Who gets it right? Using survey and administrative data to evaluate characteristics associated with accurate reports of health insurance coverage

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11th Health Survey Research Conference
Williamsburg VA, March 5, 2020

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Setting the stage

- Survey data are critical to monitoring health reform and access
- Reports of health insurance known to have measurement error
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 type for policy simulation and evaluation
What do we know about 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
    - Received medical care
    - Recency, intensity of coverage
Reverse Record Check Study

- Start with phone numbers of enrollees from US-based private health plan that offers multiple coverage types
- 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
Methods

- 15-minute split-panel phone survey conducted in Spring, 2015
- Content:
  - Demographics
  - Labor force
  - Government program participation (food stamps, WIC, etc.)
  - Health insurance randomization
- Stratified sample: oversampled public, undersampled ESI → weighted to the health plan population; adjusted for non-response
- 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: 3,800 people
  - 2,000 received CPS
  - 1,800 received ACS
Measures: Potential correlates of accurate reporting

- Covered individual characteristics
  - Age, health status (survey)
  - Any services in past 6 months (claims: public only)
- Respondent characteristics
  - Gender, race/ethnicity, education and employment status, employer size (survey)
  - Policy holder status (claims)
- Family/HH characteristics
  - Income as % poverty (survey)
Measures: Potential correlates continued

- Insurance coverage characteristics
  - Shared coverage *(survey and claims)*
    - 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/intensity of coverage *(claims)*
    - Now and up to past 6 months, 7-17 months, 18 months or more
  - Receipt of subsidy *(claims)*
    - Marketplace only
Reporting accuracy by insurance type and survey treatment

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<td>Non-Group</td>
<td>78.5%</td>
<td>85.6%*</td>
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* Indicates a significant difference between CPS and ACS p < .05 or better.
Odds of accurate Medicaid reporting

- **Lower odds of accurate reporting**
  - Covered Individual characteristics
    - Age: less than 18 vs age 45+
    - 18-25 vs age 45+
    - 26-44 vs age 45+
  - Health status: report excellent, very good, good, D/R vs fair/poor
    ^Utilization: no claims vs any claims
  - Respondent-level characteristics
    - Gender: Male vs Female
    - Race/ethnicity: Other than White Non-Hispanic vs White Non-Hispanic
  - Education: High school or less, D/R vs Bachelor degree or higher
    - Some college, Associate degree vs Bachelor degree or higher
  - Employed: part-time, part-year or more vs Not working, D/R
    - Employer size: 51 or more employees, D/R vs 50 or fewer
  - Family-/HH-level characteristics
    - Family income: 139-200% vs <138% FPG
      - 200-400% vs <138% FPG
      - >400% vs <138% FPG
  - Insurance Coverage Characteristics
    ^Shared coverage: Missing (resp. didn't match plan data) vs REF
    - Proxy report in multi-person HH with same or different coverage vs REF
    - Proxy report in multi-person HH with different coverage vs REF
    - Proxy report in multi-person HH with same coverage vs REF
    - Self report in multi-person HH vs REF
      (Shared coverage REF: Self-report in one person HH)
      ^PIT coverage: obtained in last 6 months vs 18+ months ago
      - Obtained 7-17 months ago vs 18+ months ago
      ^Respondent is not policyholder vs Respondent is policyholder
      ^No premium subsidy vs receives premium subsidy

- **Higher odds of accurate reporting**

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 State Plan reporting

Covered Individual characteristics
- Age: less than 18 vs age 45+
  - 18-25 vs age 45+
  - 26-44 vs age 45+
- Health status: report excellent, very good, good, D/R vs fair/poor
  ^Utilization: no claims vs any claims

Respondent-level characteristics
- Gender: Male vs Female
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- Employed: part-time, part-year or more vs Not working, D/R
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Insurance Coverage Characteristics
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      - Obtained 7-17 months ago vs 18+ months ago
      - ^Respondent is not policyholder vs Respondent is policyholder
        ^No premium subsidy vs receives 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

Covered Individual characteristics
- Age: less than 18 vs age 45+
  - 18-25 vs age 45+
  - 26-44 vs age 45+
- Health status: report excellent, very good, good, D/R vs fair/poor

Respondent-level characteristics
- Gender: Male vs Female
- Race/ethnicity: Other than White Non-Hispanic vs White Non-Hispanic
- Education: High school or less, D/R vs Bachelor degree or higher
  - Some college, Associate degree vs Bachelor degree or higher
- Employed: part-time, part-year or more vs Not working, D/R
  - Employer size: 51 or more employees, D/R vs 50 or fewer

Family-/HH-level characteristics
- Family income: 139-200% vs <138% FPG
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Insurance Coverage Characteristics
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- Proxy report in multi-person HH with same or different coverage vs REF
  - Proxy report in multi-person HH with different coverage vs REF
  - Proxy report in multi-person HH with same coverage vs REF
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- ^PIT coverage: obtained in last 6 months vs 18+ months ago
  - Obtained 7-17 months ago vs 18+ months ago
  - ^Respondent is not policyholder vs Respondent is policyholder
  - ^No premium subsidy vs receives premium subsidy

REF=Proxy report in multi-person HH with same or 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

**Covered Individual characteristics**
- Age: less than 18 vs age 45+
- 18-25 vs age 45+
- 26-44 vs age 45+
- Health status: report excellent, very good, good, D/R vs fair/poor

**Respondent-level characteristics**
- Gender: Male vs Female
- Race/ethnicity: Other than White Non-Hispanic vs White Non-Hispanic
- Education: High school or less, D/R vs Bachelor degree or higher
- Some college, Associate degree vs Bachelor degree or higher
- Employed: part-time, part-year or more vs Not working, D/R
- Employer size: 51 or more employees, D/R vs 50 or fewer

**Family-/HH-level characteristics**
- Family income: 139-200% vs <138% FPG
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**Insurance Coverage Characteristics**
- ^Shared coverage: Missing (resp. didn't match plan data) vs REF
- Proxy report in multi-person HH with same or different coverage vs REF
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- Proxy report in multi-person HH with same coverage vs REF
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- ^Respondent is not policyholder vs Respondent is policyholder
- ^No premium subsidy vs receives 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 key results

- Variation across public and private programs
  - For public programs family-level and respondent-level characteristics matter
    - Those in low income families (ACS, CPS) and females are more accurate
  - For private insurance education of respondents and coverage characteristics matter
    - Living alone and reporting for self (ACS)
    - Longer duration of same coverage (CPS)
    - Those receiving a subsidy in Marketplace plan
- Some results make intuitive sense, some do not
Conclusions

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

- Although significant correlates are sparse, there are patterns that have potential for imputation/editing.
  - CHIME results for public insurance are consistent with past research in terms of income, but not health status or use of health care.
    - Good: income is typically included in surveys; linking to claims is challenging.
  - Correlates of private reporting accuracy vary by survey.
    - For ACS, more significant correlates (age, reporting coverage for self).
    - For CPS, fewer significant correlates (duration of coverage).
Next steps

- Adjust for respondents reporting for multiple people in survey
- Restrict sample to those reporting for themselves vs proxy reports
- Understanding importance of who is reporting for whom is understudied
Suggestions? Questions?

Thank you!

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