



## The Medicaid Undercount: Synthesis of Research

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### **Kathleen Thiede Call**

University of Minnesota, SHADAC  
School of Public Health, Division of Health  
Policy and Management

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## Coauthors and sponsors

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## Introducing the Medicaid Undercount

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- Refers to fact that surveys produce lower counts of people on Medicaid than administrative records indicate are enrolled
- Survey measurement error contributes to discrepancy a couple of ways
  - Medicaid recipients report they have NO coverage
  - Medicaid recipients report coverage other than Medicaid
- Surveys are only source of several policy relevant estimates; the discrepancy undermines confidence in survey estimates

## Research questions

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- What do respondents for Medicaid enrollees report when asked questions about health insurance coverage?
- What factors are associated with accurate and inaccurate reports of coverage?
- What do we know about the magnitude of bias to estimates of uninsurance due to misreports among respondents for Medicaid enrollees?

## Methods: State experiments

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- “Medicaid undercount experiment” (MUE) in California, Florida and Pennsylvania
  - Surveyed known non-institutionalized Medicaid enrollees (between ~1100 and 1500)
  - Telephone survey only
  - Use of different surveys and vendors, with varied response rates per state (between ~ 30% and 56%)
  - All use point-in-time concept of health insurance coverage; placement of coverage questions in survey varied
  - Medicaid enrollment was verified on the day survey completed; those no longer enrolled are omitted from analysis

## Methods: Matching study

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- Census linked 2001 and 2002 CPS records with MSIS data for CY 2000-2002
  - There are important limitations of the linking
    - 9% of all full benefit Medicaid cases in MSIS are missing linking keys
      - Analysis limited to full-benefit Medicaid enrollees with linking identifiers
    - In 2001 20% of CPS cases are missing linking keys (largely due to refusal to provide data)
      - Remaining CPS cases are reweighted to equal the whole population
  - Other limitation
    - Universe differences across CPS and MSIS data files (roughly half of the difference is due to Inst/group quarters cases in MSIS)
  - This analysis is based on *reported* health insurance data only (exclude edited and imputed CPS cases)

## Outline of analyses reported

- Present weighted results of self-reported health insurance coverage among known enrollees
- Multivariate logistic regressions are used to examine factors associated with...
  - Accurate reports of Medicaid coverage
    - State experiments
  - Misreports of uninsurance
    - State experiments and CPS matching study
- Show the amount of upward bias in uninsurance rates due to misreports of a lack of coverage across existing undercount studies

## What respondents report about insurance for Medicaid enrollees

Self-Reported Coverage	State Experiments			CPS Match
	CA	FL	PA	
Any Medicaid	83.1%	87.0%	79.9%	58.9%
Otherwise Public	1.7%	2.7%	9.2%	9.5%
Otherwise Private	4.7%	5.4%	7.5%	14.6%
Uninsured	10.4%	4.9%	3.4%	16.9%

**Health insurance measurement:**

- All provide a list of insurance types; verify uninsurance for those saying “no” to all types.
- State surveys ask about *current* health insurance coverage.
- CPS asks about insurance coverage during the *prior calendar year*.
- Health insurance series comes later in survey for CA and CPS
- Note: CA MUE include those with partial Medicaid benefits

## Selected covariates of reporting error

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- Covariates common to state MUEs and CPS regression analyses
  - Age
  - SSI, TANF, managed care, dual eligibility
  - Poverty status
  - Sex
  - Race and ethnicity
- Covariates used in state MUE regressions
  - US born, education, employment, survey language, self-reported health status, partial/limited benefit coverage
- Covariates used in CPS regressions
  - Imputation/editing
  - Healthcare utilization under Medicaid
  - Length of enrollment
  - Recency of enrollment
  - Relationship to household reference person
  - State

## Factors consistently associated with odds enrollee will be **correctly** reported as covered by Medicaid

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- Those who get it right (state experiments):
  - Lower income households
  - Age; reports of children's coverage more likely to be correct than adults
  - Those with more contact with health care and social services (e.g., received medical care (CA only), worse self-reported health status, receipt of SSI and TANF)
  - Those who are unemployed
  - Those enrolled in Medicaid managed care and receiving full benefits

## Factors consistently associated with odds enrollee with be *Falsely* reported as being uninsured

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- State experiment and CPS:
  - Age and relationship (e.g., 18 to 64 year olds misreport more than those 65 and above; adults and parents of child enrollees)
  - Those with less contact with health care and social services (e.g., no medical care received, better self-reported health status, no receipt of SSI and TANF)
  - Those enrolled in the FFS sector
- State survey factors:
  - Those receiving partial Medicaid benefits
- CPS factors:
  - Those with less intense and less recent enrollment
  - Misreporting varies across states

