# Quality Assessment of Data Collected from Non-English Speaking Households in the American Community Survey

Pamela D. McGovern and Deborah H. Griffin
U.S. Census Bureau

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# Overview

- Background
- Terminology
- Research Objectives
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# Background

Based on:

- National tests of operational feasibility of American Community Survey (ACS) in 2000 and 2001.
- Annual sample of 700,000 addresses that collected detailed demographic, socioeconomic, and housing data about the nation.

# Background (cont.)

- Housing data collected:

  Physical characteristics, utilities, mortgages, food stamps, taxes, etc.

- Population data collected:

  Sex, age, date of birth, race, marital status, Hispanic origin, education, income, labor force status, etc.

# Background (cont.)

Three mode data collection operation:

- Mail
- Telephone
- Personal Visit

# Background (cont.)

Mail:

- Paper questionnaire available only in English.
- Spanish language assistance.
- Telephone follow-up if necessary.

# Background (cont.)

Telephone and Personal Visit:

- Automated survey instrument.
- Available in English and Spanish.
- Bilingual field representatives if needed.

# Terminology

- Household Language Spoken
- Linguistically Isolated (LI) Households

# Household Language Spoken

- Assigned when one or more people age 5+ speak a language other than English.
- Specific language assigned to household based on data collected during interview.
- Variable created at the household level.
- Further divided into LI and non-LI.

# Linguistically Isolated Households (LI)

- No household member age 14 years or over reports speaking English “very well”.
- Collected from questionnaire.
- Variable created at the household level.
- Research focuses on these households since face greatest challenges in survey response.

# Research Objectives

To determine:

- Which languages have greatest numbers of linguistically isolated households in the ACS?
- How were linguistically isolated and non-linguistically isolated households interviewed in the ACS?
- How complete are the ACS data collected from linguistically isolated and non-linguistically isolated households?

# Methodology – Objective 1

Produced 2-year average estimates of total occupied households by:

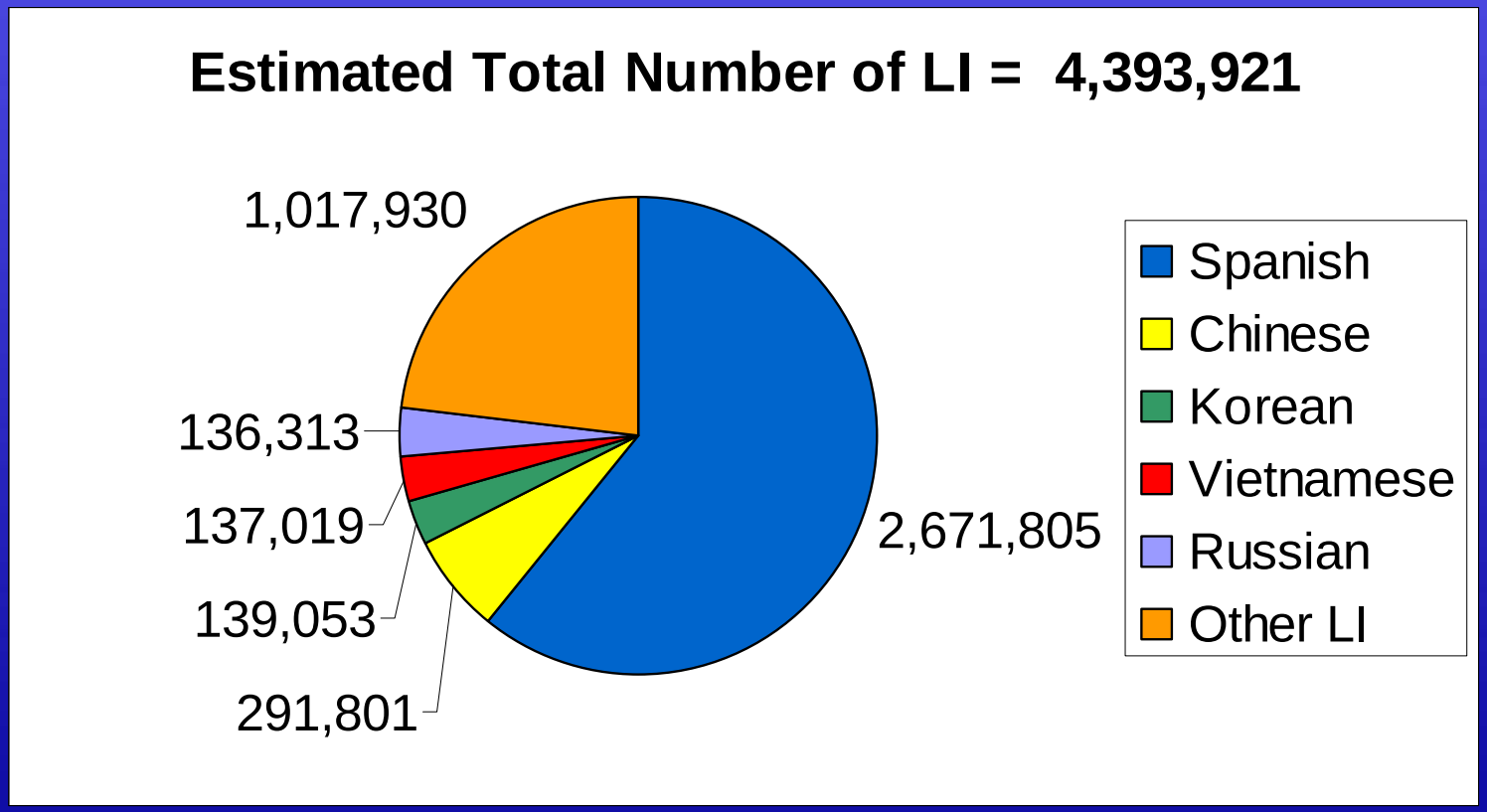
- language spoken (40 language groups)

