

Toward a More Perfect Sample: Sample Redesign

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Disclaimer

Opinions presented are those of the author and do not reflect position of NORC, FCSM, COPAFS, or any of the federal agencies

Agenda

- 01 General ideas

- 02 Case study: Levy (Census) Demog Surveys

- 03 Case study: David (NORC) MCBS

- 04 Coopersmith (Ipsos): NHTS

- 05 Werth (NHTSA): NOPUS + NSUBS

- 06 Questions to presenters



General thoughts

Principles and Practices for a Federal Statistical Agency (7th ed)

Principle 5: Continual Improvement and Innovation

Federal statistical agencies must continually seek to improve and innovate their processes, methods, and statistical products to better measure an ever-changing world.

- To provide relevant information, statistical agencies must attend to changes in policy issues in their domain, identify emerging needs, and work with their data users and stakeholders to identify gaps in the agency portfolio or potential new statistical products that are needed.
- Agencies should engage in regular, periodic reviews of their major data collection programs that consider how to produce relevant, accurate, and timely data in the most cost-effective manner possible, while seeking to maintain comparability in key statistics over time and across geographies.
- An effective statistical agency seeks out and carefully evaluates the quality and utility of potential new data sources and methods to harness information that could be useful for statistical purposes.

Principles and Practices for a Federal Statistical Agency (7th ed)

Practice 6: Strong Internal and External Evaluation Processes for an Agency's Statistical Programs

- Statistical agencies should have processes in place to support regular evaluations of their major statistical programs and their overall portfolio of programs. Reviews of major data collection programs and their components should consider how to produce relevant, accurate, and timely data in the most cost-effective manner possible. Reviews of an agency's portfolio should consider ways to reduce duplication, fill gaps, and adjust priorities so that the overall portfolio is as relevant as possible to the information needs of policy makers and the public. Such evaluations should include internal reviews by staff and external reviews by independent groups.

Redesign drivers

- **Scheduled redesign cycle**
- **Changes in policy, legislation**
- **Changes in standards**
 - NAICS updates every 5 years
 - SPD15 on race and ethnicity
 - Connecticut
- **External on-the ground pressure**
 - Census Pulse Surveys
 - NCHS Research and Development Surveys / Rapid Surveys System (*)

Goals of redesign

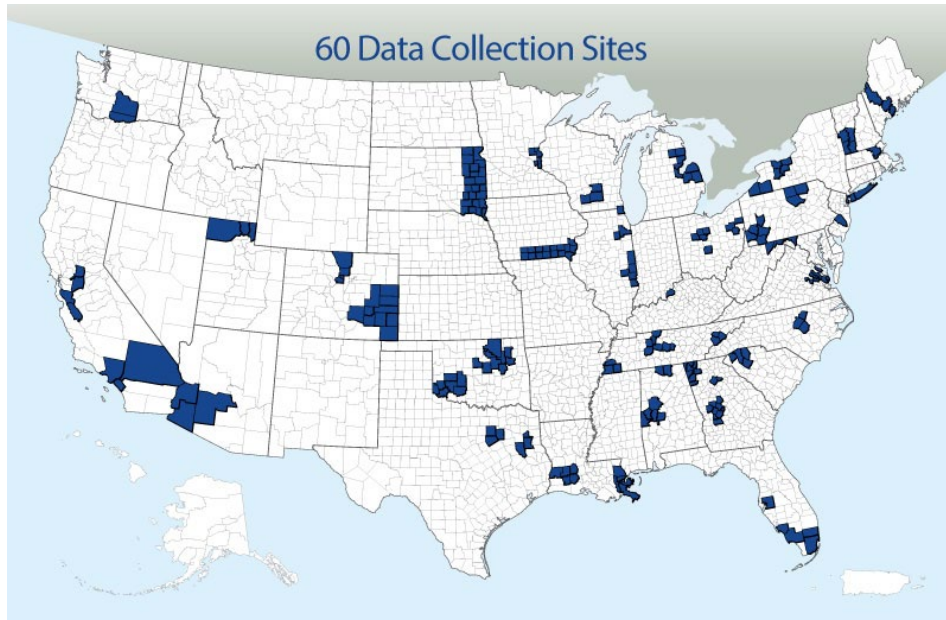
- **Improve quality**
 - FCSM 2020 Quality Framework
- **Adjust to changes in the population**
- **Incorporate new / emerging technologies**
 - Catch up on decline in obsolete technologies
 - Industry transition away from phone (AAPOR TF report)