## Summary of multivariate logistic models

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- Some characteristics of recipients are associated with *accurate* reports of Medicaid participation (esp. age and income); fewer are predictive of *misreports* of uninsurance
- Characteristics of program enrollment such as service sector (e.g., managed care), the receipt of other public benefits are consistently highly predictive in their impact on *accurate* reports of Medicaid participation and *misreports* of a lack of insurance
- In addition for the CPS, recency and intensity of enrollment, and relationship of reference person impact accuracy of measurement

## Impact of misreports on bias to estimates of uninsurance: What is known to date

Studies and Target Population	Percent of Medicaid Population with Misreport of Uninsurance	Percentage Point Upward Bias in the Uninsured Rate
<b>Experimental Studies</b>		
Adults on Medicaid in CA 2004	10.4%	1.3%
Adults on Full Benefit Medicaid in CA 2004	5.0%	0.6%
Non-Elderly (<65) Persons on Medicaid in FL 2004	4.9%	0.7%
Persons on Medicaid in PA 2004	3.4%	0.4%
Children on Medicaid in MN 1999	4.5%	0.7%
Persons on Medicaid in MN 1999	4.1%	0.3%
Adults on Medicaid in Blue Cross in MN 2003	0.6%	0.0%
Persons on Medicaid in MD 2004	4.4%	0.6%
<b>Matching Studies</b>		
Adults (age 15-64) on Medicaid in CA (pooled 1990-2000 CPS data)	21.7%	1.0%
CY 2000 Full Benefit Enrollees in U.S. (suitable CPS matches)	16.9%	2.3%

- Upward bias is modest in experiment studies; primarily point-in-time concept of coverage
- Upward bias in CPS matching studies more significant; on par with Trim simulation model

## Summary of results

- Results point to role of measurement error
  - Respondents are reasonably good at reporting, especially at a point-in-time, if they do or do not have coverage, and somewhat less accurate reporters of specific types of coverage
  - Errors are greatest in the CPS
- Results point to likely candidates for imputation of Medicaid status
  - Poverty, age, relationship to reference person, length and recency of enrollment
- Misreports of a lack of coverage for Medicaid enrollees leads to modest upward bias in point-in-time uninsurance estimates

## Conclusions and implications

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- Medicaid undercount is primarily an issue of measurement error
- Consistency across studies suggest ways to reduce measurement error
  - Attend to scope of questionnaire/survey context—health survey
  - Question placement—early versus late in survey
  - Reference period for health insurance questions—current insurance versus prior year (CPS)
  - Perhaps consider inclusion of questions about program characteristics or program participation to improve Medicaid reporting
- Consistency across studies suggest potential imputation strategies for improving Medicaid estimates

## Conclusions and implications

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- Results from various undercount studies should reduce uncertainty about using survey estimates of coverage to inform policy
- There are a number of potential explanations why respondents may fail to report enrollment in Medicaid
  - Poor proxy reporting; inaccurate reporting for others in household
    - Direction of bias less clear
  - Stigma
    - May report another type of coverage as being uninsured bears some stigma
  - Confusion about which program they are enrolled in
    - Likely to report some form of coverage
  - Confusion, unaware of enrollment status
    - Particularly problematic if then act uninsured and health suffers

## Other issues to consider

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- Unit non-response and implications for bias to health insurance coverage estimates
  - State surveys are RDD -- Falling response rates and rise of cell phone only households raise additional concerns about these estimates
- Need to learn more about bias introduced by inability to link all MSIS and CPS cases
- Not enough is known about potential for “overcounts” in administrative records
- Acknowledge that Medicaid undercount is but one form of measurement error. Likely that some who are uninsured report insurance.
  - For example, the SNACC team found that some respondents report Medicaid for people for whom there is no link to MSIS
    - True for almost 3 million weighted cases for whom no other insurance is reported
    - This in contrast to 6 million weighted cases who are in MSIS but no coverage is reported.

## Forthcoming research

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- SNACC project has completed similar matching projects using National Health Interview Survey (NHIS) and Medical Expenditure Panel Survey (MEPS HC)
  - Reports are in final stages of review
- Census in conducting similar research with the American Community Survey
- A model for imputing Medicaid and uninsurance in the CPS is under development

## Suggestions for future research

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- To date, most validation experiments have focused on accuracy of Medicaid reporting
  - Need better understanding of reporting accuracy in the private and SCHIP market, as well as what those lacking insurance report in surveys (e.g., local safety net, sliding fee programs)
- Important to learn if those who are insured but unaware forgo needed health care services – acting uninsured

## Contact information

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- Kathleen Thiede Call
- State Health Access Data Assistance Center (SHADAC)
  - callx001@umn.edu