Comparing Health Insurance Measurement Error (CHIME) in the ACS & CPS

Angela Fertig, Medica Research Institute; Joanne Pascale, US Census Bureau; Kathleen Call, State Health Access Data Assistance Center; Don Oellerich, ASPE, DHHS

MOTIVATION

- No universal record of health insurance status in US
- All health insurance statistics are based on survey estimates
- Limited data on reporting accuracy by coverage type
- Accuracy and reporting issues vary by survey
- No data on reporting accuracy post-ACA

OBJECTIVE

 To compare survey responses about health insurance in the American Community Survey (ACS) and the Current Population Survey (CPS) to administrative insurance records to understand the magnitude, direction and patterns of misreporting on these two important surveys conducted by the U.S. Census Bureau.

METHODS

- Collaborated with a private health plan (MHP) that offers multiple coverage types
- Employer Sponsored
- Direct Purchase (on and off Marketplace)
- Public (managed Medicaid)
- Restricted to Minnesota residents < age 65, with valid phone numbers
- Used plan enrollment records as sample and randomly assigned within each coverage type to two different survey treatments

METHODS (CONTINUED)

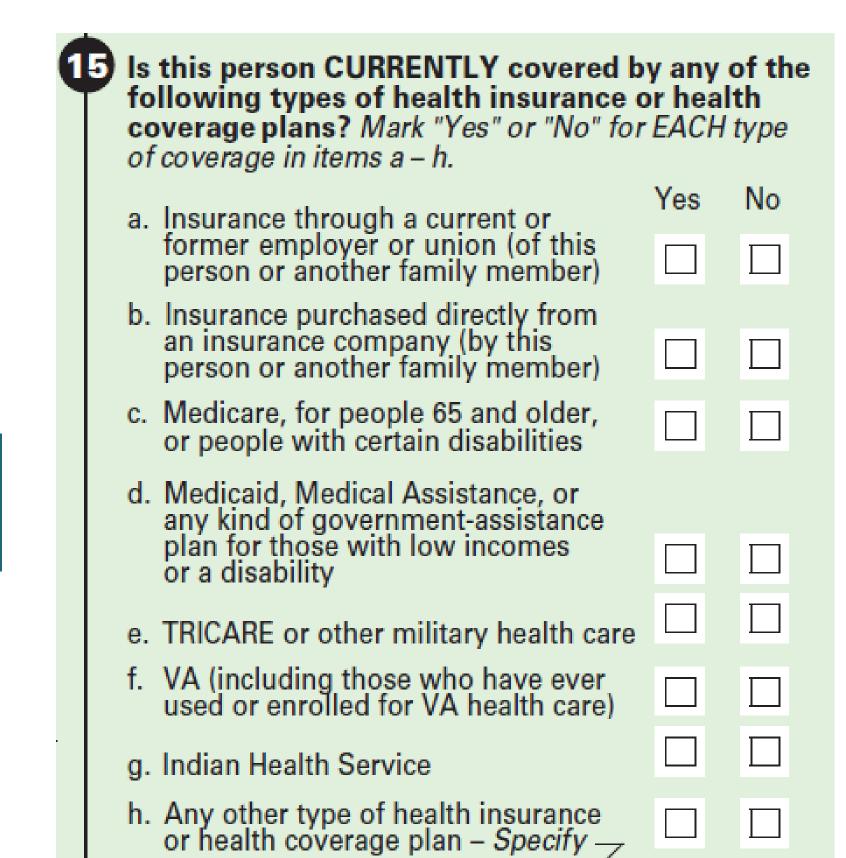
SURVEY DESIGN & RESPONSE RATE

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

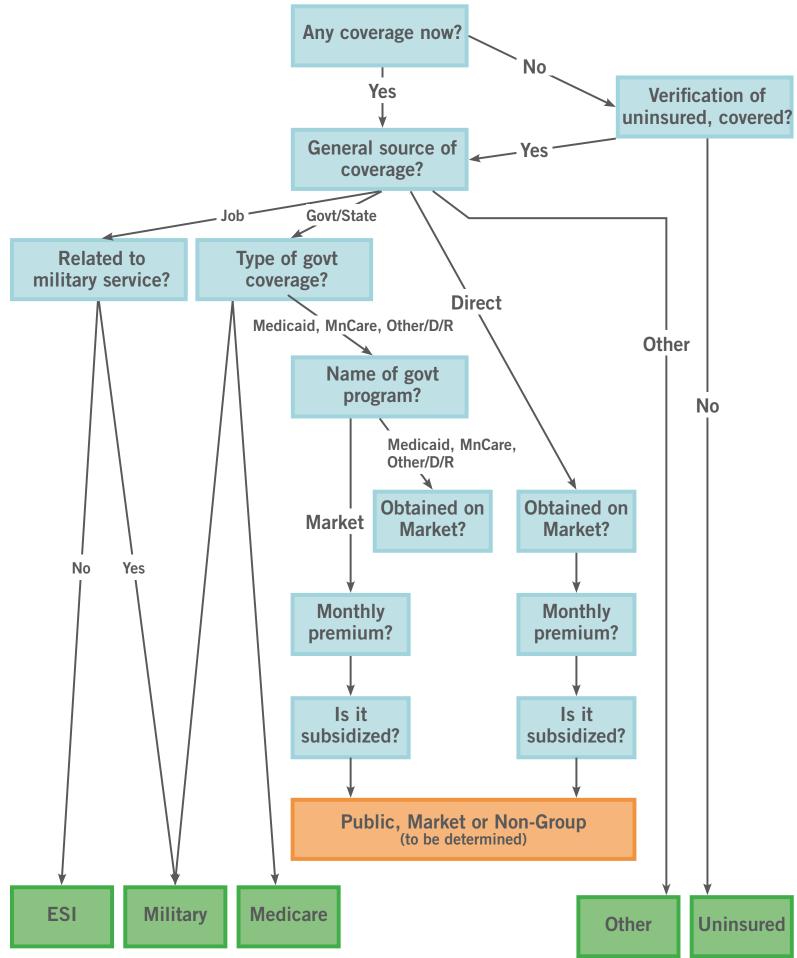
V	•
CPS	ACS

22% response rate (AAPOR RR4)

ACS HEALTH INSURANCE QUESTION



CPS HEALTH INSURANCE QUESTIONS



MATCHING SURVEY RESPONSES WITH ENROLLMENT RECORDS

- Survey collected information on all
- Individuals in surveys matched to enrollment records: at least one person matched in 87% of households
- Final matched dataset: 3,823 people

V	•
1,989	1,834
RECEIVED CPS	RECEIVED ACS

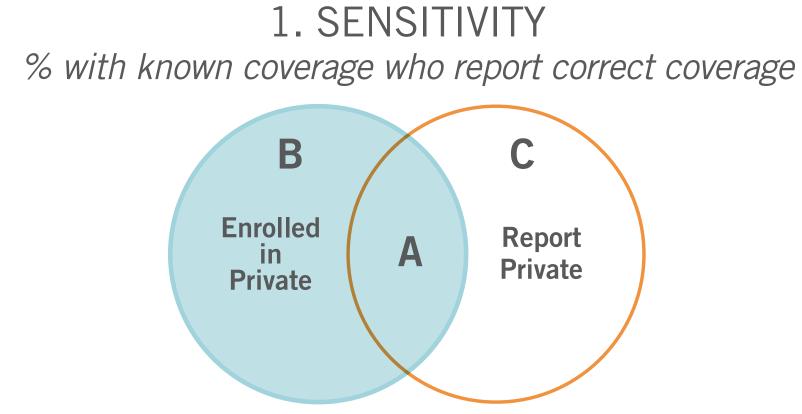
LIMITATION

 Only have enrollment records from one health plan; some may report coverage with other plans

