

Reporting of Indian Health Service Coverage in the American Community Survey: A First Look

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Introduction

- American Indians and Alaska Natives (AIANs) have lower access to care and poorer health outcomes relative to other race groups
- Federal government provides health care to AIANs through the Indian Health Service (IHS)
- Studies of IHS coverage often rely on survey data, thus there is a need for accurate data

Research questions

- 1) To what extent do individuals misreport their IHS coverage in the American Community Survey (ACS)?
- 2) What characteristics are associated with misreporting?

Indian Health Service

- Established in 1955 to provide health care services primarily to members of federally recognized AIAN tribes through federally and tribally run hospitals and centers as well as contract service providers
- Focus is on providing care to AIANs but some non-AIANs are eligible for care
- Eligibility does not translate to access

Previous research

- Previous research has compared administrative records on Medicare and Medicaid enrollment to responses about coverage in Census Bureau surveys
- Identified significant undercount of Medicaid coverage and small undercount of Medicare coverage as well as factors associated with survey misreporting
 - Reported coverage through other health insurance programs, Medicaid/Medicare coverage for others in the household, citizenship, year of entry, labor force participation, disability status, imputation status of survey response
- We evaluate reporting of IHS coverage using IHS administrative records and ACS data

Data

- 2014 American Community Survey (ACS)
 - Health insurance question asks respondents to answer yes/no for several types of health insurance and programs, including IHS
 - Respondents are asked about their current coverage
- 2014 Indian Health Service Patient Registration File (IHS file)
 - Includes records for all individuals who have ever visited an IHS doctor or facility and whose record was sent to national data repository

Data - numbers

- 2014 ACS
 - 318.9 million weighted cases (5.1 million unweighted records)
 - 5.4 million AIAN alone or in combination
 - 1.5 million report IHS coverage
 - 1.3 million report AIAN alone or in combination and IHS coverage
- 2014 IHS File
 - 3.6 million unique cases, 2.5 million are “Indian” according to Indian indicator variable on file

Methods

- Link records from ACS and IHS file
 - Unique identifiers assigned to each file and used to link person records included in both the ACS and IHS data
 - Reweight linked data to account for bias in assignment of unique identifiers
- Compare ACS responses about IHS coverage with whether individuals are in the IHS file to measure two types of errors:
 - False positives
 - False negatives

Measuring response error

- False positives:
 - Universe: linkable records who reported having IHS coverage in the ACS
 - Consistent report: Match to the IHS file
 - False positive: Do not match to the IHS file
- False negatives
 - Universe: ACS records that match to the IHS file
 - Consistent report: Report “yes” to IHS coverage in the ACS
 - False negative: Report “no” to IHS coverage in the ACS

Sample

- False positives:
 - Total: 44,000 records, 1.5 million weighted cases
 - AIAN alone or in combination: 40,000 records, 1.3 million weighted cases
- False negatives
 - Total: 71,000 records, 2.8 million weighted cases
 - AIAN alone or in combination: 48,000 records, 1.6 million weighted cases

Results

False positives

Among linkable records who reported having IHS coverage in the ACS:

- Consistent response (matched to IHS file)
- False positive response (did not match to IHS file)



False negatives

Among linkable ACS records that match to the IHS file

- Consistent response (reported "yes" to IHS coverage in ACS)
- False negative (reported "no" to IHS coverage in ACS)

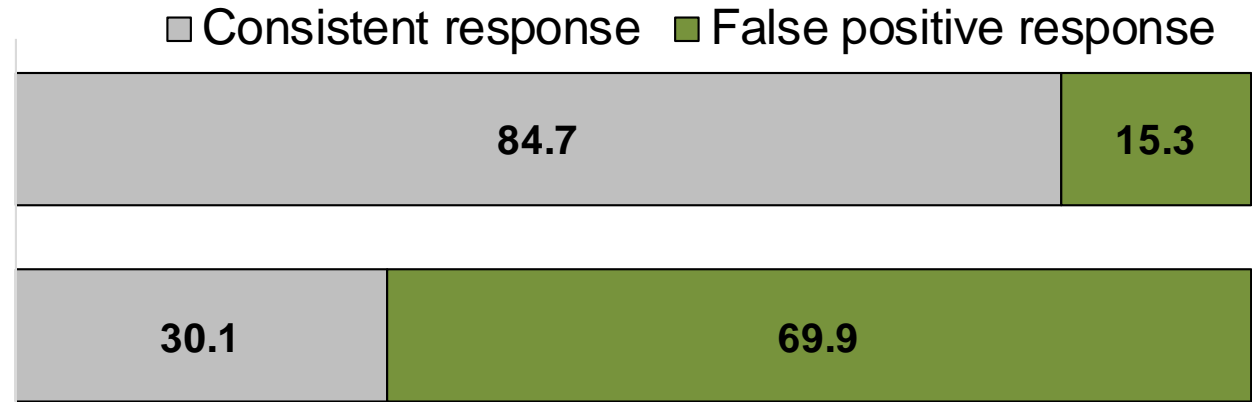


Misreporting is lower among AIANs compared to those who do not report an AIAN race

