

# Utilization of health care services by immigrants in Canada: what does it tell us about equity of access?

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CAHSPR -- Calgary May 2009

# Research question

- Observed income-related inequity in HCU in Canada:
  - For same level of need, probability to visit a GP or a specialist increases with income
  - But probability to be hospitalized (inpatient) decreases with income
  - Overall: might be same level of expenditure but pattern is different
- Main question is: Why?

# Question (2)

## **“Why inequities?” is a policy-relevant question**

- Main cause can be demand side:
  - Plausible story (health capital): poor demand less health (ambulatory care) and end up in hospital + rich face cost-of-time and prefer day procedures
  - Consequence: solutions not in health policy (education, income distribution?)
- Main cause can be access:
  - Plausible story (information): poor demand the same quantity/quality of health but do not access what they want
  - Lack of information, less vocal, doctors do not understand their need, lack of private insurance for complementary goods

# Question (3)

- We use immigration-related differences in utilization as a way to disentangle demand from access:
  - Our assumption: Demand for health should be the same across immigration status
  - Can be discussed: health capital more important for immigrants (+), health shock due to immigration (+), cost-of-time higher for immigrants (-)
  - If we observe some difference in HCU across immigration → points toward pathway 2 (information or navigating the system)
  - We add control for “cultural” differences (race/ethnicity), all socio-demographics, health status, and private health insurance

# Marginal effect of immigration

- Everything else being the same (on age, health status, income, education...):

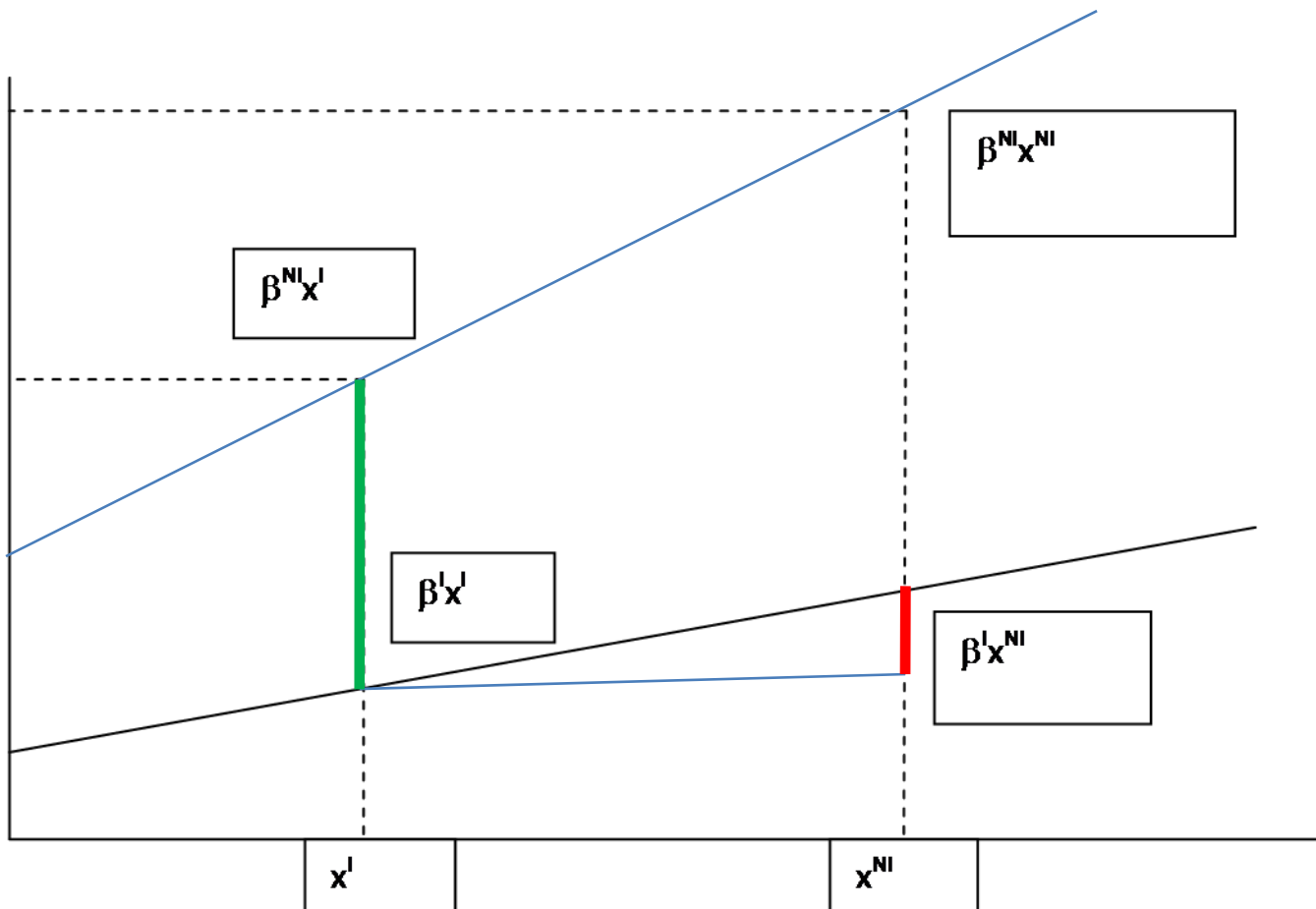
Service	Probability	Intensity
Inpatient	-0.09 (Z-value: -2.28)	-1.56 (Z-value: -2.60)
GP	-0.01 (Z-value: -1.27)	+0.17 (Z-value: +2.27)
Specialist	+0.01 (Z-value: 0.16)	-0.23 (Z-value: -1.76)