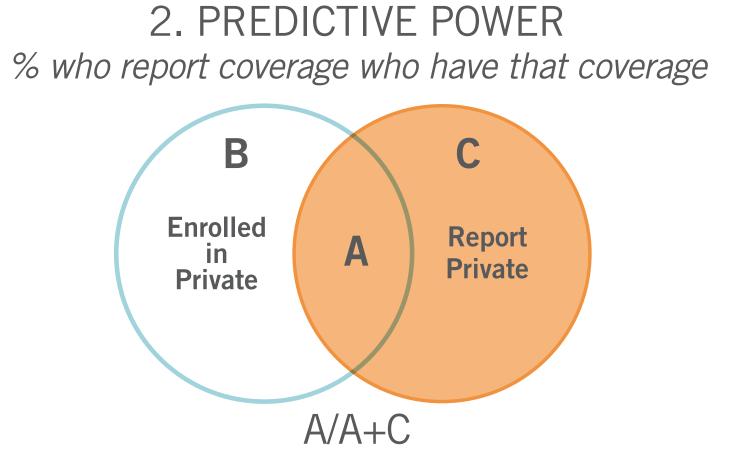
DATA ANALYSIS

- All comparisons adjusted for household size, family income and race.
- All estimates weighted to population of

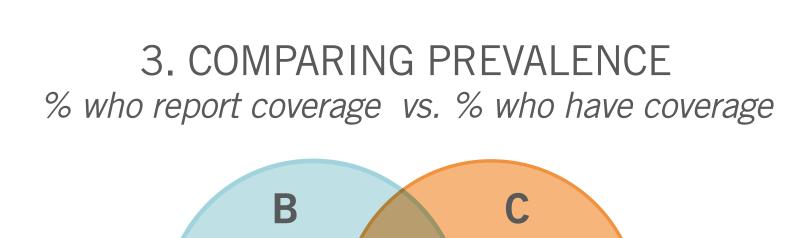
MEASURES OF REPORTING **ACCURACY**



Does survey elicit "correct" response?



Can survey predict "truth" from report?



