



UBC CENTRE FOR
HEALTH SERVICES AND
POLICY RESEARCH

Understanding income-related equity in inpatient acute hospital care

Kimberlyn McGrail
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THE UNIVERSITY OF BRITISH COLUMBIA



Why income-related equity? Why acute care?

- Fundamental principle
- Previous research shows consistent inequities in use of acute care services
- Reasons for inequities may point to policy interventions

Concentration indices for probability of use of Medicare services



Potential reasons for inequities

- Trade-off between acute and day surgery?
- Lack of people at home to provide care?
- Unmeasured severity?

The advantages of data linkage



**Self-reported health,
risk factors, SES,
living situation**

**Actual use of
services, case-
mix measure
of morbidity,
longitudinal**

Outcomes	Probability of admission Total \$ on acute care	
	<i>Need</i>	<i>Non-need</i>
Demographics	Age group Sex Marital status	
Health status	Self-reported health status ACG Health utility	
Socioeconomic status		Household income Education Labour force participation
Risk factors	Smoking	BMI Physical activity Alcohol use
Social support	Lives alone	Sense of belonging Stress
Health care services use	GP visits (prior) Specialist visits (prior) Day surgery use (after)	
Health care system factors		Regular doctor Unmet needs

Equity results

	CI / HI	Std error	t	P > t
Probability of acute admission				
CI	-0.1458	0.0154	-9.45	0.000
HI	0.0025	0.0132	0.19	0.848
Total acute expenditures				
CI	-0.0644	0.0308	-2.09	0.037
HI	0.0066	0.0280	0.24	0.814

What factors are important for income-related inequalities in acute admission? (I)

Variable	Odds ratio
Single / never married	0 .6871443 *
<i>(Many specific health status categories)</i>	
Acute major	4.278293 *
Acute Minor/Acute Major/Likely to Recur/Chronic Medical	18.11665 **
Inactive	1.667731 **
Occasional drinker	1.281031 *
Former / never drinker	1.262699 *
Former smoker	1.444165 **
Current smoker	1.557604**
Fruit and vegetable consumption	1.213908 *
Specialist visit in year prior	0.6916202 *
Day care surgery in year after	1.439434 **

* p < .05
 ** p < .01

What factors are important for income-related inequalities in acute admission? (II)

- Decomposition can tell us a bit more
- One-quarter of differences come from alcohol and physical activity variables
- Two-thirds of differences come from differences in ACGs

Policy implications

- Does not seem to be a trade-off between acute and day surgery
- Marital status / living alone are not important variables
- After controlling for risk factors, inequities in hospital use seems to disappear – so system may be responding appropriately
- But... most of the variation remains unexplained

What next?

- Divide overall hospitalization into medical and surgical (or emergent / urgent vs. elective)
- Concentrate on elderly (but this is tricky...)
- Other thoughts?