

The Use of Paradata to Improve Survey Quality: Census Bureau

Barbara C. O'Hare
FedCASIC
March 27, 2012

Addressing the Questions

- **Current:** What data? Modes and surveys?
What key performance indicators?
- **Challenges:** Capturing the data?
Standardized vs. tailored? Responsive design?
- **Costs:** Time, money and payoff?

Current: What data?

- Focused on data from
 - Field case management system
 - Contact History Instrument (CHI)
 - Cost accounting system
 - HR data on Field Rep tenure and benefits
 - Questionnaire response data
- Other sources in progress
 - Census small geography demographics
 - Geo-coordinates / mapping data

Current: Modes and surveys?

- CAPI – our major mode of collection and current paradata focus
 - Demographic reimbursable surveys
 - ACS, SIPP
- Telephone – early stages of study
 - Decentralized through field FRs (captured in CHI)
 - CATI in ACS and CPS
- Paper – on the horizon
 - Economic surveys
 - ACS
- Web – on the horizon
 - Economic surveys
 - ACS

Current: What key performance indicators?

- Cost per contact attempt
 - Daily calculation for 6 major surveys
 - Available to about 40 users in Field and HQ
- Still in early stages of identifying *best* KPIs for production use
 - Many examples calculated and graphed
 - Categorized by Effort, Case Status, Productivity, Quality
- Response propensity estimates for case management and FR evaluation (in progress)

Challenges: Capturing the data?

- **Completing Contact History Instrument**
 - Field Rep record of contact attempt outcome
 - Need to improve compliance and develop key performance indicator to demonstrate value
- **Integrating data across systems**
 - Data systems are not synchronized (e.g., time period, matching keys)
 - Paradata have their own errors
 - Short shelf-life for operations data

Challenges: Standardized vs. tailored?

- First priority: show the benefits of standardized data and procedures across programs
- Tailored paradata collection
 - Developing person-level CHI instrument to track contact attempts within household
 - Discussion of FR observation data tailored to survey to improve nonresponse adjustment

Challenges: Responsive Design?

- Research and Methodology directorate is leading a study to demonstrate RD
- Early stages of discussing study design
- Field study expected using one survey; specific objectives to be worked out

Challenges: Putting Paradata into Practice

- Develop training and communications on how to use key performance indicators in the field
- Expand use of charts as “dashboard” tool for quick assessments
- Conduct field evaluations to assess benefits of paradata use
- Improve reporting systems

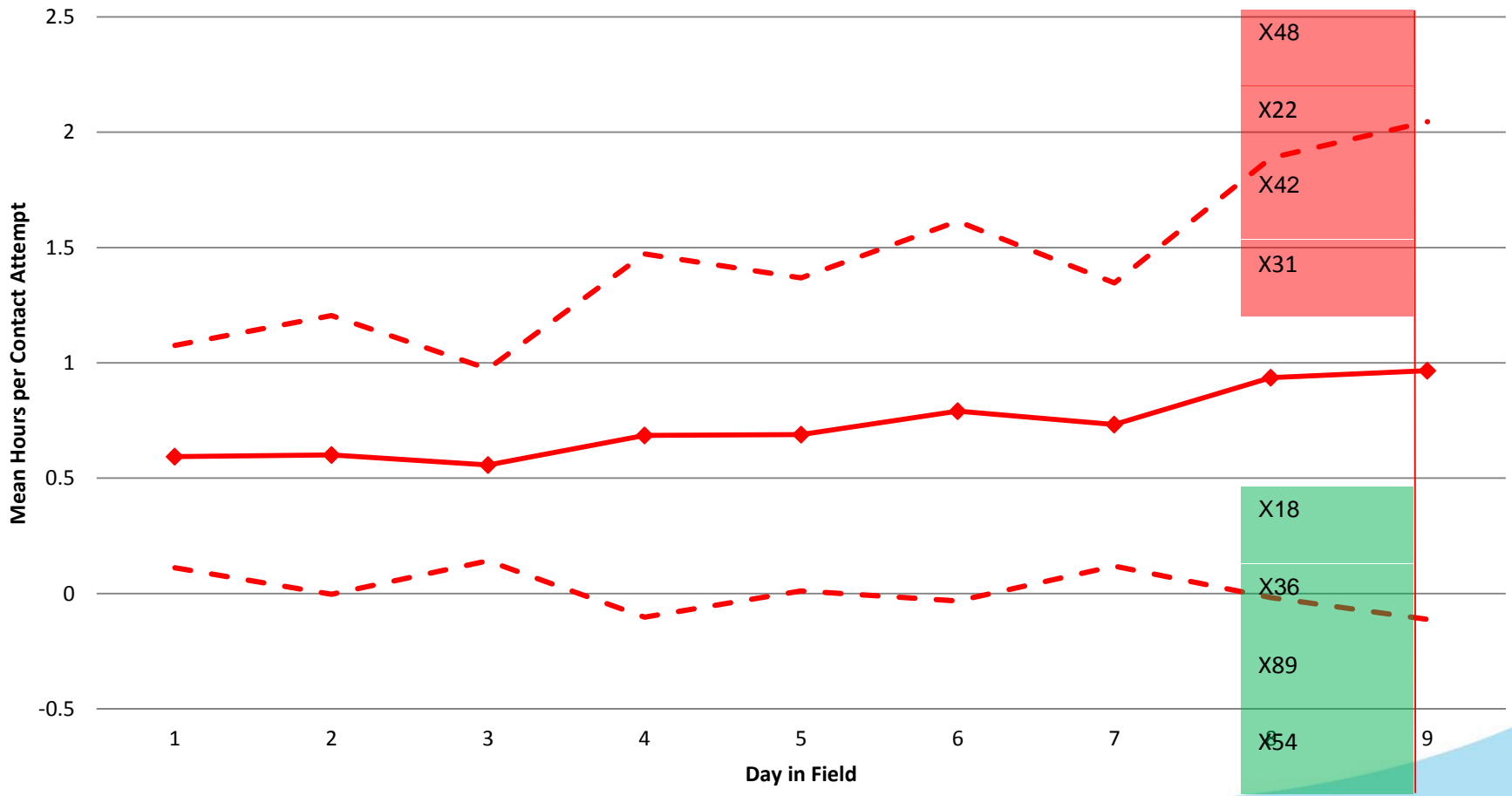
Costs: Time, money and payoff?

