

Measurement Challenges in Social Epidemiology

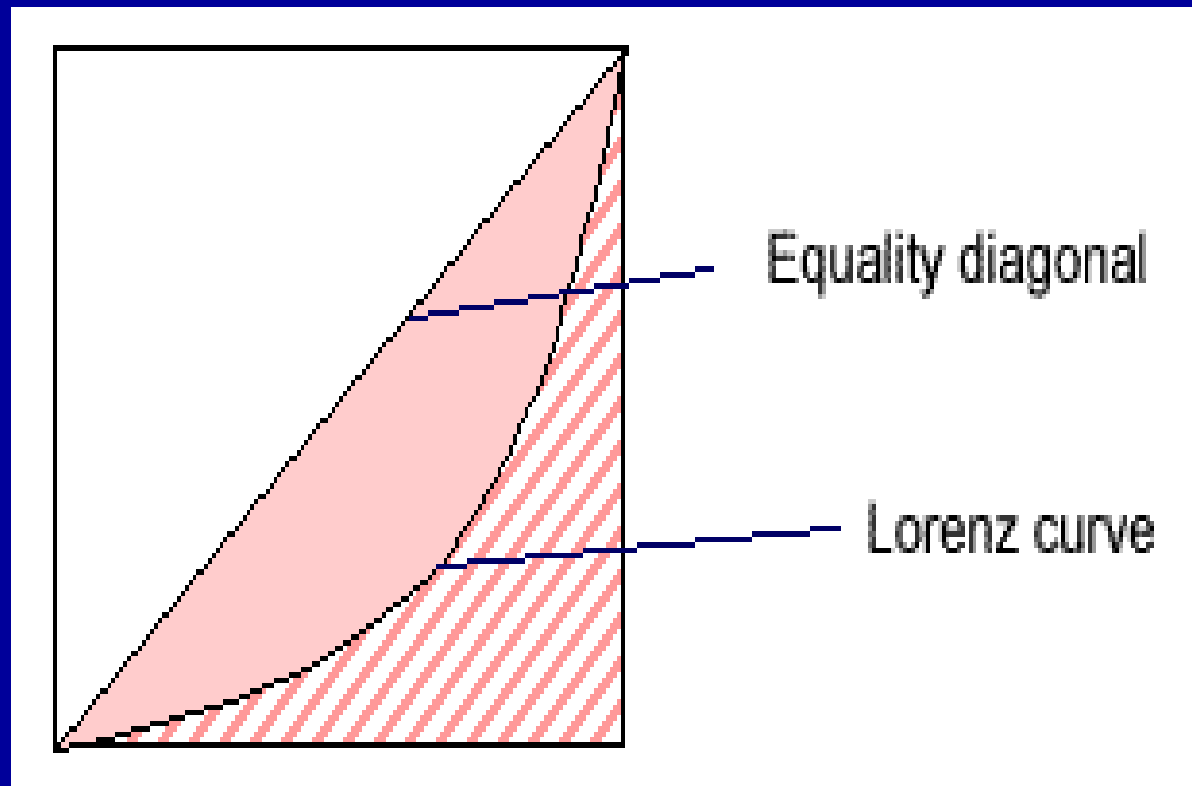
Donald Patrick

Epidemiology Workshop
Social Epidemiology Symposium
7 May 2003, University of Washington

