

## RIDING CARS WITH SENIORS

### ACCESSIBILITY IMPLICATIONS OF MODE OF TRAVEL

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## Mobility in aging

- Intuitions from time-geography
- Seniors
  - Fewer spatially fixed commitments → more relaxed time budget constraints
  - More strict capability constraints
- Implications are ambiguous
  - Net effect unclear

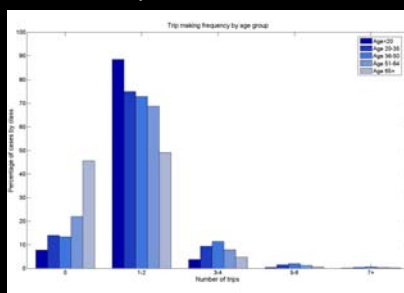
## Mobility in aging

- There is a need to understand the travel behaviour of seniors and the implications
  - Trip generation
  - Distance traveled
  - Accessibility
  - Trip chaining
  - Modal choices
  - ...

## Mobility in aging

- Trip generation
  - How many trips?
  - What factors affect trip making propensity?
- Distance traveled
  - Key transport variable - efficiency and environmental impacts (e.g. VKT)
  - Measure of "everyday competence" - active aging

## Trip generation of seniors (Montreal\*)



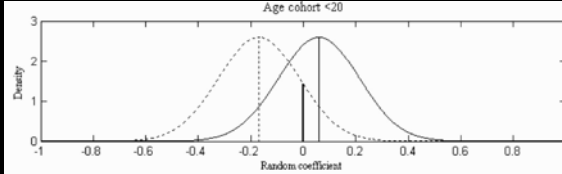
\* Similar results for Toronto, Hamilton

## Trip generation of seniors

- **Age** (↑) - Trip making frequency (↓)
  - Even when controlling for disabilities (e.g. Schmöcker et al. 2005; TRR)
- **Licensing status** - Trip making freq (↑)
- **Vehicle ownership** - Trip making freq (↑)

### Trip generation (Hamilton)

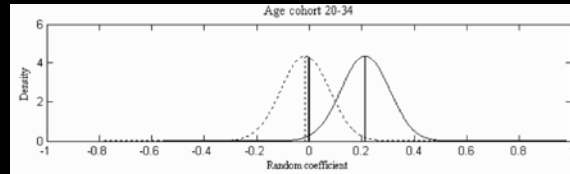
- Age coefficient: Age <20



- Random coefficient spatial mixed ordered probit (--- without car and — with car)

### Trip generation (Hamilton)

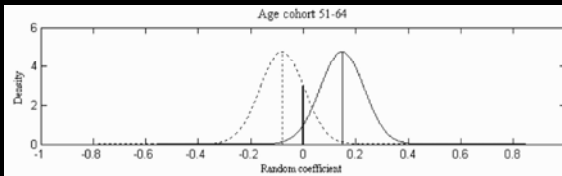
- Age coefficient: Age 20-34



- Random coefficient spatial mixed ordered probit (--- without car and — with car)

### Trip generation (Hamilton)

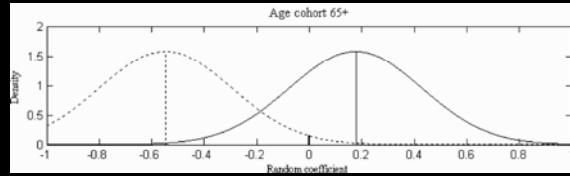
- Age coefficient: Age 51-64



- Random coefficient spatial mixed ordered probit (--- without car and — with car)

### Trip generation (Hamilton)

- Age coefficient: Age 65+



- Random coefficient spatial mixed ordered probit (--- without car and — with car)

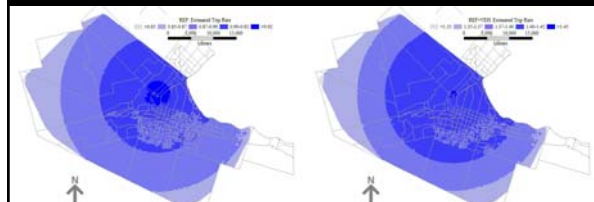
### Trip generation (Hamilton)

