



# Redesigning National School Surveys

Coverage and Stratification Improvement using  
Multiple Datasets

Prepared for:

**Federal Committee on Statistical Methodology**

**November 2013**

## **Authors:**

**William Robb, Ronaldo Iachan, Kate Flint, Alice Roberts  
ICF International**

- **Contact: [william.rob@icfi.com](mailto:william.rob@icfi.com) (646) 695-8182**

# Talk Outline

---

- **To date three national school surveys have used a single, common source for the sampling frame.**
  - National Youth Risk Behaviors Survey
  - National Youth Tobacco Survey
  - National School Health Policies and Programs
- **We presents results from moving to a frame sourced from multiple files.**
  - Make use of data available from the National Center for Education Statistics
  - Goal is to explore increases in coverage
  - Balanced with operational efficiency
- **The Talk**
  - Describe the studies and data sources
  - Describe the frame build process
  - Present results regarding coverage and duplication

# Research Questions

---

**The motivation for building a frame from a combination of sources is to increase coverage, and decrease the risk of coverage bias. We also wanted to explore operational issues.**

**Specifically, the research questions were:**

- **What is the increase in coverage?**
- **What is the rate of duplicate school entries?**
- **Will the combined frame affect validation and recruitment efforts?**
- **Is there an impact on the estimates?**

# The Studies – Sample Design

---

## SHPPS

- National Scope
- Elementary, Middle, and High Schools
- PSU (districts) stratified by Locale Code
- Second Stage: Schools

## YRBS/NYTS

- National Scope
- High Schools (YRBS/NYTS)
- Middle Schools (NYTS)
- PSU (counties) stratified by Urbanicity/Ethnicity
- Second Stage: Schools
- Third Stage: Students

# Validation

---

- **For these studies, we do not replace non-responding schools. We do, however, replace schools that are found to be ineligible.**
- **Our recruiters contact schools to confirm that**
  - The school itself is eligible
  - All sampled grades are present
  - The students are not a “pull-out” population from other schools
- **School and personnel information is stored in a contact management system, which provides tracking and support for validation, recruitment, and fielding.**

# Data Sources for Sampling Frame

---

## To Date: Single MDR File

- The “MDR” files have been used as a single source for the frame up to this point.
- Single source for public and private school data, including
  - Updated contact information, including personnel names.
  - Enrollment and Ethnicity counts incorporated from NCES

## Piloted: Combined with NCES Files

- For the 2014 NYTS & SHPPS piloted a combined frame built from NCES and MDR files
- Two additional files:
  - Common Core Data for public schools
  - Private School Data for Private Schools

# Processing Description

---

## Schools

- Screening for geography, type
- Record level matching based on:
  - Public: NCES ID (96.0% ), Address (0.8% ), Phone (3.2% )
  - Private: Address (100%)
- Screen for eligible schools

## Districts

- Match schools to 18,474 CCD districts
- Match schools to 13,823 MDR districts
- Combined frame included 15,665 districts



# Processing Summary

---

## Public Schools

Existing Both Sources	51,749	84.0%
Existing MDR Only	3,905	6.3%
Added CCD Only	5,988	9.7%

