users receive more
  - 'Modern' LTC-services like respite services and practical assistance: Young users receive more
- Mechanisms?
  - A desire to keep young users out of institutions?