Who gets it right? Characteristics associated with accurate reports of health insurance coverage

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Goals of this study

- Describe correlates of accurate reports of insurance coverage in two commonly used census surveys:
  - Current Population Survey ASEC (CPS)
  - American Community Survey (ACS)
- Identify variation in correlates of accurate reporting of coverage by
  - type of insurance (public or private) and
  - survey (ACS and CPS)
Why do correlates of accuracy matter?

Results can inform

- Survey design
- Editing or imputation routines
- Adjustments to population estimates of coverage for policy simulation and evaluation
Who gets it right?

- What is known is limited to Medicaid reporting
- Most accurate:
  - Adults reporting for children vs adults
  - Low income, unemployed, low education
  - Shared coverage
    - i.e., respondent shares same coverage as other HH members
  - Received medical care
  - Recency, intensity of coverage

- Here we expand to private insurance
Data: CHIME validation study

- Start with enrollment records from a private health plan that offers multiple coverage types
  - Medica Health Plan (MHP) in Minnesota
- Use records as sample and randomly assign to different survey treatments
  - Current Population Survey ASEC (CPS)
  - American Community Survey (ACS)
- Compare estimates/indicators of coverage type:
  - Survey estimates versus enrollment records
  - Difference in surveys and records across CPS and ACS
CHIME survey methods

- 15-minute phone survey conducted in Spring, 2015
- Content: questions from both CPS and ACS:
  - Demographics
  - Labor force
  - Government program participation (food stamps, WIC, etc.)
  - Health insurance randomization

- Stratified sample: oversampled public, undersampled ESI → weight data to Medica population totals
- 22% response rate (AAPOR RR4)
- Data collected on all household members
- Individuals in surveys matched to enrollment records: at least one person matched in 87% of households
- Final matched dataset: 3,823 people

1,989 received CPS
1,834 received ACS
Potential correlates of accurate reporting

From CHIME survey:

- Covered individual characteristics
  - Age, health status
  - Any services in past 6 months (claims data, public only)

- Respondent characteristics
  - Gender, education and employment status, employer size, family income, and
  - Policy holder status (claims data)

- Family/HH characteristics
  - Income as % poverty
  - Any SSI/TANF or food stamp participation (Medicaid only)
Potential correlates continued

From administrative records:

- Complexity of survey reporting task
  - Shared coverage
    - Proxy-report in multi-person HH w/ different coverage
    - Proxy-report in multi-person HH w/ same coverage
    - self-report in multi-person HH
    - Self-report in one-person HH
  - Recency of coverage
    - past 6 mos, 7-17 months, 18 months or more
- Receipt of subsidy (marketplace only)
### Reporting accuracy by insurance type and survey treatment

<table>
<thead>
<tr>
<th>Type</th>
<th>CPS</th>
<th>ACS</th>
<th>CPS</th>
<th>ACS</th>
<th>CPS</th>
<th>ACS</th>
<th>CPS</th>
<th>ACS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Group</td>
<td>78.4%</td>
<td>85.6%*</td>
<td>62.9%</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Marketplace</td>
<td></td>
<td></td>
<td></td>
<td>83.7%*</td>
<td>83.2%</td>
<td>83.2%</td>
<td></td>
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</tr>
<tr>
<td>Medicaid</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>77.1%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MinnesotaCare</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>69.5%*</td>
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</tr>
</tbody>
</table>

* Indicates a significant difference between CPS and ACS p < .05 or better.
Odds of accurate Medicaid reporting

**Personal-level characteristics**
- Age less than 19 vs age 35+
- Age 19-34 vs age 35+
- Health status fair/poor vs excellent/v.good/good/D/R
- Had any health care claims in last 6 months

**Respondent-level characteristics**
- Male vs female
- High school or less vs bachelor or higher
- Some college, associate vs bachelor degree or higher
- Less than full time, full year vs full time, full year in 2014
- Not working/D/R vs full time, full year in 2014
- Employer size >50 vs 50 or fewer

**Family-level characteristics**
- Family income in 2014 <200% vs > 200% FPG/D/R
- Household receives TANF or SSI
- Household receives SNAP

**Task complexity**
- Self report in one person HH vs REF
- Self report in multi-person HH vs REF
- Proxy report in multi-person HH with same coverage vs REF
- Missing (respondent didn't match claims data)
- PIT coverage obtained in last 6 months vs 18+ months ago
- PIT coverage obtained 7-17 months ago vs 18+ months ago
- Received a premium subsidy

REF=Proxy report in multi-person HH with different coverage
^ Based on administrative records data; all other indicators are from survey data.

