The Ecology of Access: Organizational Health Care Safety Nets and Use of Care in 60 U.S. Communities

Courtenay E. Savage, M.A.
School of Social Service Administration
University of Chicago
csavage@uchicago.edu

Research Questions

- **What are the effects of state and local factors on local health care safety net organizations' capacity?**

- **To what extent does organizational safety net capacity enable use among low-income uninsured adults?**

- **How do the findings differ by type of safety net organization?**

Conceptual Model

State-Level Factors
- Political Ideology
- Medicaid Program Characteristics

Local Factors
- Government Revenues
- Demand
- Demographic Composition

Controls
- Local Population
- Census Region
- Local Median Income

Instrumental Variable
- Local Safety Net Capacity in 1970

Organizational Safety Net Capacity

- MDs
- Individual-Level Demographics

Ambulatory Care Use Among Low-Income Uninsured Adults

Sample

- *Community-Level*

  276 Geographic Areas (83% MSAs) derived from the Current Population Survey (CPS)

- *Individual-Level*

  Subset = the 60 geographic areas in the Community Tracking Study (CTS)

  Made up of 3903 adults who met the following criteria:

  > 1. Ages 18-65
  >
  > 2. Family income less than or equal to 250% Federal Poverty Level (FPL)
  >
  > 3. Uninsured at least some of the time in the previous 12 months

Dependent Measures

Organizational Capacity

➤**Full Organizational Safety Net**	**Sum of safety net FTEs per 1000 population. See below.**
➤**Private Non Profit Safety Net Hospitals**	**Clinical FTEs per 1000 population. (At least 10% of annual bed days funded by Medicaid.)**
➤**Public Safety Net Hospitals**	**Clinical FTEs per 1000 population. (At least 10% of annual bed days funded by Medicaid.)**
➤**Federally Qualified Health Centers (FQHCs)**	**Clinical FTEs per 1000 population.**
➤**Local Health Departments (LHDs)**	**LHDs offering primary care services; clinical FTEs per 1000 population.**
Use of Care	**Dichotomous: Use of any ambulatory or preventive care in previous 12 months.**

Statistical Method

- **OLS and tobit estimations for community-level models: OLS for full safety net and tobits for each organizational type**

- **Two-Stage regression with IVs for individual-level models**

- **Adjust SEs for complex survey design and clustering**

- **Possible sources of bias**
  1. community-level: endogeneity bias
     use IV approach
  2. individual-level: sample selection bias
     use Heckman correction

INITIAL FINDINGS

First Stage Regressions: Standardized Estimates (Mean = 0; SD = 1)

	FULL SN CAPACITY[1]	NP HOSP CAPACITY[2] (SE)		PUBLIC HOSP CAPACITY[2] (SE)		FQHC CAPACITY[2] (SE)		LHD CAPACITY[2] (SE)	
Intercept	--	-0.37***	(0.07)	-0.67***	(0.08)	-0.33***	(0.07)	-0.56***	(0.08)
Political Ideology	0.021	0.27+	(0.16)	-0.48**	(0.15)	-0.02	(0.14)	0.51**	(0.16)
Medicaid Expenditures	0.10	0.05	(0.15)	0.28*	(0.16)	0.12	(0.14)	-0.37*	(0.17)
Medicaid Enrollment	0.01	-0.01	(0.13)	-0.07	(0.13)	-0.06	(0.12)	0.27*	(0.14)
Non-Health Related Revenue	0.18**	-0.18*	(0.09)	0.47***	(0.07)	-0.20*	(0.08)	0.21*	(0.09)
Proportion Uninsured	-0.18*	-0.15	(0.13)	-0.10	(0.12)	-0.02	(0.12)	-0.12	(0.13)
Percent Blacks 20-64	0.43***	0.20*	(0.10)	0.47**	(0.09)	0.23*	(0.09)	0.14	(0.10)
Percent Latinos 20-64	0.08	0.01	(0.11)	0.06	(0.11)	0.38***	(0.10)	0.07	(0.07)
Population	-0.07	0.10	(0.08)	0.03	(0.07)	0.04	(0.08)	0.30***	(0.08)
Median Income	-0.24	-0.49	(0.71)	-0.53	(0.65)	-0.11	(0.68)	-0.20	(0.74)
Quadratic Median Income	0.03	0.31	(0.70)	0.35	(0.63)	-0.01	(0.67)	0.18	(0.72)
Northeast	0.013	0.07	(0.11)	-0.11	(0.13)	0.05	(0.10)	-0.24*	(0.12)
South	-0.07	-0.11	(0.14)	-0.13	(0.14)	-0.17	(0.14)	0.41**	(0.14)
West	0.01	-0.09	(0.11)	0.23*	(0.11)	0.21*	(0.11)	-0.05	(0.12)
1970 County Beds	-0.07	-0.18*	(0.09)	0.16*	(0.07)	-0.02	(0.08)	0.06	(0.08)
Scale	--	1.14	(0.06)	0.98	(0.06)	1.08	(0.06)	1.11	(0.07)

1. OLS. 2. Tobit Estimation. Referent: Midwest Census Region.

$+ < .10$; $* < .05$; $** < .01$; $*** < .001$

Second Stage Regressions:[1] Significant Findings

	FULL SN CAPACITY (SE)		NP HOSP CAPACITY (SE)		PUBLIC HOSP CAPACITY (SE)		FQHC CAPACITY (SE)		LHD CAPACITY (SE)	
Predicted FTEs per 1000 Population	.01**	(.003)	.013*	(.005)	.012*	(.005)	-.14	(.12)	-.01	(.04)
Spanish as Primary Language	-.15**	(.052)	-.15**	(.052)	-.15**	(.052)	-.13*	(.052)	-.14**	(.052)
Female	.22***	(.028)	.22***	(.028)	.22***	(.028)	.22***	(.028)	.22***	(.028)
SF-12 Physical Component Summary (PCS)	-.03***	(.01)	-.03**	(.01)	-.03**	(.01)	-.03**	(.01)	-.03**	(.01)

1. Two-stage least squares with IV. Referents: Age 18-40; white; high school graduate; good health.
+ $p < 0.10$, * $p < 0.05$, ** $p < .01$, *** $p < .001$

Conclusion and Directions for Future Research

- **Decomposing the local safety net into its component organizations highlights differing relationships between state and local factors and capacity; and between capacity and use of care among low-income uninsured adults.**

- **Future Directions**

  1. Same study but use smaller geographic areas.

  2. Longitudinal focus – has safety net capacity changed since the late '90s? If so, what factors contributed to the change?

CONTACT INFORMATION

Courtenay E. Savage
School of Social Service Administration
University of Chicago
969 E. 60th Street
Chicago, Illinois 60637

csavage@uchicago.edu