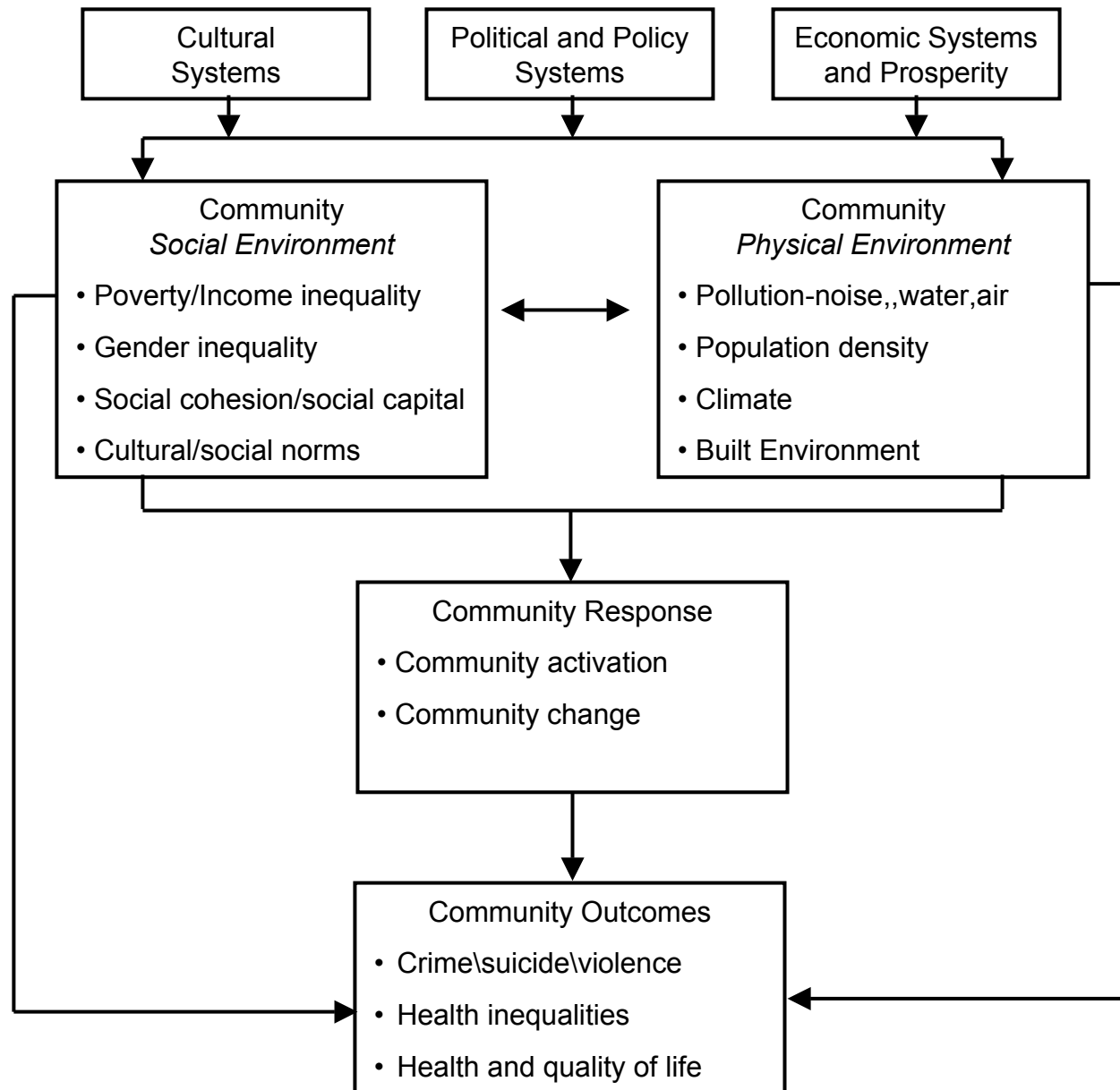
The Challenges

- Theoretically driven measurement
- Measurement at community level and using aggregates of individuals
- Averages and distributions
- Measurement over time
- Validity and reliability of measures
- Interpretation of results