- linguistic isolation

# Total Number of Households Speaking Language at Home

| Household Language | # Speaking Lang. | Percent |
|---|---|---|
| All | 105,623,930 | |
| English | 86,655,932 | 82.0 |
| Spanish | 10,375,325 | 9.8 |
| Chinese | 798,276 | 0.8 |
| Korean | 384,168 | 0.4 |
| Vietnamese | 318,074 | 0.3 |
| Russian | 316,151 | 0.3 |

# Which languages have the greatest numbers of linguistically isolated households?



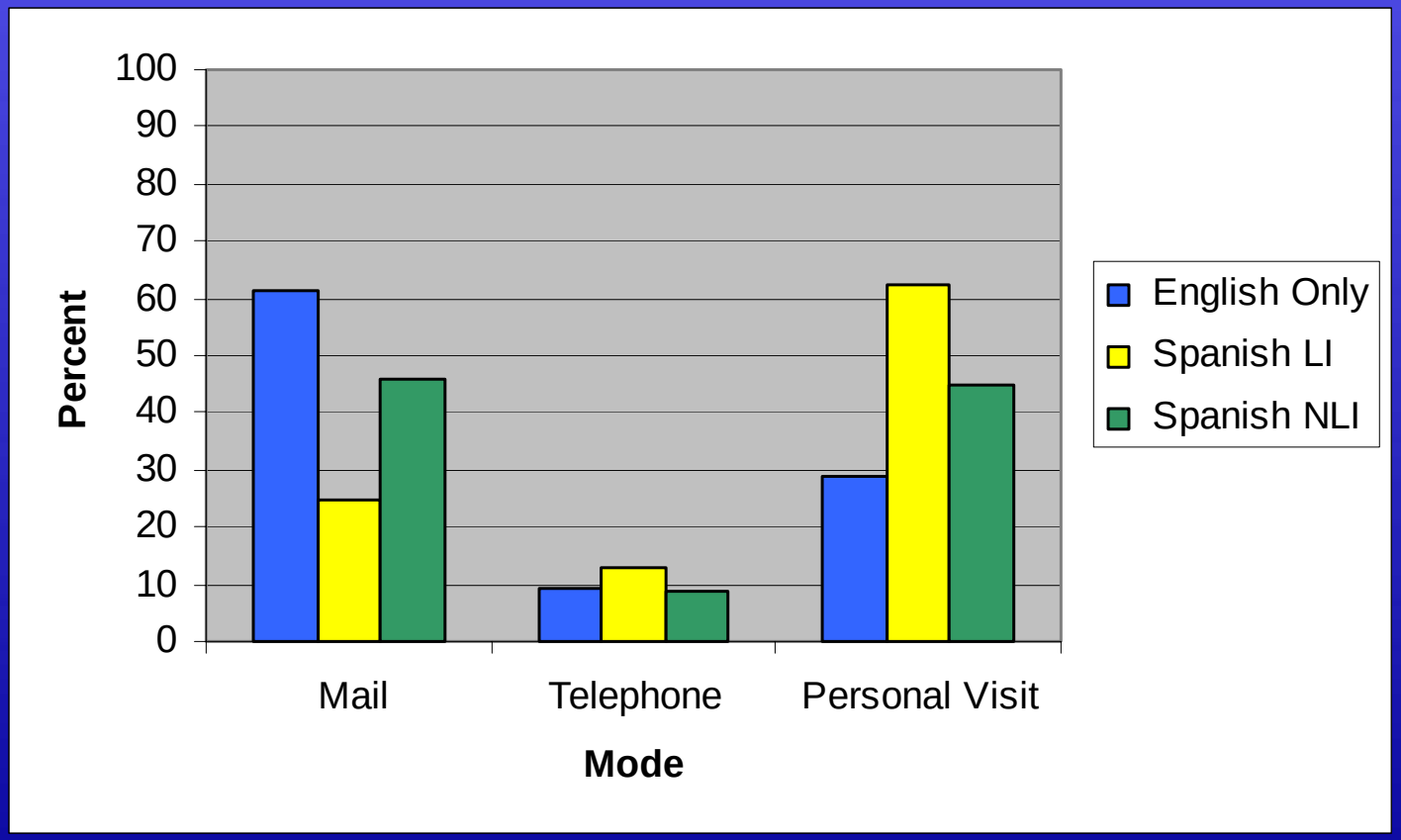
# Methodology – Objective 2

- Used operational data on mode (mail, telephone, personal visit), household language, and linguistic isolation.
- Produced distribution of interviews across modes for various language groups.

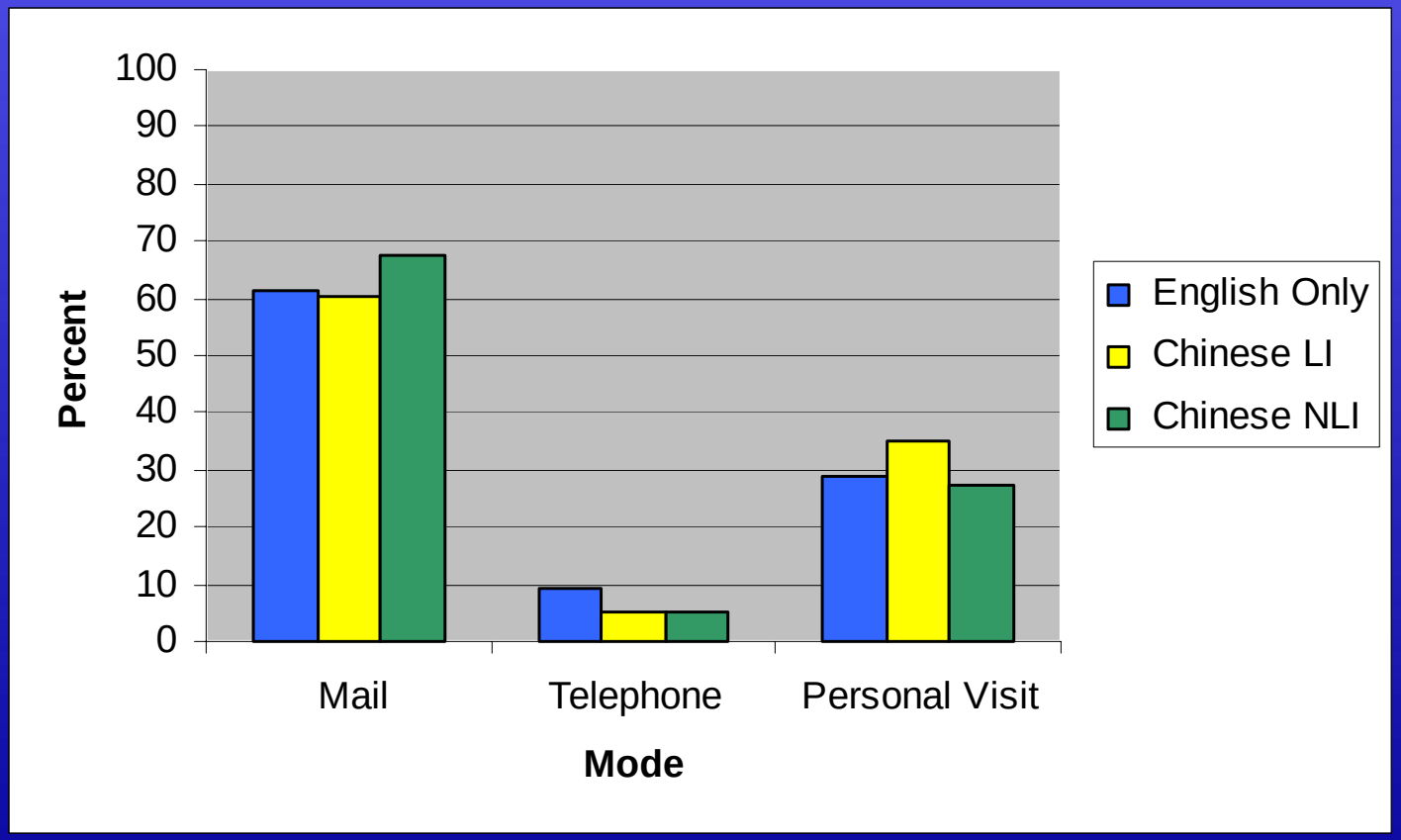
# How were LI and non-LI households interviewed?