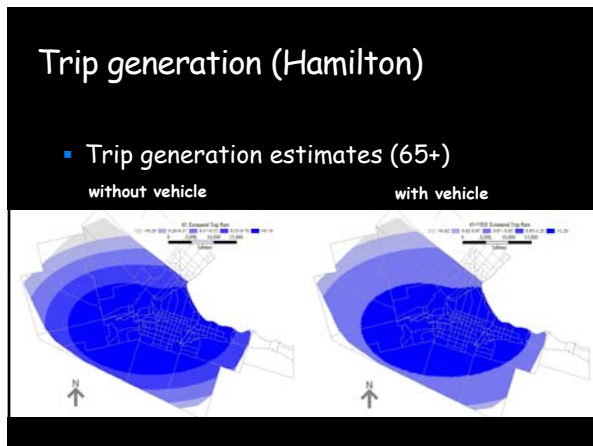
- Is there a spatial pattern?
- Spatial estimates

### Trip generation (Hamilton)

- Trip generation estimates (REF)

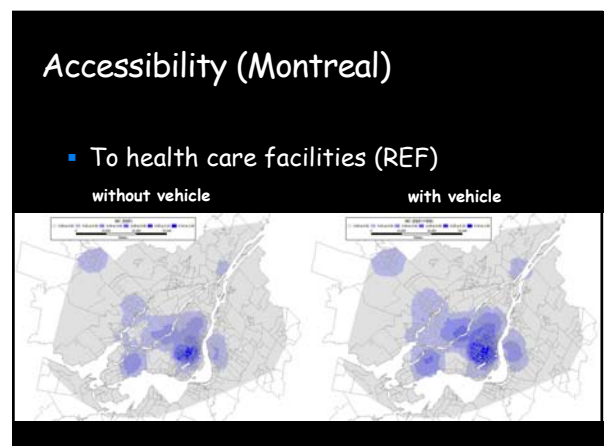
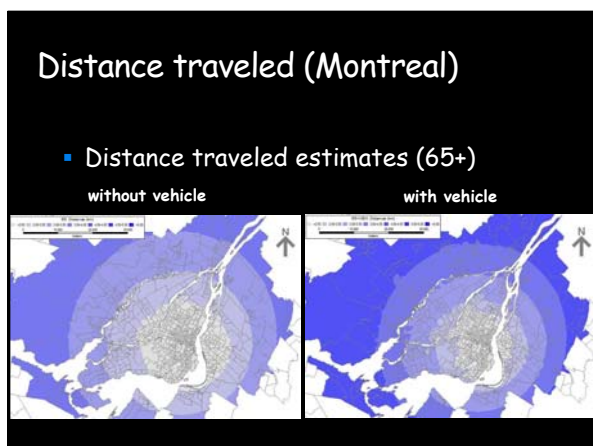
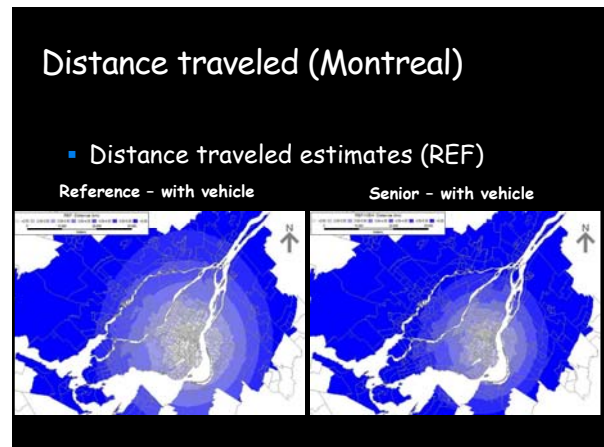
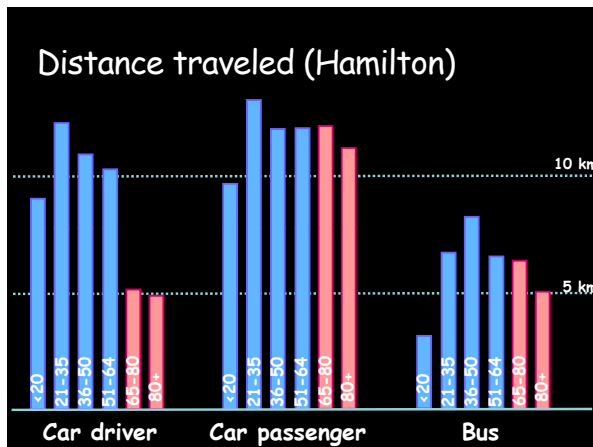
without vehicle                      with vehicle