LOWER ODDS OF ACCURATE REPORTING
HIGHER ODDS OF ACCURATE REPORTING

CPS
ACS
Odds of accurate Medicaid reporting

**Personal-level characteristics**
- Age less than 19 vs age 35+
- Age 19-34 vs age 35+
- Health status fair/poor vs excellent/v.good/good/D/R

**Respondent-level characteristics**
- Male vs female
- High school or less vs bachelor or higher
- Some college, associate vs bachelor degree or higher
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- ^Received a premium subsidy

REF=Proxy report in multi-person HH with different coverage
^ Based on administrative records data; all other indicators are from survey data.
Odds of accurate MNcare reporting

**Personal-level characteristics**
- Age less than 19 vs age 35+
- Age 19-34 vs age 35+
- Health status fair/poor vs excellent/v.good/good/D/R
- Had any health care claims in last 6 months

**Respondent-level characteristics**
- Male vs female
- High school or less vs bachelor or higher
- Some college, associate vs bachelor degree or higher
- Less than full time, full year vs full time, full year in 2014
- Not working/D/R vs full time, full year in 2014
- Employer size >50 vs 50 or fewer
- Respondent is policyholder

**Family-level characteristics**
- Family income in 2014 <200% vs > 200% FPG/D/R
- Household receives TANF or SSI
- Household receives SNAP

**Task complexity**
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- PIT coverage obtained 7-17 months ago vs 18+ months ago
- Received a premium subsidy

REF=Proxy report in multi-person HH with different coverage and missing (respondent didn’t match)

^ Based on administrative records data; all other indicators are from survey data.
Odds of accurate Non-group reporting

**Personal-level characteristics**
- Age less than 19 vs age 35+
- Age 19-34 vs age 35+
- Health status fair/poor vs excellent/v.good/good/D/R
- Had any health care claims in last 6 months

**Respondent-level characteristics**
- Male vs female
- High school or less vs bachelor or higher
- Some college, associate vs bachelor degree or higher
- Less than full time, full year vs full time, full year in 2014
- Not working/D/R vs full time, full year in 2014
- Employer size >50 vs 50 or fewer
- Respondent is policyholder

**Family-level characteristics**
- Family income in 2014 <200% vs > 200% FPG/D/R
- Household receives TANF or SSI
- Household receives SNAP

**Task complexity**
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- Self report in multi-person HH vs REF
- Proxy report in multi-person HH with same coverage vs REF
- Missing (respondent didn’t match claims data)
- PIT coverage obtained in last 6 months vs 18+ months ago
- PIT coverage obtained 7-17 months ago vs 18+ months ago
- Received a premium subsidy

REF=Proxy report in multi-person HH with different coverage and missing (respondent didn’t match)
^ Based on administrative records data; all other indicators are from survey data.
Odds of accurate Marketplace reporting

**Personal-level characteristics**
- Age less than 19 vs age 35+
- Age 19-34 vs age 35+
- Health status fair/poor vs excellent/v.good/good/D/R

^Had any health care claims in last 6 months

**Respondent-level characteristics**
- Male vs female
- High school or less vs bachelor or higher
- Some college, associate vs bachelor degree or higher
- Less than full time, full year vs full time, full year in 2014
- Not working/D/R vs full time, full year in 2014
- Employer size >50 vs 50 or fewer

^Respondent is policyholder

**Family-level characteristics**
- Family income in 2014 <200% vs > 200% FPG/D/R
- Household receives TANF or SSI
- Household receives SNAP

**Task complexity**
- ^Self report in one person HH vs REF
- ^Self report in multi-person HH vs REF
- ^Proxy report in multi-person HH with same coverage vs REF
- ^Missing (respondent didn’t match claims data)
- ^PIT coverage obtained in last 6 months vs 18+ months ago
- ^PIT coverage obtained 7-17 months ago vs 18+ months ago
- ^Received a premium subsidy

REF=Proxy report in multi-person HH with different coverage and missing (respondent didn’t match)

^ Based on administrative records data; all other indicators are from survey data.
Summary of results

- Consistent with prior research **public** reporting is more accurate among
  - less social/structurally advantaged:
    - Low income and education
  - those with experience with other social programs and who likely need care
    - TANF/SSI and SNAP recipients
    - Fair/poor self-reported health

- Variation across public programs
  - For Medicaid, family-level characteristics matter
  - For MNcare, respondent-level characteristics matter
Summary continued

- **For ACS, private** reporting is more accurate among
  - more social/structurally advantaged
    - Males, higher income
  - those less likely to have ESI offer
    - Part-time/part-year, modest educational attainment
  - those with less task complexity
    - Living alone and reporting for self
  - those receiving a subsidy in Marketplace plan

- **For CPS, private** reporting is more accurate among
  - those age 35 plus vs age 19-34
  - those with long duration of same coverage
Conclusions

- CHIME is **first look** at correlates of accurate reporting for ACS, CPS redesign, direct purchase and marketplace.

- Although significant correlates are sparse, there patterns:
  - CHIME results for **public** insurance are consistent with past research.
  - For both **public and private** insurance:
    - Characteristics of accurate reporting match likely enrollees.
    - Lends confidence in editing/imputation routines and use of survey data for policy simulations.
  - Correlates of **private** reporting accuracy vary by survey:
    - For **ACS**, respondent-level characteristics matter, more significant correlates.
    - For **CPS**, fewer significant correlates.

- Next steps: Refine regression models; look at other accuracy metrics beyond undercount.
I welcome suggestions
Thank you!

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