Reported

Prevalence

of Sample

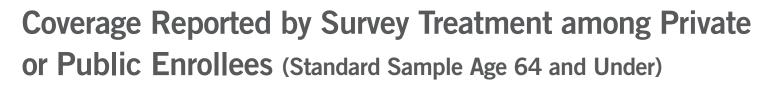
Enrolled

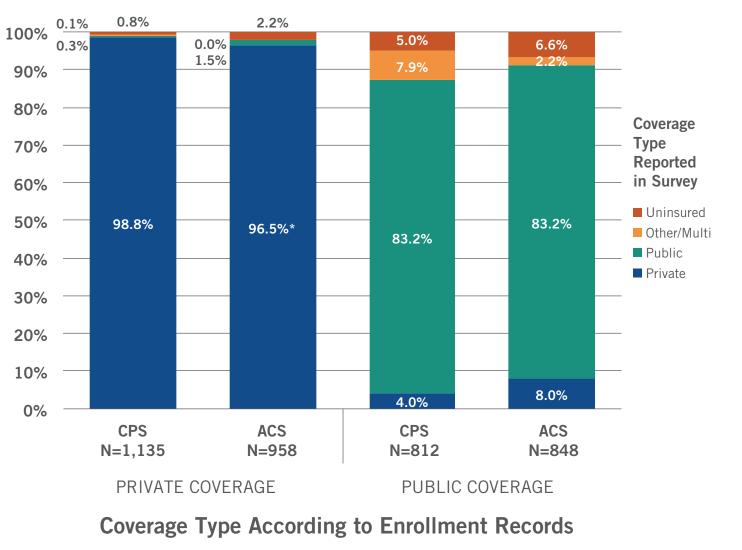
Prevalence

of Sample

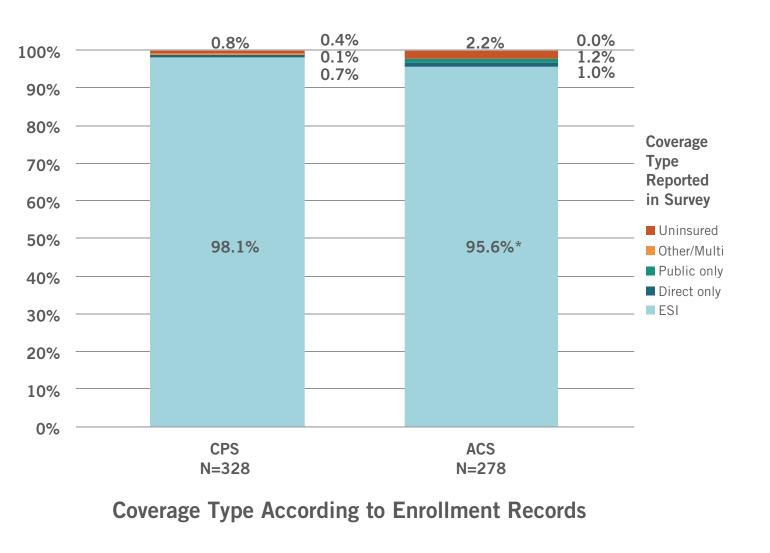
SENSITIVITY

RESULTS

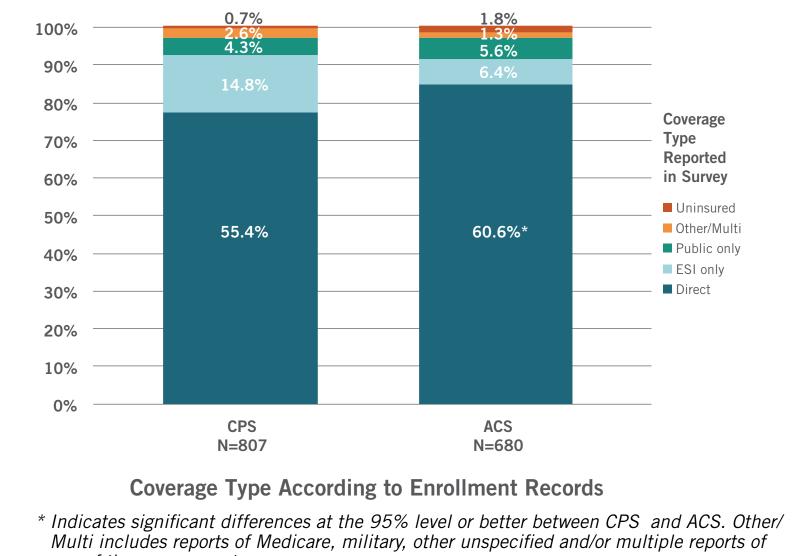




Coverage Reported by Survey Treatment among **Employer-Sponsored Insurance Enrollees (ESI)** (Standard Sample Age 64 and Under)

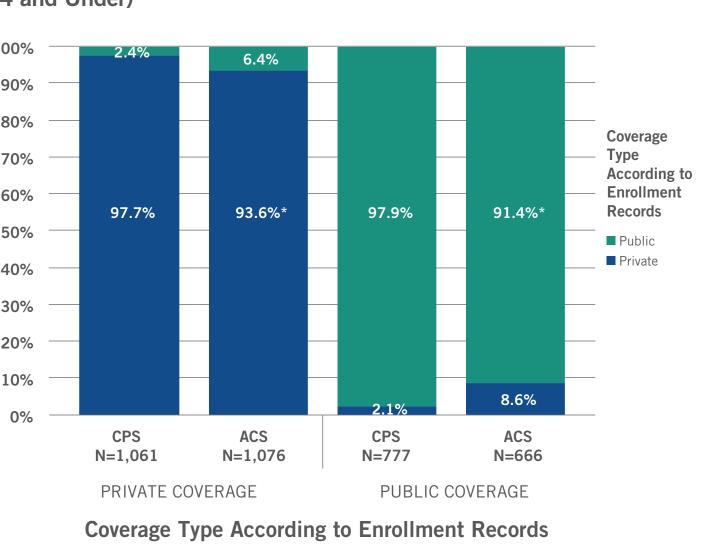


Coverage Reported by Survey Treatment among Direct Purchase Plan Enrollees (Standard Sample Age 64 and Under)