Total 61,642

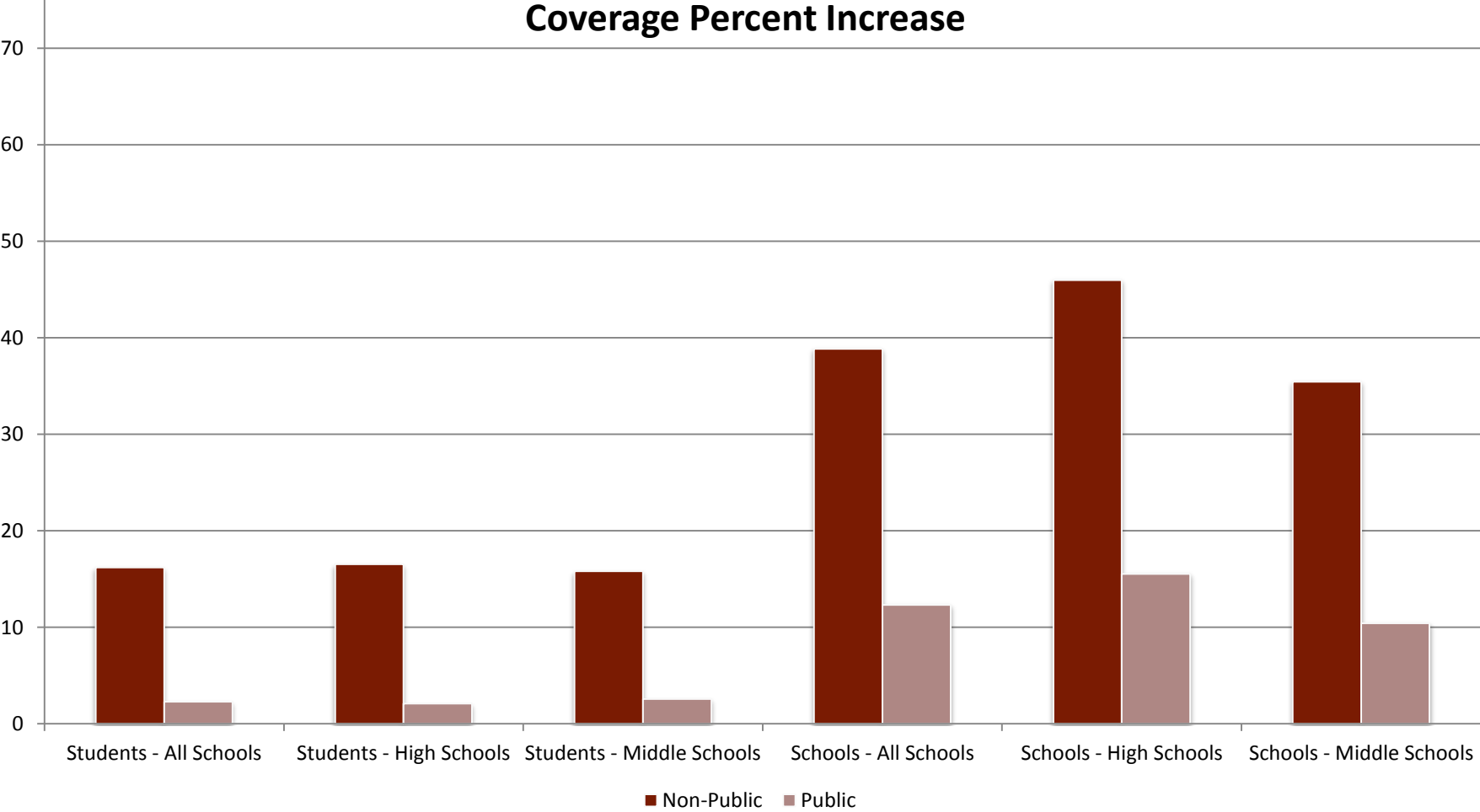
## Private Schools

Existing Both Sources	13,995	57.0%
Existing MDR Only	3,936	16.0%
Added PSS Only	6,607	26.9%