Areas for calculation of the Gini Coefficient



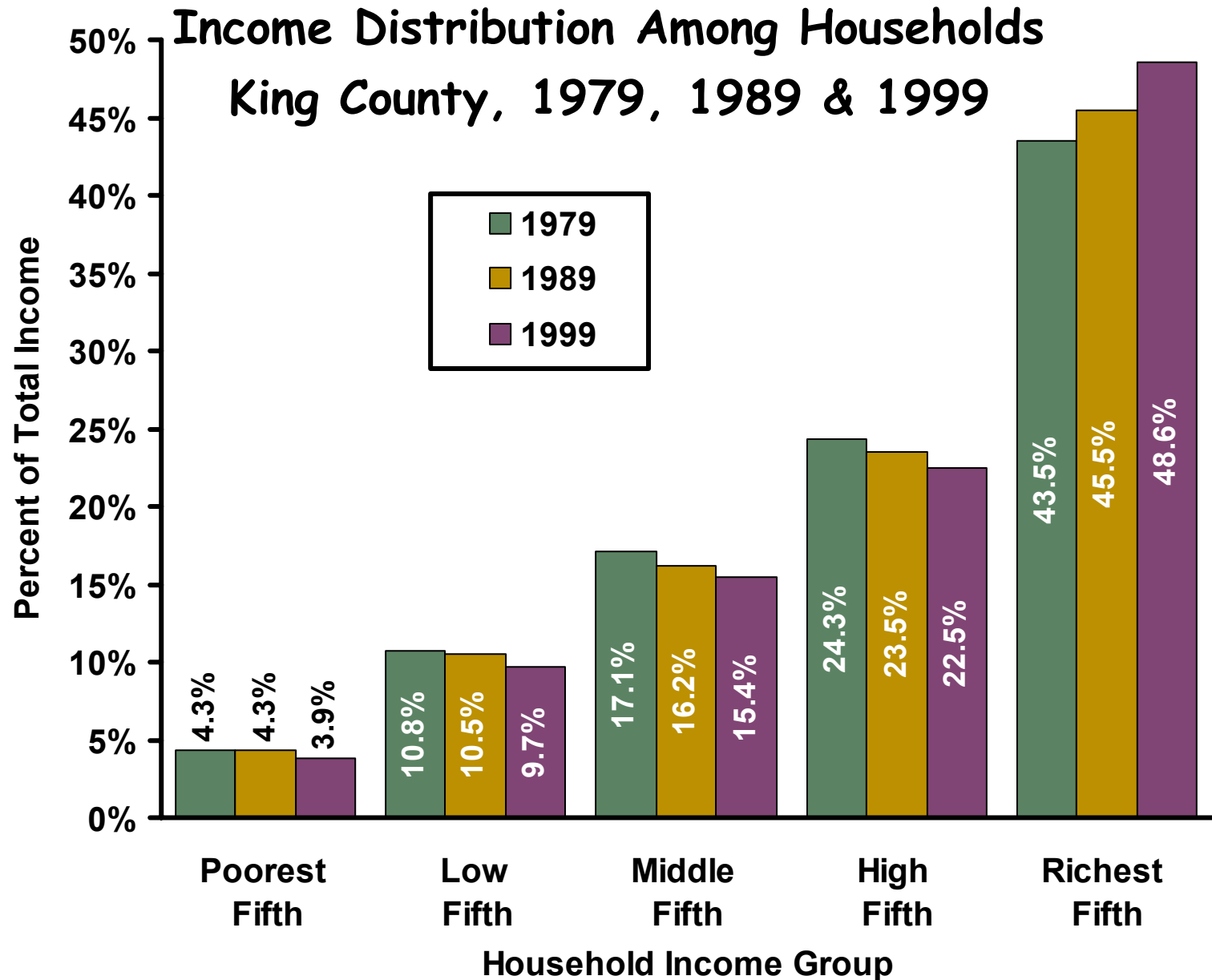
STUDYING COMMUNITY AND HEALTH



<http://www.communitiescount.org/>



Income Distribution



Predicted all-cause death rates for persons 45-64 years by level of neighborhood per capita civic participation

(adjusted for mean level of neighborhood deprivation, in 342 Chicago neighborhoods)

