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The Medicaid Undercount: Synthesis of Research

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Coauthors and sponsors

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Introducing the Medicaid Undercount

- 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

- 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

- "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

- 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

- 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

- 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

- 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

- 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
Experimental Studies		
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%
Matching Studies		
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

- 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

- 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

- 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

- 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

- 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

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