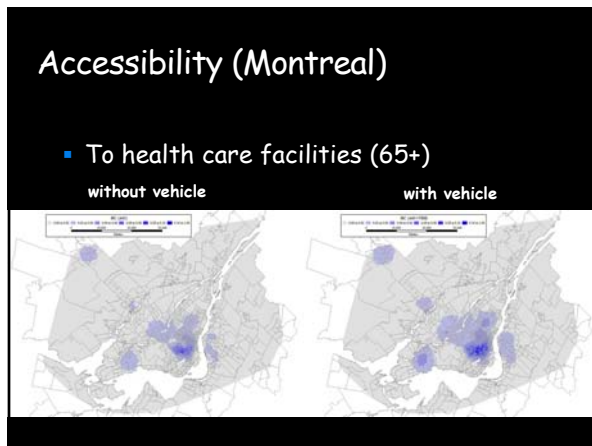




### Distance traveled

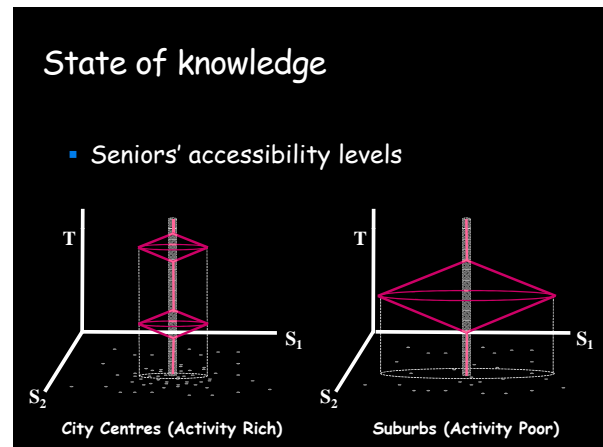
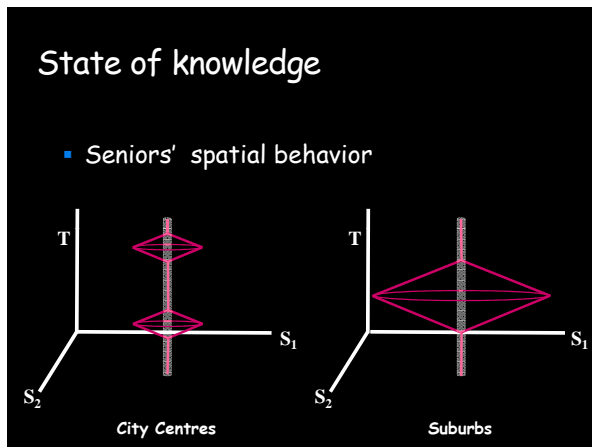
- Distance traveled peaks at age 20-35 and then decreases with age
- Effect is different by mode of transportation
- There are also substantial spatial differences





### State of knowledge

- Seniors display mobility patterns that are distinct from the general population
  - Lower trip generation levels
  - Typical trips are shorter



### State of knowledge

- Accessibility is affected by location and access to mobility tools
  - Mobility-enhancing effect of private vehicle ownership
  - Vehicle ownership STILL low accessibility in suburban locations
  - Vehicle: a necessity to sustain even such low accessibility levels in suburban locations

### References

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