- Data that require keying new information
 - CHI instrument is estimated to take ~ 2 minutes to complete
 - In process of establishing governance procedure for identifying and approving new data to be captured (e.g., FR observations)
- Corporate commitments
 - Unified Tracking System
 - Office of Survey Analytics
- Work still to be done to measure payoff

A Few Examples

Chart Example 1

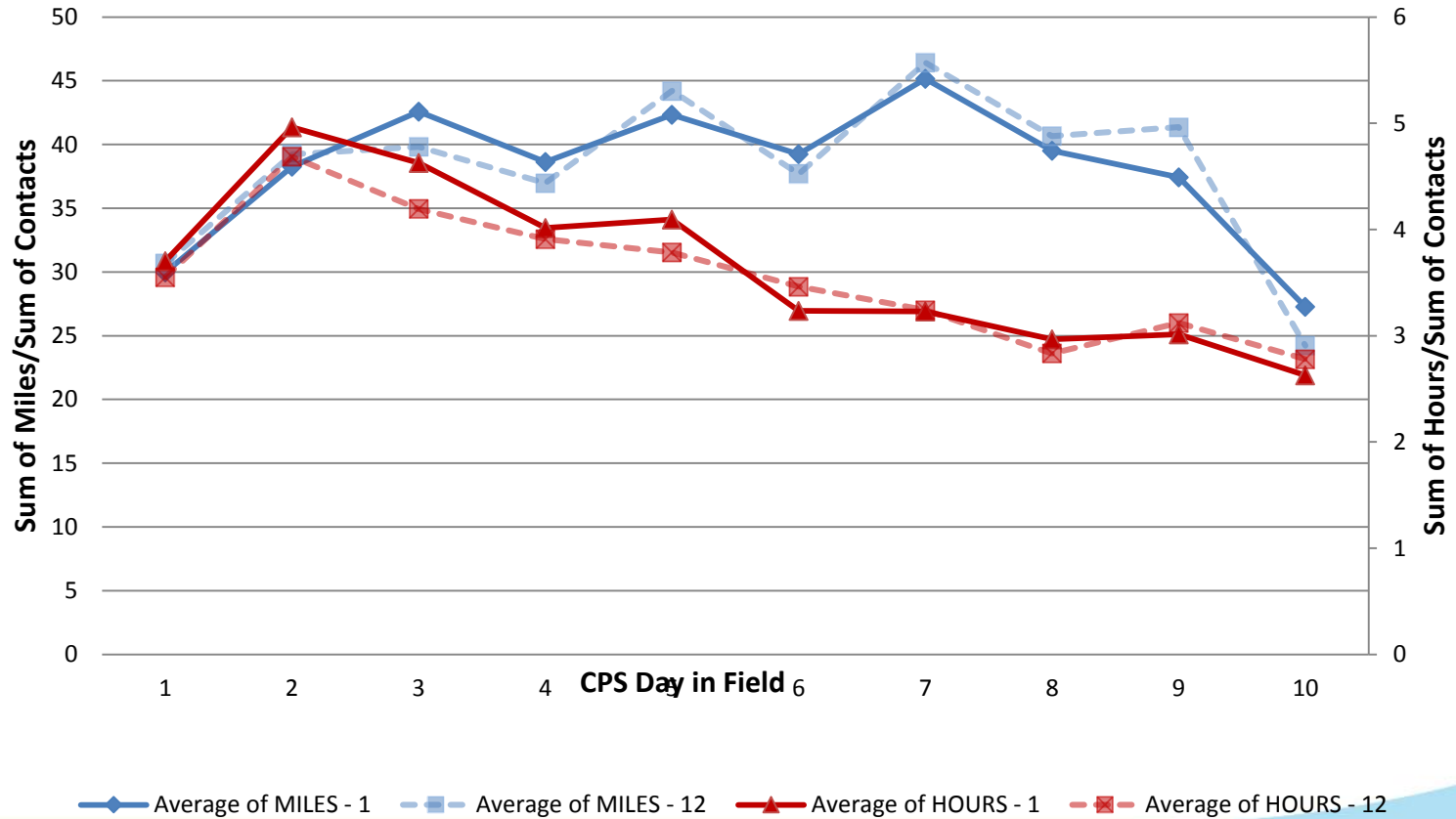
Mean Hours per Contact Attempt
Regional Office X, Nov 2011