Inputs to redesign

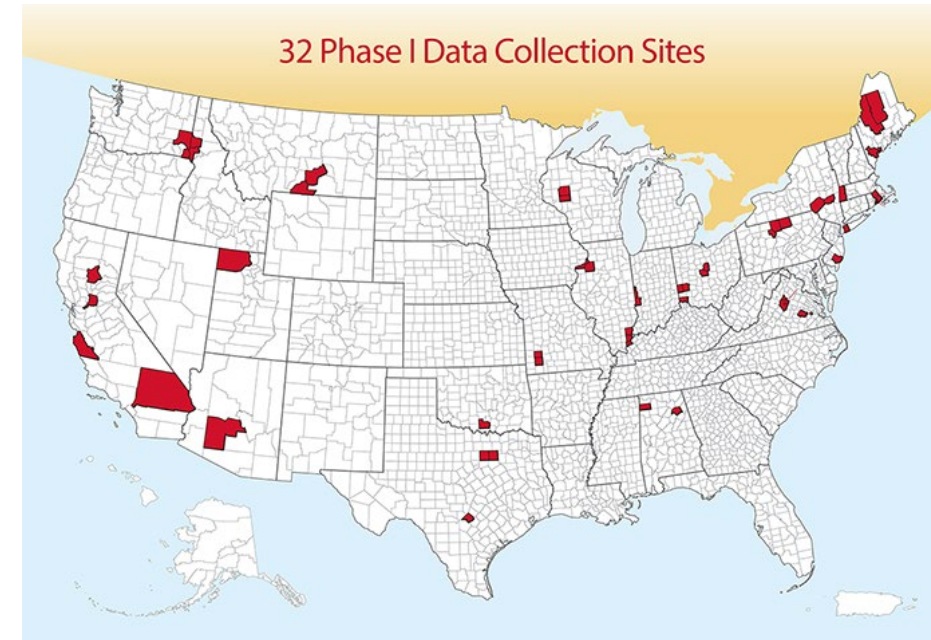
- Internal review
- Agency's advisory committee
- Special committees and panels established by external professional associations
- Request for information (RFI)
- Public comments

Lack of redesign

- ACS and cell phone use in mid 2010s
- NHTSA sampling systems:
 - Crash Report Sampling System



- Crash Investigation Sampling System



Case studies

FCSM 2024

Levy (Census): Demographic Surveys

Targeted innovations

- Coordinated sampling between programs, sample overlap

Dissent: NHIS

Outcomes: new data products and processes

- Crowdsourcing
- Assessment and incorporation of innovations in private sector

Challenges

- Knowledge transfer (documentation?)
- Connecticut

Redesign 2030

Davis (NORC *): MCBS

Big driver: COVID

- In-person -> phone

Goals

- Mode change: cost and feasibility
- Domain estimates (FCSM granularity): stakeholder interest

Organization synergy

- Expertise on NIS (phone response rates)
- Expertise on AmeriSpeak: multimode NRFU (?)

Questions

- Do you expect interest in Hispanic subpopulation to remain in light of SPD15?
- Stratify only the largest states by race?

Coopersmith (Ipsos): NHTS

- Implicit redesign as a part of an infrequent data collection with a new contractor
- In-person interview -> ABS and panel sample
- Which aspects of the data quality changed?
- How was the agency involved in redesign?

Werth (NHTSA): Occupant Protection Surveys

Redesign

- 10 year (cycle?)
- Goal: reflect the current population
- Goal: use richer data and more modern data infrastructure
- OpenStreetMap
- Complementary GIS sources (IES)
- POI data
- Tweaks to the sampling design

Transportation survey research is hard

- Instantaneous vs. superpopulations
- Units: households, vehicles, trips, occupants, road segments; events (crashes)
- Measurement and its invasiveness
- Gradual changes in vehicle fleet and modes: safer cars, but less safe micromobility
- Autonomous vehicles

Universal questions

- Where did the redesign work funding come from?
- What would you have done differently?
- What was outside of your expectations through the redesign process or as a result of the redesign?
- What was the weirdest pushback or stakeholder comment you received?

Thank you.

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