Medicaid Undercount in the American Community Survey: Preliminary Results

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Background

- Administrative data on public assistance programs are not sufficient for policy making
  - Not timely
  - No population denominator
  - Incomplete or lower quality covariates
- Population surveys fill these gaps
  - Yet they universally undercount public program enrollment described in administrative data
    - Food stamps, public housing, TANF (Lewis, Elwood, and Czajka 1998; Meyer, 2003)
    - Medicaid (Call et al 2008, 2012)

Research Focus

- Present preliminary results from an ongoing collaboration between the Census Bureau and the State Health Access Data Assistance Center

- Extend prior data linkage research to the American Community Survey (ACS)

- Describe the concordance of Medicaid reporting in the ACS and enrollment data in MSIS

- Bias to uninsurance estimates

Previous Linkage Research

Our research expectations come from the following sources:

- Turner & Boudreaux (2010)
  - 2008 ACS produces coverage estimates similar to other population surveys (e.g. 2008 NHIS)
    - So expect similar results

- Previous linked results:
  - 57% of CPS (CY 2005) & 68% of NHIS (CY 2002) linked cases were reported as Medicaid

- O'Hara (2010)
  - Linked MSIS and ACS Content Test
    - 66% (CY 2006) of linked cases (non-elderly) were reported as Medicaid

Data Source 1:
American Community Survey or ACS

- Large, continuous, multi-mode survey of the US population residing in housing units and group quarters

- Added health insurance question in 2008

- One simple multi-part question on health insurance type

- Unique data source due to its size
  - Subgroup analysis
    - Small demographic groups
    - Low levels of geography

Data Source 2: Medicaid Statistical Information System (MSIS)

- Medicaid enrollment records

- Longitudinal database of enrollment
  - Records originate in the states and are reported to the federal government
  - Includes regular Medicaid and Expansion CHIP
  - Tracks all levels of enrollment (e.g., emergency & dental)

- Not a perfect gold standard

ACS Question

"Is this person CURRENTLY covered by any of the following types of health insurance or health coverage plans?

  d. Medicaid, Medical Assistance, or any kind of government-assistance plan for those with low incomes or a disability?"

- Comprehensive coverage is a subset of MSIS
- MSIS coverage is a subset of ACS *means-tested coverage*

Investigating Survey Response Errors

- Discordance between MSIS and ACS can come from definitional differences and survey response error
- Our focus here is on survey response errors which we investigate by merging the ACS and the MSIS
- Use linking methodology developed by the Census Bureau's Center for Administrative Records Research and Applications
  - Personal Identification Key (PIK)
- Consider a case to have Medicaid enrollment if they are covered on the day of ACS interview by full benefit coverage from Medicaid or expansion CHIP
- Adjust ACS person weights to account for unlinkable records
- Although all persons were linked estimates reported here are for the civilian non-institutionalized population

Preliminary linked results: Percent that were reported (coded) correctly as Medicaid

	Total	Age		
		0-18	19-64	65+
Reported (coded) as Medicaid*	75.9 (0.11)	79.2 (0.15)	71.3 (0.15)	73.1 (0.31)
Implied undercount	24.1 (0.11)	20.8 (0.15)	28.7 (0.15)	26.9 (0.31)

Source: 2008 MSIS and 2008 ACS civilian non-institutional population as analyzed by SHADAC.
*Includes all means tested public coverage because of ACS question wording
Percent (Standard error)

Preliminary linked results: Percent reported (coded) as Medicaid by percent of poverty

	% of Poverty		
	0-138	**139-200**	**200+**
Reported (coded) as Medicaid*	82.3 (0.14)	70.5 (0.31)	62.1 (0.25)
Implied undercount	17.7 (0.14)	29.5 (0.31)	37.9 (0.25)

Source: 2008 MSIS and 2008 ACS civilian non-institutional population as analyzed by SHADAC.

*Includes all means tested public coverage because of ACS question wording
Percent (Standard error)

What types of coverage are coded for misreports?