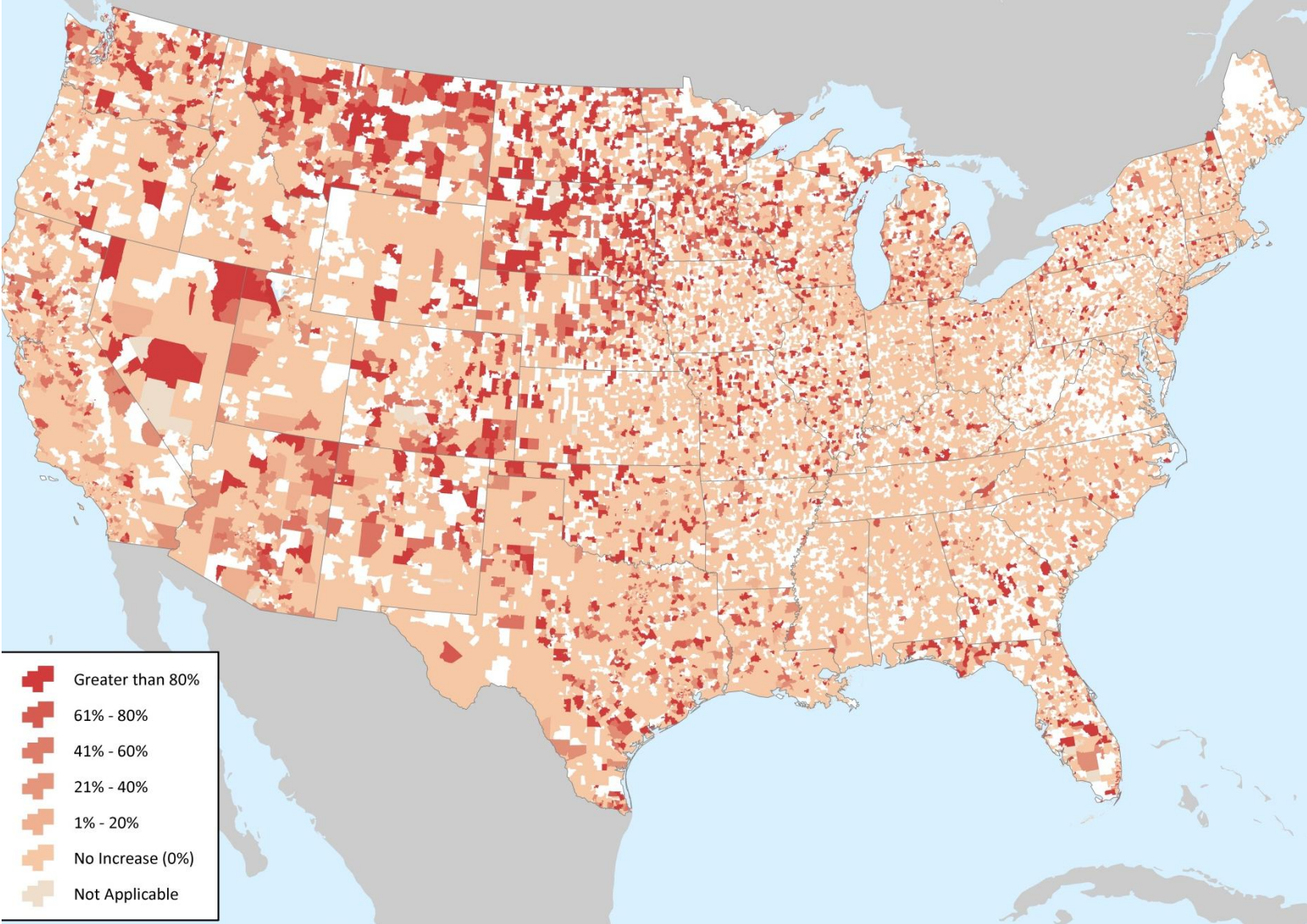
Total 24,538

# Coverage Increase by School Type

Coverage Percent Increase

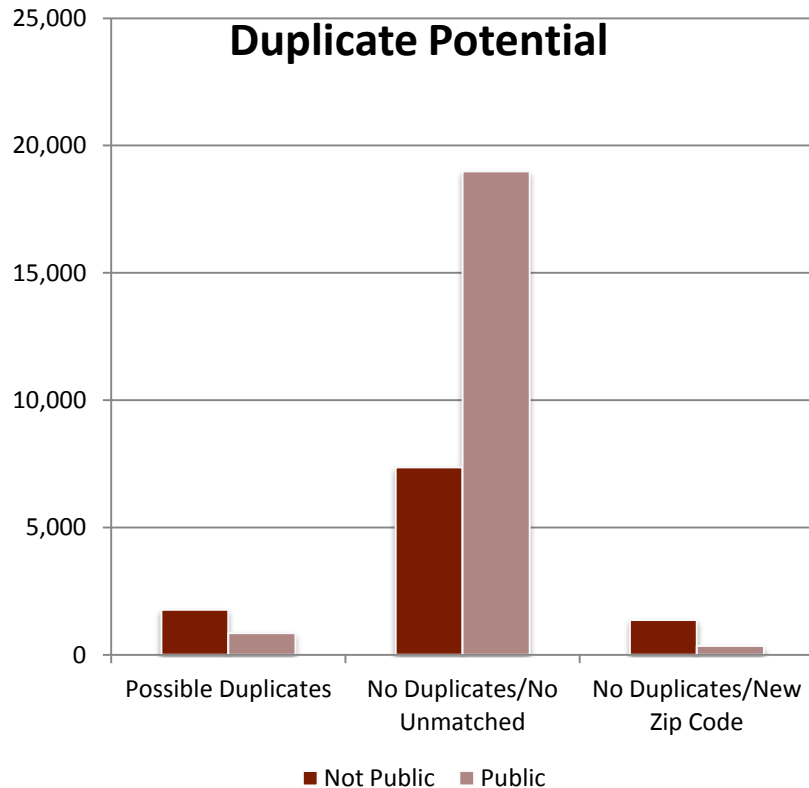


# Coverage Increase by Geography

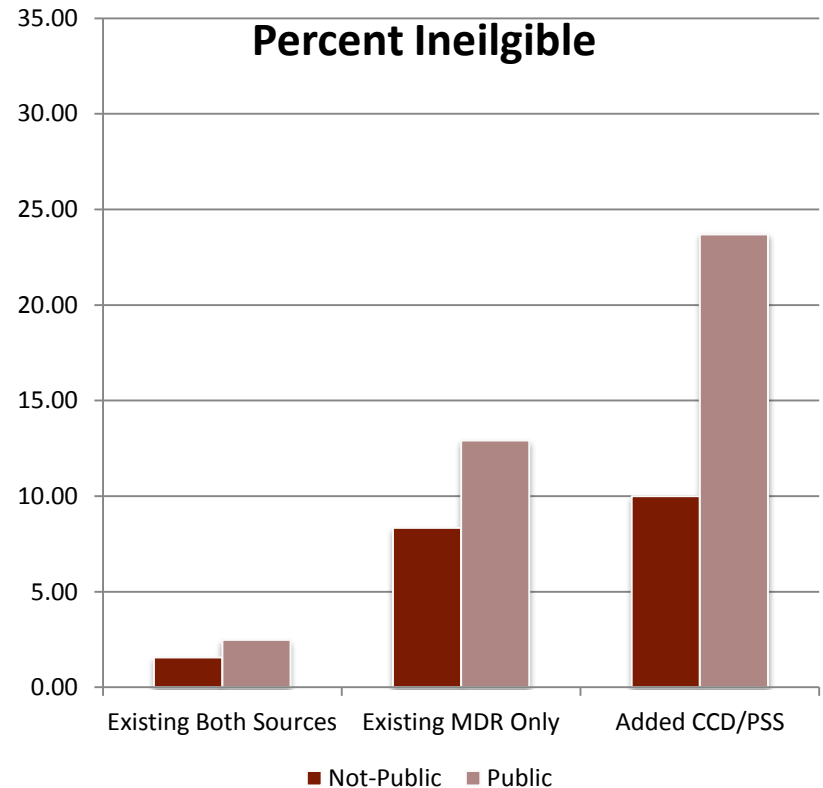


# Duplicates/Ineligibles

## Duplicates (NYTS)



## Ineligibles (SHPPS)



## Looking Ahead

---

### **In process, for proceedings publication:**

- **Assess school ineligibility rates for NYTS**
- **Add elementary schools (SHPPS) to file processing and coverage assessment**
- **Finish duplication assessment via record review**

### **After Fielding**

- **Assess impact on estimates**

### **Preliminary Findings**

- **Increases in coverage, primarily among small and private schools**
- **Increases in ineligibility schools identified during validation**

**Thank You – and stay tuned!**

Contact Author: William Robb  
[william.robbs@icfi.com](mailto:william.robbs@icfi.com)  
(646) 695-8182

