The Consumer Expenditure Survey: Proposed New Diary Instrument

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Outline

1. CE Redesign Overview
   - Background
   - Inputs

2. Improving CE Diary Methods
   - Protocol comparisons
   - CE electronic diary

3. Lessons Learned
   - CE Field Tests
   - In General

CE Redesign: Background

Motivation

- Evidence of measurement error
- Changes in technology & spending behaviors
- Need for greater operational flexibility
- High level of burden – linked to data quality

Objectives

- Verifiable reduction in measurement error, with a particular focus on underreporting
- No harmful effect on response rates
- Neutral impact on budget
- Secondary objective: Reduction in burden

CE Redesign: Key Inputs

CE relied on several sources for proposal inputs:

- Expert panels
- External discussion events
- Ongoing research on key topics
- National Academies' Committee on National Statistics (CNSTAT)
- Westat independent proposal
- Census staff and Field Representative (FR) input

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CE Redesign: Current Protocol

Interview

- 5 waves of personal interviews
- 3 month recall
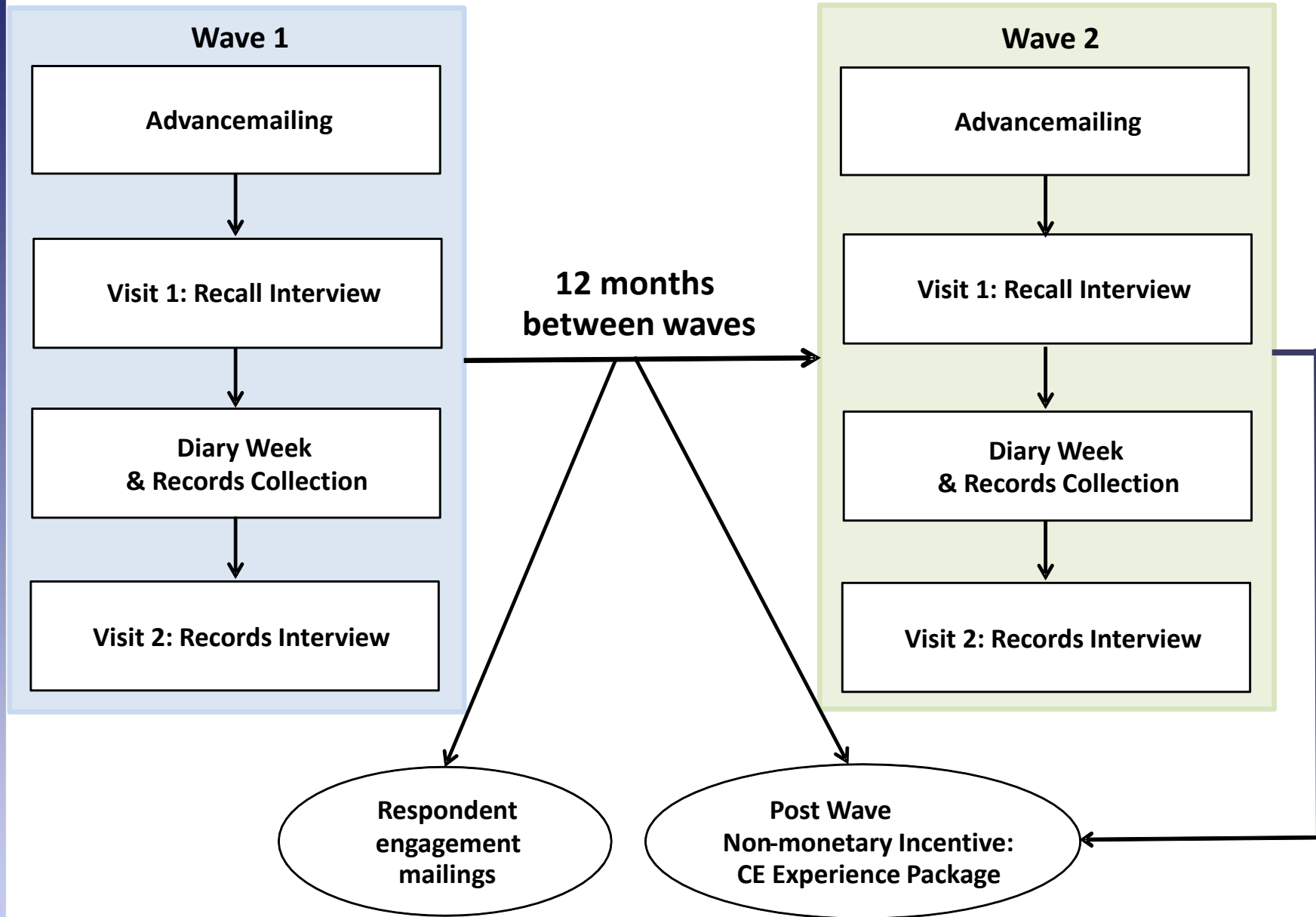- Most expenses collected
- Estimates use: Large or recurring expenditures

Diary

- 2 one-week household paper diaries
- Contemporaneous recall
- All expenses collected
- Estimates use: Small, frequently purchased items

Consumer Expenditure Survey Estimates

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CE Redesign: New Protocol

Wave 1

Advancemailing

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Visit 1: Recall Interview

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Diary Week & Records Collection