# Method

- Not only to document a difference in level between immigrants and Canadian-born
- We want to know if being an immigrant affects the link between individual characteristics and utilization: do we observe that, in Canada, response to a given health status differs for immigrants and Canadian-born?

# Оахаса:

$$\beta^{NI}x^{NI} - \beta^I x^I = \beta^I \Delta x + \Delta \beta x^I + \Delta \beta \Delta x$$



# Data

- CCHS 1.1: Canada, Ontario, linked with administrative data
- Dependent variables:
  - Any inpatient stay past 12 months
  - Any visit to GP past 12 months
  - Any visit to specialist past 12 months
  - # nights in hospital (conditional at least one) past 12 months
  - # visits to GP (conditional at least one) past 12 months
  - # visits to specialist (conditional at least one) past 12 months
- Probability: model = logistic
- Conditional number: model = negative binomial

# Results (1)

- Over all estimations (Canada self-reports, Ontario administrative data):
  - Prob(inpatient): barrier but effect small relative to characteristics (the true reason immigrants go less often to hospital is their endowments)
  - Prob(GP): unclear (admin contradicts self-report)
  - Prob(Specialist): immigrants “overuse” but effect small
  - **Intensity(inpatient): immigrants stay less** (1.5 nights or 18% of average) even though they ‘should’ stay longer based on their characteristics
  - **Intensity(GP): immigrants “overuse”** (0.32 visits, or 8%)
  - **Intensity(Specialist): immigrants visit less often** (0.14 visits or 4%) due to coefficient effects

# Results (2)

Decomposition of the C effect into coefficients:

- Inpatient intensity:
  - Different directions: being married (+ vs. -)
  - No effect among I: age and chronic conditions
  - Effect among I, not among C-B: speaking English or French (+)
  - Same direction, but stronger among I: education (-), income (-), in the LF (-)
- Specialist intensity:
  - Different directions: being married (+ vs. -)
  - Same direction, stronger among I: in the LF (-)
- GP intensity: no effect of LFP and education among I

# Conclusion

- Being married increases intensity of hospital and specialist utilization: social capital or cost-of-time effect?
- Speaking E or F: navigation effect on duration of hospital stay
- No effect of age and conditions on time spent in hospital: doctors do not use extra information on immigrants?