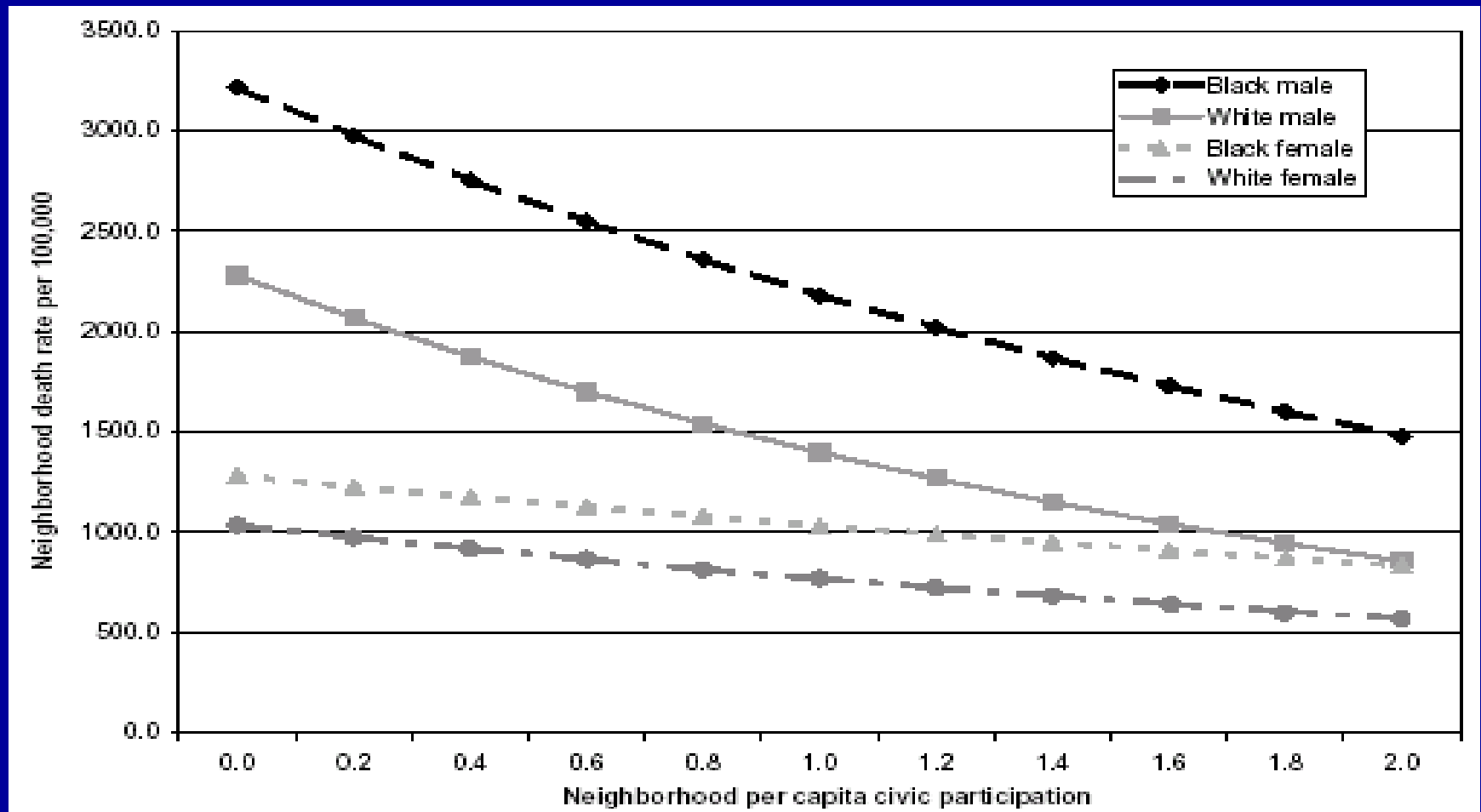
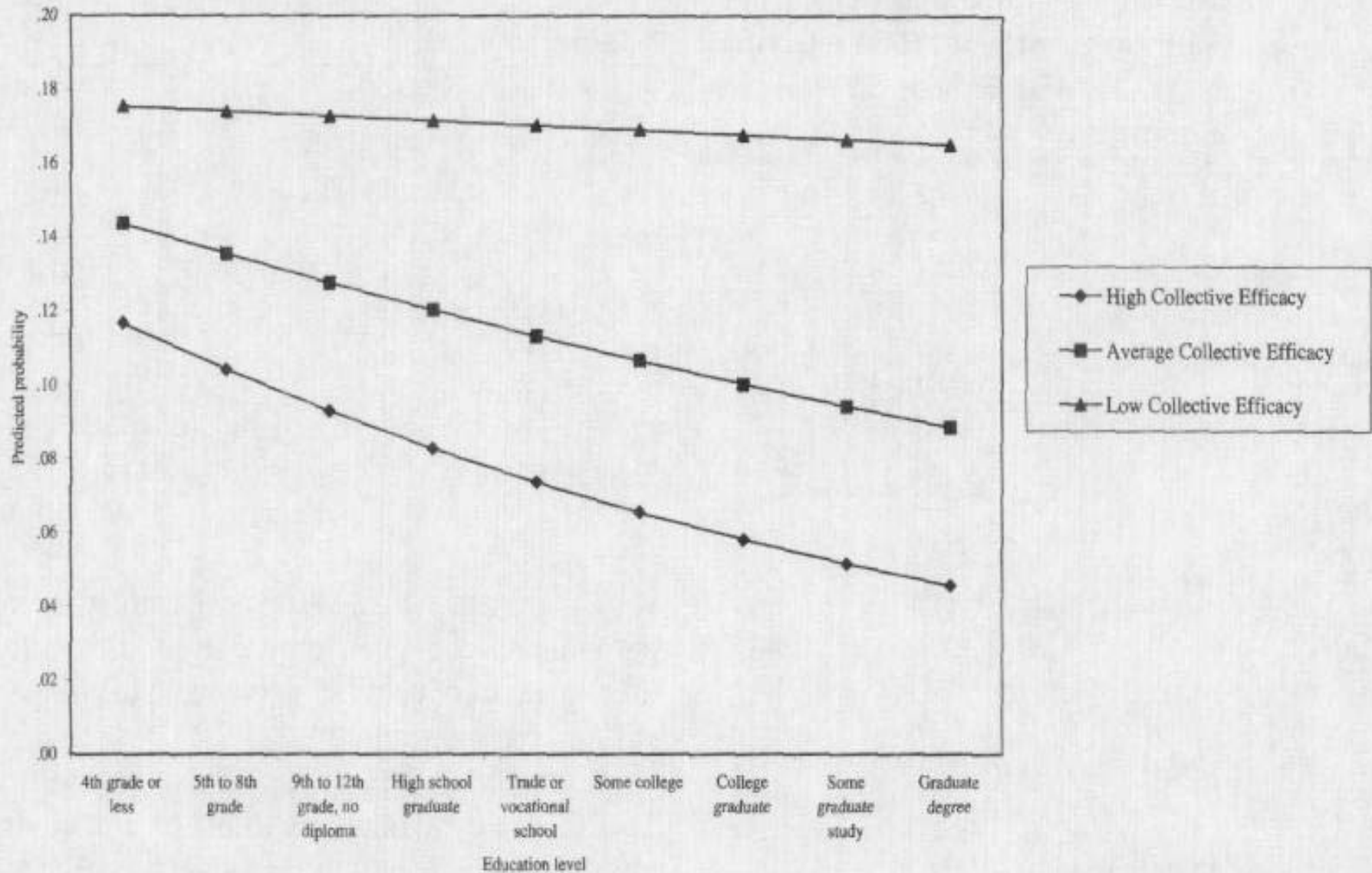