Among those who report having IHS coverage:

AIAN race reported
(1,294,185)

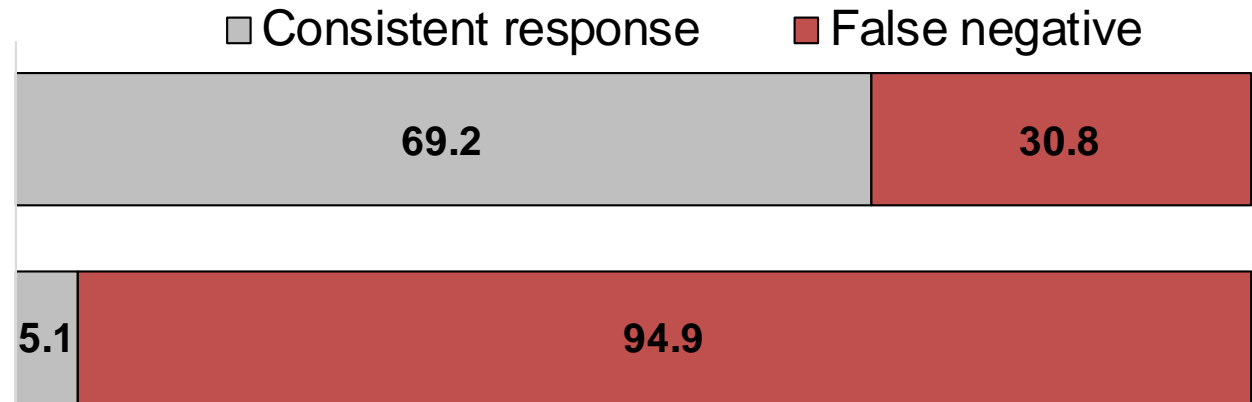
No AIAN race reported
(202,800)



Among those in the IHS file:

AIAN race reported
(1,584,499)

No AIAN race reported
(1,191,135)



Regression analysis

- Restrict sample to AIANs
- Separate models to evaluate characteristics associated with each type of reporting error
 - False positives (weighted N = 1.3 million)
 - False negatives (weighted N = 1.6 million)
- Independent variables
 - From the ACS: report an AIAN ancestry, report a tribe, Hispanic origin, age, sex, nativity, report of public health insurance coverage, disability status, live in an IHS Contract Health Service Delivery Area (CHSDA), urban/rural, region, relationship to householder, IHS coverage of other members in the household, imputation status of IHS coverage response
 - False negative model also includes what year a person's information was last updated at an IHS facility (variable from IHS file)

Odds of misreporting IHS coverage for selected characteristics

	Model 1. False positive response	Model 2. False negative response
Report a tribe	0.72 ***	1.05
Child	2.26 ***	1.96 ***
Hispanic	1.48 ***	1.53 ***
Foreign born	4.22 ***	4.82 ***

*p<.05, **p<.01, ***p<.001

Odds of misreporting IHS coverage for selected characteristics

	Model 1. False positive response	Model 2. False negative response
Lives in an IHS Contract Health Service Delivery Area	0.14 ***	0.45 ***
Years since last IHS facility visit	N/A	1.02 ***

*p<.05, **p<.01, ***p<.001

Odds of misreporting IHS coverage for selected characteristics

	Model 1. False positive response	Model 2. False negative response
Another individual in the household reported IHS coverage	0.63 ***	0.04 ***
IHS coverage response was imputed	4.45 ***	7.23 ***

*p<.05, **p<.01, ***p<.001

Conclusion

- For many AIANs, IHS coverage responses in the ACS are not consistent with whether they are present in administrative records
- Researchers who rely on survey data on IHS coverage should be aware of misreporting

Next steps

- How accurate are ACS estimates of the total AIAN population with IHS coverage?
- Compare number of AIAN individuals in 2014 IHS file with 2014 ACS weighted estimate of AIANs with IHS coverage
- Limitations: differences in definition
 - ACS question asks about **current** coverage
 - IHS file includes all individuals who have **ever** accessed care
 - Individuals who may have not received care recently
 - Individuals who have died

Thank you!

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