◆ Hours per contact attempt - - - +/- 1SD

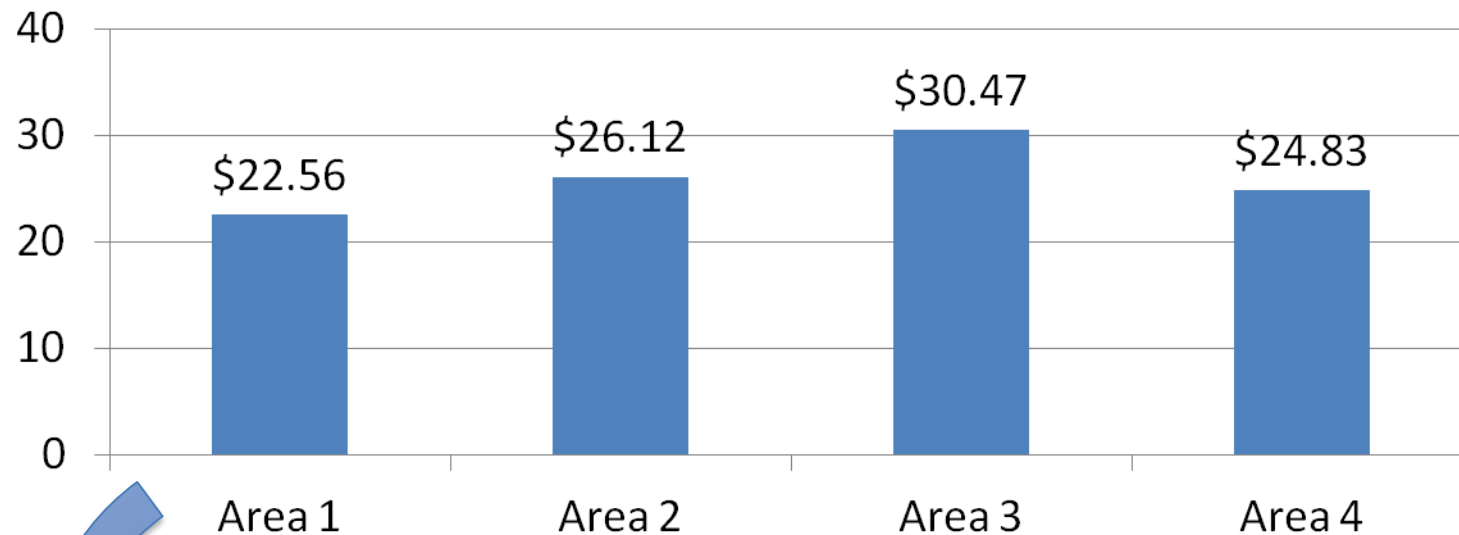
Chart Example 2

Fig 3. Average Miles and Average Hours per FR by Day in Field (Regional Office X: Jan, 2011 v. Dec 2010)



FieldSCAPES Drill-Down Example

Avg. Cost/Attempt



| FR | # of Attempts | Cost / Attempt | # of Personal Visit Attempts | PV Cost / Attempt | # of Telephone Attempts | Phone Cost / Attempt |
|-----|---------------|----------------|------------------------------|-------------------|-------------------------|----------------------|
| T08 | 70 | 8.74 | 27 | 46.70 | 43 | 4.79 |
| T22 | 56 | 24.94 | 15 | 35.0 | 41 | 17.63 |
| W14 | 29 | 20.47 | 23 | 33.30 | 6 | 14.24 |
| Y19 | 72 | 18.88 | 44 | 25.00 | 28 | 10.19 |
| Y36 | 80 | 9.15 | 47 | 22.20 | 33 | 6.84 |

Thank You

Barbara C. O'Hare

barbara.c.ohare@census.gov