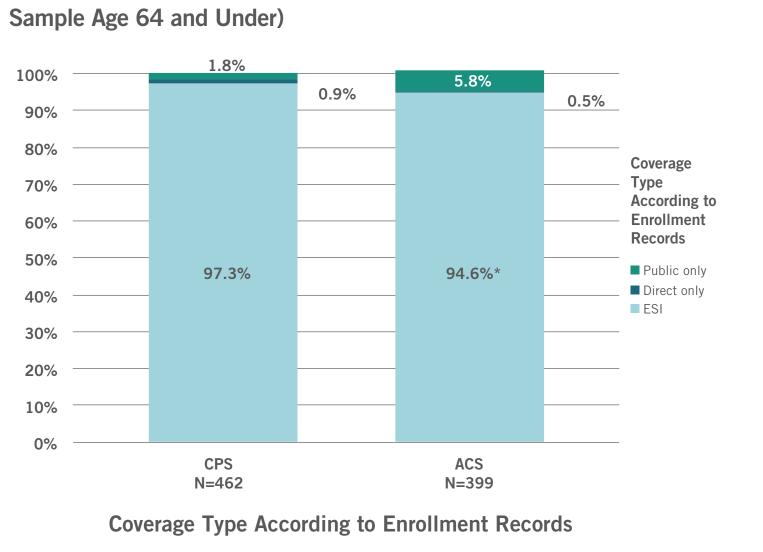


PREDICTIVE POWER

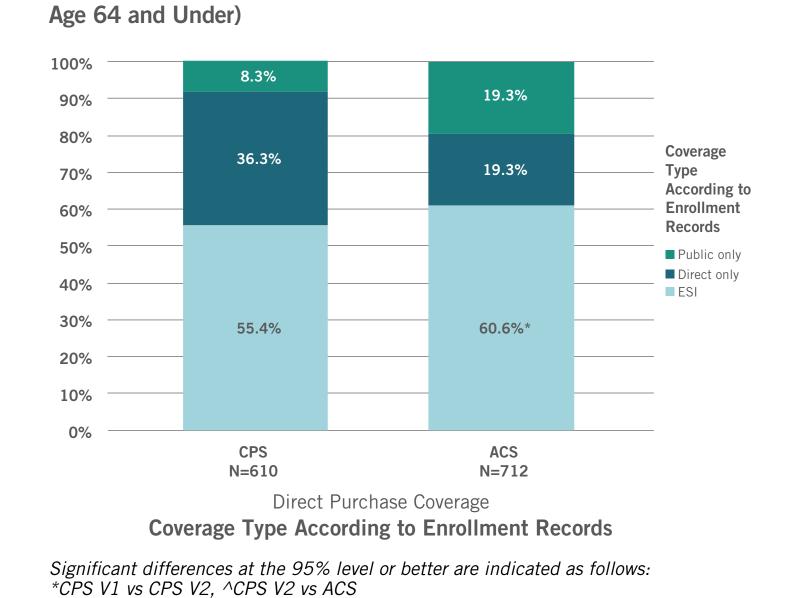
Point in Time Coverage Type Validated in Enrollment Records by Survey Treatment among those with Survey Reported Public or Private Insurance (Standard Sample Age



Point in Time Coverage Type Validated in Enrollment Records by Survey Treatment among those with Survey Reported Employer-Sponsored Insurance (ESI) (Standard

