

# **Differences in Estimates of Public Assistance Reciprocity Between Surveys and Administrative Records**

**Jane M. Staveley and Cynthia M. Taeuber**  
**The Jacob France Institute, University of Baltimore**

**In Collaboration with**

**Victoria A. Lynch and Dean M. Resnick**  
**The U.S. Census Bureau**

**Federal Committee on Statistical Methodology Research Conference**  
**November 6, 2007**

# Today's Discussion

- Purpose
- Data Sources
- Evaluating the Size of the Discrepancy between the Survey Estimate and the Count from Administrative Records
- Evaluating Survey Errors Causing the Estimate-Count Discrepancy
- Conclusions

# Purpose

- Compare the estimate of households receiving public assistance in Maryland in the American Community Survey (ACS) with the actual count from Maryland's administrative records and identify the discrepancy between the two data sources
- Investigate why respondents in the ACS, with household members participating in TANF, do not accurately report receipt of public assistance

# Data Sources

- U.S. Census Bureau  
American Community Survey/  
Supplementary Survey for 2001  
(ACS/SS01)
- Maryland Department of Human Resources  
Client Automated Resource and Eligibility  
System (CARES)

# Research File

- Used Census Bureau's matching system to link ACS/SS01 Maryland dataset with CARES
- Failure to find matches is rare:
  - very few survey observations or administrative records missed information required for matching
  - previous analysis with same files found 95% match rate
  - matching algorithm is subject to ongoing quality control analyses

# **Phase One**

**Evaluating the Size of the  
Discrepancy between the Survey  
Estimate and the Count from  
the Administrative Records**

# Phase One Questions

- What part of the discrepancy, between the count and the ACS estimate of households with public assistance, is attributable to survey error?
- What part of the discrepancy is attributable to respondents incorrectly reporting no public assistance receipt (i.e. false-negative reports)?

# Income Question in the ACS/SS01

40

## INCOME IN THE PAST 12 MONTHS.

Mark (X) the "Yes" box for each type of income this person received, and give your best estimate of the TOTAL AMOUNT during the PAST 12 MONTHS. (NOTE: The "past 12 months" is the period from today's date one year ago up through today.)

Mark (X) the "No" box to show types of income NOT received.

If net income was a loss, mark the "Loss" box to the right of the dollar amount.

For income received jointly, report the appropriate share for each person – or, if that's not possible, report the whole amount for only one person and mark the "No" box for the other person.

### f. Any public assistance or welfare payments from the state or local welfare office.

- Yes → \$ .00
- No TOTAL AMOUNT for past 12 MONTHS

# Computing Count from CARES

Adjust CARES so it covers the same universe as the survey question

- **Time period:** Monthly average of number of households recorded in CARES with benefit in given month in 2001 or 12 months prior to that given month
- **Unit measured:**
  - link records for individuals in the same household
  - exclude people under age 15
  - link duplicate accounts within a household

# Estimate-Count Discrepancy

CARES count of public assistance households adjusted to reflect universe of survey question	62,960
ACS/SS01 published point estimate of number of households receiving public assistance in Maryland	<u>30,979</u>
Estimate-count discrepancy	31,981

# Estimate-Count Discrepancy Due to False Negative Reports

- Supplemented survey estimate with false-negative households that matched to CARES ( $30,979+25,796=56,775$ )
- False negative reporting accounts for 81% of the estimate count discrepancy
- Results of sensitivity analysis show that false negative reporting may account for almost all the discrepancy

# Phase Two

**Evaluating Survey Errors  
Causing the Estimate-Count  
Discrepancy**

# Research Questions

- What household characteristics relate to false-negative reporting?
- What is the relative risk of false-negative reporting associated with particular household characteristics?

# Methods

- Used subset of TANF households from the matched file
- Conducted chi-square tests of household characteristics that we believed would be high risk factors for false negative reporting

# Findings

- Respondents in the sample of TANF households were more likely than not to misreport household participation in public assistance
- TANF households that were correctly reported were not representative of all TANF households in the sample
- There was a significant relationship between TANF misreport (false negative reporting) and certain household characteristics

# **Accuracy of Response to Public Assistance Question among TANF Households in ACS/SS01 Sample**

	<b>Reported “yes” to ACS/SS01 public assistance question</b>	<b>Reported “no” to ACS/SS01 public assistance question</b>
<b>Survey households CARES shows had at least one current household member enrolled in TANF in previous 12 months</b>	<b>43</b>	<b>52</b>

# Household Characteristics with Significant Relationship to Incorrectly Reporting No Receipt of Public Assistance

- At least one person in the survey household was not in the TANF assistance unit (complex household)
- The respondent was not a member of the household's TANF assistance unit
- Only children in the household's TANF assistance unit – no adult
- No-one in the household was receiving TANF when the survey form was filled out, but did receive TANF in the time frame of the question
- The household had income from employment

# Complex Household

The ACS/SS01 household included one or more individual(s) in addition to those who were in the TANF assistance unit

- There were 56 complex households
- 34% of them correctly reported receipt of public assistance
- 62% of the households that matched the TANF assistance unit correctly reported public assistance receipt

# Respondent not in the TANF Assistance Unit

The survey respondent was not a member of the household's TANF assistance unit

- 40 households in the matched sample had a respondent who was not part of the TANF assistance unit
- Only 15% of these respondents correctly reported receipt of public assistance
- 67% of the respondents who were part of the TANF assistance unit correctly reported receipt of public assistance

# Only Children in the TANF Assistance Unit – No Adult

There were only children (aged 15-18) in the TANF assistance unit

- There were 17 households with child only cases (children aged 15-18)
- 18% of these households correctly reported receipt of public assistance
- 51% of the households that had an adult in the TANF assistance unit correctly reported receipt of public assistance

## **No-one in the Survey Household was in TANF during the Month of the Survey**

No-one in the household received TANF when the survey form was filled out but one or more household members received TANF in the time frame of the question

- There were 40 of these households
- 28% of them correctly reported receipt of public assistance
- 58% of the households that received TANF in the survey month correctly reported public assistance receipt

# Household had Income from Employment

In the survey household, one or more members had income from employment

- 73 households had income from employment during the survey's reference period
- 40% of these households correctly reported receipt of public assistance
- 64% of the households that did not have income from employment correctly reported public assistance receipt

## Accuracy of Response to Public Assistance Question among TANF Households in ACS/SS01 Sample, by Household Characteristics

ACS/SS01 Survey Household Characteristic	Does this correctly describe household situation?	Rate of correct reporting of pa for households in this situation	Chi-square	P-Value
Someone in survey household was not in TANF assist. unit	Yes (n=56) No (n=39)	34% 62%	7.07	0.0078
Respondent was not one of survey household members in TANF assistance unit	Yes (n=40) No (n=55)	15% 67%	25.54	<0.0001
Only children in household's TANF assist. unit - no adult	Yes (n=17) No (n=78)	18% 51%	6.37	0.0116
No-one in survey household received TANF during month of survey	Yes (n=40) No (n=55)	28% 58%	8.79	0.0030
Someone in survey household had income from employment during reference period	Yes (n=73) No (n=22)	40% 64%	3.90	0.0483

# Conclusions

## Phase One

- The published ACS/SS01 point estimate is about half the count from the state administrative records when CARES is adjusted to reflect the universe of the survey question
- False negative reporting accounts for 81% of the estimate-count discrepancy between the ACS/SS01 published point estimate and the CARES count of public assistance households in Maryland

# Conclusions

## Phase Two

- Respondents in TANF households were more likely than not to misreport receipt of public assistance
- Certain household characteristics were associated with misreporting by respondents in TANF households