FIGURE 1. Predicted Probability of Chronically Fair or Poor Health by Education Level (Neighborhoods at Low, Average, and High Collective Efficacy)



Most frequently mentioned aspects of neighborhood from respondents rating their neighborhood as bad or mixed

Men		Women	
Aspect of Neighbourhood	%	Aspect of Neighbourhood	%
<i>(a) Most frequently mentioned aspects of neighbourhood from respondents rating their neighbourhood as bad or mixed</i>			
Problems with young people	22.48%	Problems with young people	26.29%
People unfriendly	14.01%	Problems with drugs	15.72%
Noise problems	13.68%	Problems with vandalism	14.91%
Problems with drugs	12.38%	People unfriendly	14.63%
Problems with vandalism	12.05%	Noise problems	14.36%
Traffic problems	12.05%	Pollution problems	11.65%
Good shopping facilities	10.75%	Area becoming worse	11.38%
Crime rate high	10.42%	Crime rate high	11.11%
Area becoming worse	9.77%	Other negative aspect	10.30%
Pollution problems	9.45%	Traffic problems	10.30%
Number of respondents	307		369

Most frequently mentioned aspects of neighborhood from respondents rating their neighborhood as good

Men		Women	
Aspect of Neighbourhood	%	Aspect of Neighbourhood	%
<i>(b) Most frequently mentioned aspects of neighbourhood from respondents rating their neighbourhood as good</i>			
Quiet area	44.40%	Quiet area	43.34%
People friendly	31.52%	People friendly	36.80%
No crime	25.95%	Neighbours friendly	23.73%
Neighbours friendly	22.11%	No crime	23.07%
Rural surroundings	19.85%	Rural surroundings	20.15%
Good shopping facilities	16.53%	Good shopping facilities	20.11%
Like the area	14.99%	Town centre accessible	14.06%
Good local facilities	14.75%	Like the area	13.98%
Town centre accessible	13.74%	Has open spaces	13.78%
Area feels safe	12.40%	Good local facilities	13.24%
Number of respondents	2082		2433