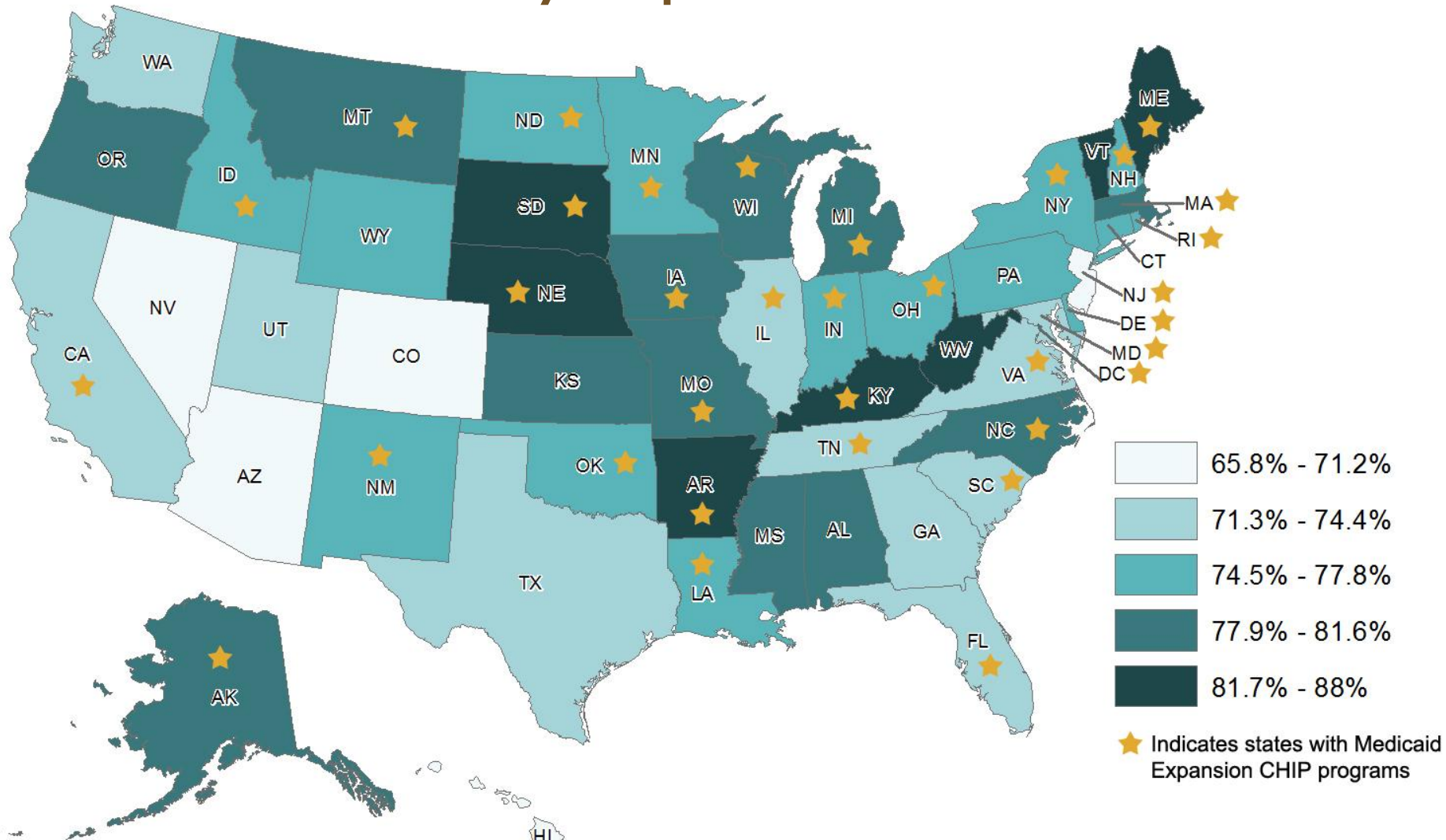|	
Medicaid* NOT reported as Medicaid *	75.9 (0.11) 24.1 (0.11)
Employer sponsored insurance	37.8 (0.24)
Direct purchase	10.6 (0.17)
Medicare	14.7 (0.16)
TRICARE	1.4 (0.05)
VA	0.7 (0.03)
Uninsured	41.5 (0.23)*

Note: Sums to 107% because can report multiple coverage types.
Source: 2008 MSIS and 2008 ACS civilian non-institutional population as analyzed by SHADAC.
*Includes all means tested public coverage because of ACS question wording
Percent (Standard error)

Preliminary linked results: Percent of linked cases that correctly report Medicaid

Legend:
- 65.8% - 71.2%
- 71.3% - 74.4%
- 74.5% - 77.8%
- 77.9% - 81.6%
- 81.7% - 88%
- ★ Indicates states with Medicaid Expansion CHIP programs

Source: Linked 2008 MSIS and 2008 ACS civilian non-institutional population as analyzed by SHADAC; Kaiser Family Foundation, State Indicators.

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Bias to estimates of uninsurance

- A key policy metric is the share of the population that lacks any type of coverage

- Uninsurance is a residual category, so undercounting Medicaid *partially* contributes to bias in uninsurance

  - We cannot estimate bias from other sources of coverage

  - We cannot estimate bias from those that report Medicaid, but are in fact uninsured

Partial Bias to Uninsurance, National Level

	Count in millions	Percent (SE)
All Uninsured	42.9	14.6 (0.04)
Share of the uninsured that are enrolled in Medicaid	3.6	8.3 (0.07)
Partially adjusted uninsured	39.4	13.4 (0.04)

Source: 2008 MSIS and 2008 ACS civilian non-institutional population as analyzed by SHADAC.

*Includes all means tested public coverage because of ACS question wording
Percent (Standard error)

Summary of Results

- Although not perfectly comparable, the undercount in the ACS appears in line with other surveys
  - Large (24.1%), but slightly better than some other surveys
- As with other surveys the undercount increases with age and family income and appears to vary by state
- The undercount translates into an overestimate of uninsurance of 1.2 percentage points or 3.6 million but it is likely that there are other offsetting influences

Limitations

- The MSIS is an imperfect gold standard for the ACS given differences in concept alignment

- Comparison of the magnitude of the undercount in other federal surveys is compromised because the ACS lumps Medicaid with all other government sponsored coverage for low-income groups

Discussion

- Although the ACS
  - Focus is general household survey
  - Medicaid state names are not included
  - One multi-part question to elicit health insurance information
- Preliminary evidence is that the implied undercount is in line or lower than other surveys

Future Work

- Detailed examination of other subgroups
  - Race/ethnicity, education, group quarters
  - Managed care, length of enrollment
- Impact of survey characteristics
  - Survey mode, language of interview
- Explore sources of state level variation

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