- Linguistically isolated households of all language groups have lower percentages of response by mail (relative to English only).
- Mixed results of non-linguistically isolated households (relative to English only).

# How were Spanish LI and non-LI households interviewed?



# How were Chinese LI and non-LI households interviewed?



# Methodology – Objective 3

- Measured completeness using item nonresponse.
- Missing data compensated in allocation procedures.
- Allocation rates: measure of final data quality that quantify how frequently allocation was the source of data.

# Methodology - Objective 3 (cont.)

- Produced combined allocation rates across all population and housing items.
  - by mode
  - by language group
  - two-year averages

- Ratio of the total # of population (housing) items for which a value was allocated to the total # of population (housing) items for which response was required.

# How complete were population data collected by mail?

| Household Lang. | Allocation Rates (%) | | | |
|---|---|---|---|---|
| English Only | 6.4 | | | |
| | LI | diff. | Non-LI | diff. |
| Spanish | 11.7* | 5.3 | 9.0* | 2.6 |
| Chinese | 7.5* | 1.1 | 7.2* | 0.8 |
| Korean | 9.1* | 2.7 | 7.7* | 1.3 |
| Vietnamese | 9.5* | 3.1 | 11.2* | 4.8 |
| Russian | 9.5* | 3.1 | 7.6* | 1.2 |

* Significantly different from English Only at the $\alpha$=.10 level.

# How complete were population data collected by personal visit?

| Household Lang. | Allocation Rates (%) | | | |
|---|---|---|---|---|
| English Only | 4.8 | | | |
| | LI | diff. | Non-LI | diff. |
| Spanish | 4.1* | -0.7 | 4.1* | -0.7 |
| Chinese | 7.4* | 2.6 | 7.7* | 2.9 |
| Korean | 7.1* | 2.3 | 6.4* | 1.6 |
| Vietnamese | 4.8 | 0.0 | 5.7 | 0.9 |
| Russian | 4.4 | -0.4 | 5.3 | 0.5 |

* Significantly different from English Only at the $\alpha$=.10 level.

# How complete were the population data across all modes?

| Household Lang. | Allocation Rates (%) | | | |
|---|---|---|---|---|
| English Only | 5.7 | | | |
| | LI | diff. | Non-LI | diff. |
| Spanish | 5.5 | -0.2 | 6.5* | 0.8 |
| Chinese | 7.3* | 1.6 | 7.3* | 1.6 |
| Korean | 7.9 * | 2.2 | 7.1* | 1.4 |
| Vietnamese | 7.3 * | 1.6 | 9.0* | 3.3 |
| Russian | 7.0* | 1.3 | 6.4* | 0.7 |

* Significantly different from English Only at the $\alpha$=.10 level.

# Conclusions

- Spanish largest non-English language group in the U.S.
- ACS interviews more linguistically isolated households by personal visit.
- ACS successful in obtaining complete data from linguistically isolated households with three modes of data collection.

# Other Research

- Testing and refining a Spanish questionnaire.
- Conducting qualitative quality assessments.
- Reviewing item-level rates to identify problem questions for linguistically isolated households.
- Continuing to monitor rates using 2002 data and beyond.

# Contact Information

Pamela McGovern:

E-mail: Pamela.D.McGovern@census.gov

(301)763-5951