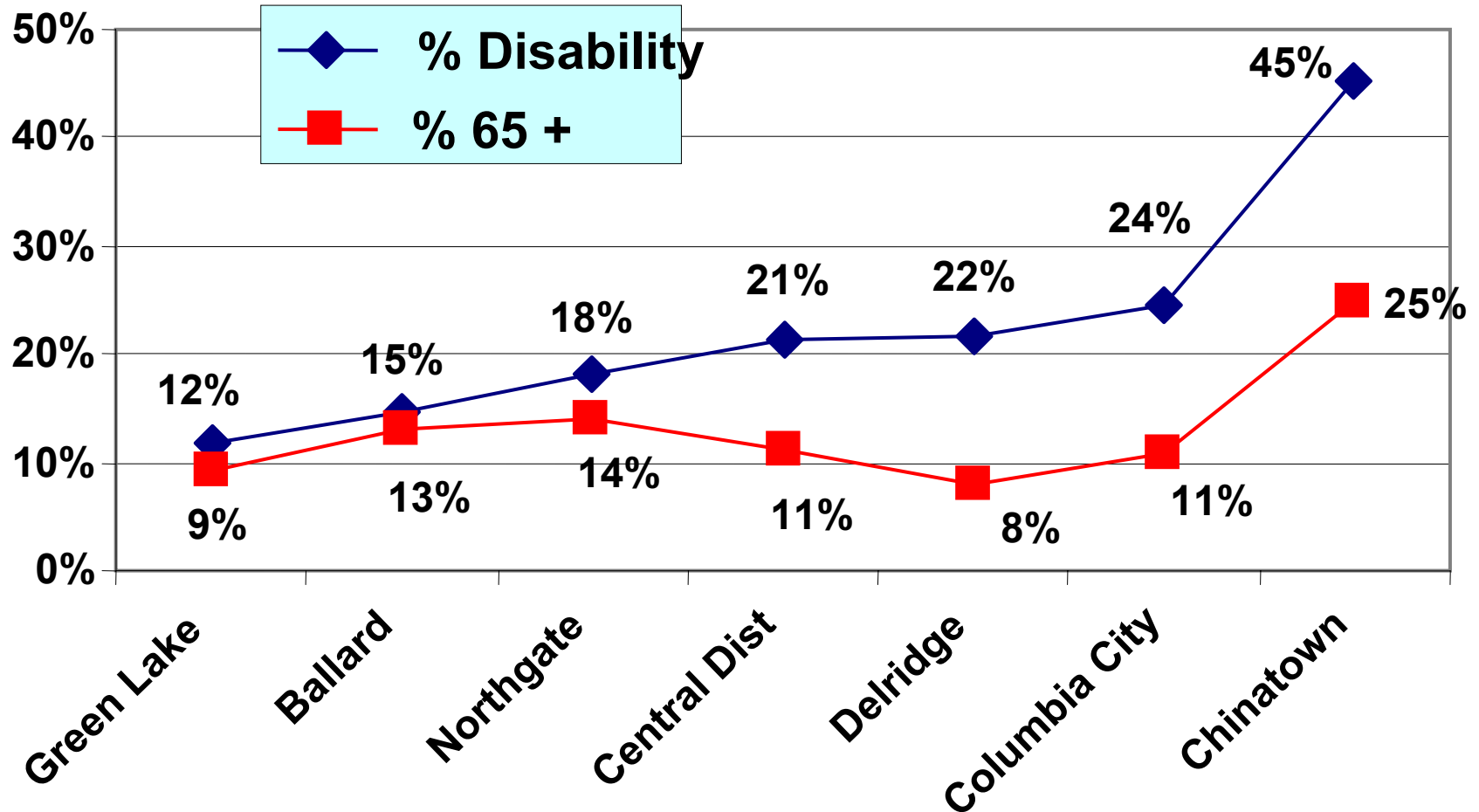
Sample Questions on Social Capital, Social Cohesion, Collective Efficacy

1. How many voluntary groups or organizations do you belong to (e.g., book clubs, parent groups, sports teams/health clubs, and church groups)?
2. Think about the people in the community where you live. Generally speaking, would you say that people can be trusted: Not at all ,A little ... Very much
3. How true are these statements: some kids feel they have trouble avoiding fights in their neighborhood
4. Trust in neighborhood—counting on others

Measuring Community Accessibility for People with Disabilities

- <http://depts.washington.edu/cdpr/commaccess.html>
- Funded by Office of Disability and Health,
Centers for Disease Control and
Prevention
- Susan Kinne, Principal Investigator

Disability Rate and % Age 65+ by Neighborhood, Census 2000



Picking a Neighborhood: Top 10 Items for People with Mobility Limitations

- 1 Stores and commercial services
- 2 Cost of accessible housing
- 3 Good/accessible public transportation
- 4 Crosswalks or curb cuts
- 5 Steep streets and sidewalks
- 5 Rate of crimes against people
- 7 % of housing that's accessible for you
- 8 Cost of housing
- 9 Street and sidewalk lighting
- 10 Public services

Moving forward...

- Studies of different local geographical areas—health considered broadly
- Search for community-level indicators, particularly of inequality
- Comparison of aggregated individual measures with community-level
- Integration of measurement of physical and social environment