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Visit 2: Records Interview

12 months between waves

Wave 2

Advancemailing

↓

Visit 1: Recall Interview

↓

Diary Week & Records Collection

↓

Visit 2: Records Interview

Respondent engagement mailings

Post Wave Non-monetary Incentive: CE Experience Package

Proposed New Protocol for the Diary

- Open-ended diary, designed to collect:
  - ▶ Smaller, more frequently purchased items
  - ▶ Items more willing to report privately
  - ▶ Items an proxy respondent would not know
- All HH members 15+ maintain individual diary
- 1 week diary keeping period
- Available via the web (using a PC, mobile phone, or tablet) or paper
- Centralized monitoring of diary reporting
  - ▶ Interviewers follow-up with respondents as necessary
- $20 individual diarist incentives

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Diary Protocol Comparison: Mode

Current	Redesign
Two one-week open ended paper diaries	Electronic one-week diary with paper back-up

Advantage:

- Electronic diary –
    - Offers greater flexibility and ease of use for respondent
    - Facilitates in the moment reporting, in any location
- Respondent uses mode most comfortable with (electronic or paper)

Disadvantage:

- Design of electronic diary does not meet respondent expectations

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Diary Protocol Comparison: Reporting Level

Current	Redesign
Single paper diary per household	Individual diaries for all households 15 and over.

Advantage:

- Reduce error due to proxy reporting
- Spreads burden across household members, instead of on an individual respondent
- Increased salience among participants

Disadvantage:

- Requiring all household members to complete diary could reduce response.

CE Electronic Diary: Entering Expenses

Entering Expenses

Below are examples of your home screen where you will be able to view a summary of your entered expenses. To help you find a particular entry, you can also click or tap on the column headings to sort the items.

Desktop Version
To add an expense, you will enter information about your expense right under the "Add an Expense" section at the top of the screen.

Mobile Version
To add an expense, tap on the green "Add an expense" button. After you've added an expense, you will see it listed on your home screen.

CE Electronic Diary: Entering Expenses

Adding Expenses to Your CE Diary (Mobile Version)

Select the date.

Describe the expense. (If Food and Drink Away from Home, describe the meal. For all other categories, describe the item. See examples on Page 6.)

Enter the cost. (Include tax and tip for Food and Drink Away from Home. For all other categories, do not include tax.)

Select the category.

To cancel and return to your home screen, select Cancel.

To save the expense entry, select Save.

CE Electronic Diary: Editing Expenses

View, Edit, or Delete an Expense

Desktop Version
To delete an expense, click on the red "x" next to the expense. To view or edit an expense, click on the "Edit" button next to the expense. In the expanded entry space, you will be able to make and changes and select "Save" or "Cancel."
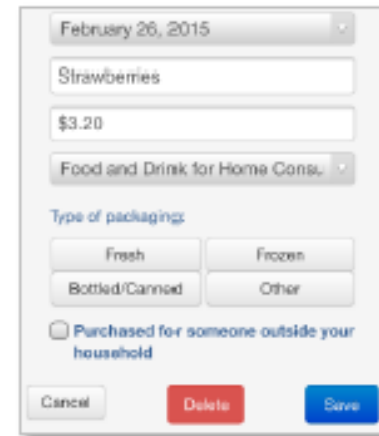
Mobile Version
To view, edit, or delete an expense, tap on the "Edit" button next to the item on the home screen. You can then delete the entry by tapping on the red "Delete" button or you can make any changes and select "Save" or "Cancel."

CE Electronic Diary: Passwords

User Settings

If you would like, you may change your password by clicking on the "User Settings" button on the Desktop version or tapping on the settings button ⚙ on the home screen of the Mobile version. Make sure your new password meets all of the requirements that are specified on the Change Password page. You will also be required to enter your Email address and select and answer a Security Question.

Passwords must contain all of the following:
- At least 8 characters
- At least 1 uppercase letter
- At least 1 lowercase letter
- At least 1 number
- At least 1 special character from the following: ! # $ * & ? ~

CE Electronic Diary: Receipts

All Other Categories
For all of the other three categories, you will enter each item purchased as a separate entry and enter the cost of the item without tax.

CE Electronic Diary: Groceries

Food and Drink Away from Home

In the Food and Drink Away from Home category, you will enter the _entire meal/purchase_ as one entry and enter the total cost of the meal including tax and tip.

Lessons Learned: Field Tests

Web Diary Feasibility Test

Assessed the feasibility and impact of collecting Diary Survey expenditures, relying on a prototype desktop-based online diary. Highlights include:

- Reported higher median expenditure in certain sections
- Lower item non-response rates, and greater median number of entries for respondents who logged in within the first 3 reporting days
- Identification of operational issues and strategies to address them in forthcoming tests of an alternate online mode for the diary survey.

Individual Diaries Feasibility Test

Evaluated the feasibility and impact of using both individual diaries and multiple modes to collect CE diary expenditures. Each CU member in the research sample was sequentially offered a mobile application, then a web survey to enter diary expenditures for two weeks.

- Usability testing, December 2013
- Pilot test fielded, March 2014
- Main data collection fielded, August – December 2014

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Lessons Learned: In General

- Degree of comfort with technology
  - ▶ Transitional period in society, continuum of comfort
  - ▶ True for respondents AND interviewers
- Technical limitations
  - ▶ Data collection vendor
  - ▶ Device & technology adoption rate in general population
    - – (e.g., phablets, QR codes)
- Data security issues
  - ▶ Theory in practice: Paper vs. electronic self-admin instruments
  - ▶ Sponsoring organization and data security staff sometimes working at cross purposes
  - ▶ Likelihood of risk vs. severity of risk
    - – Respondent access vs. risk of breach, intrusion, malicious software, data integrity, etc.

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