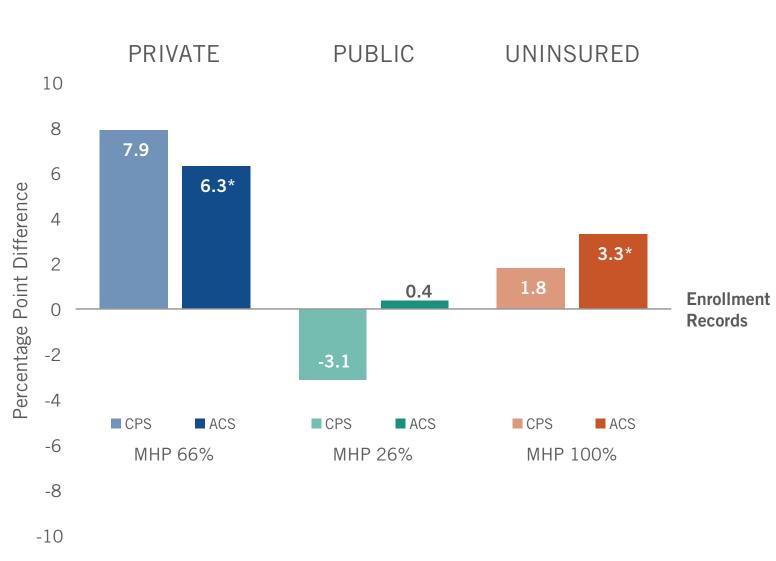


Point in Time Coverage Type Validated in Enrollment Records by Survey Treatment among those with Survey Reported Direct Purchase Insurance (Standard Sample

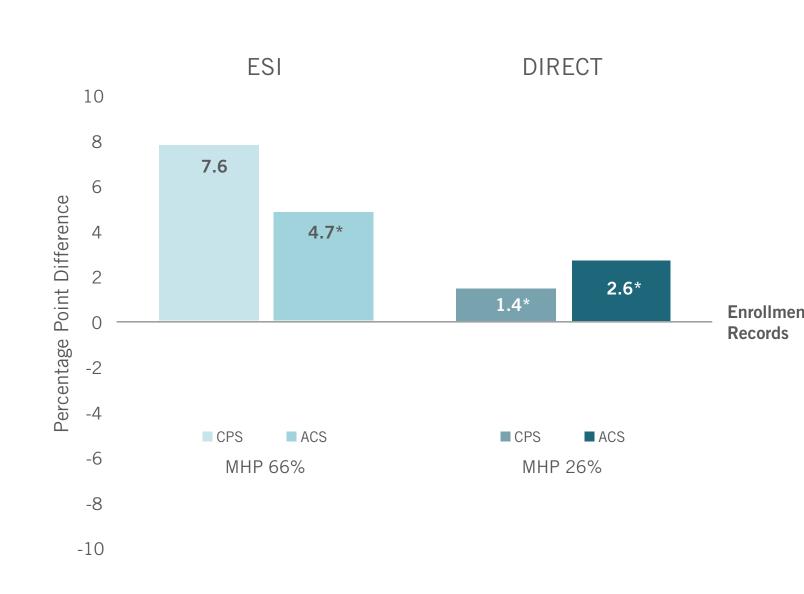


PREVALENCE

Percentage Point Difference in Point in Time Prevalence between Enrollment Records and Survey Treatment (Full Sample Age 64 and Under)



Percentage Point Difference in Point in Time Prevalence between Enrollment Records and Survey Treatment (Standard Sample Age 64 and Under)



CONCLUSIONS

- Both surveys produce fairly accurate estimates of aggregated insurance
- Direct purchase coverage estimates are the least accurate because
- It is a small segment of the market
- The small fraction of individuals in other coverage types who misreport their coverage as direct have a huge impact



CONTACT INFORMATION Angela.Fertig@medica.com

FUNDED BY:

- Robert Wood Johnson Foundation
- US Department of Health and Human Services Office of the Assistant Secretary for Planning and Evaluation
- State Health Access Data Assistance Center (SHADAC)
- Medica Research Institute
- US Census Bureau



