



United States Department of Agriculture

# Plans for Using a Native Smartphone Application in FoodAPS-2 to Collect Detailed Information on Food Acquisitions

**Jeffrey M. Gonzalez**

Economic Research Service

**Mark Denbaly, Linda Kantor, Elina T. Page, and John A. Kirlin**

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# Acknowledgments and disclaimer

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The findings and conclusions in this presentation are those of the authors and should not be construed to represent any official USDA or U.S. Government determination or policy.



# National Household *Food Acquisition and Purchase Survey*

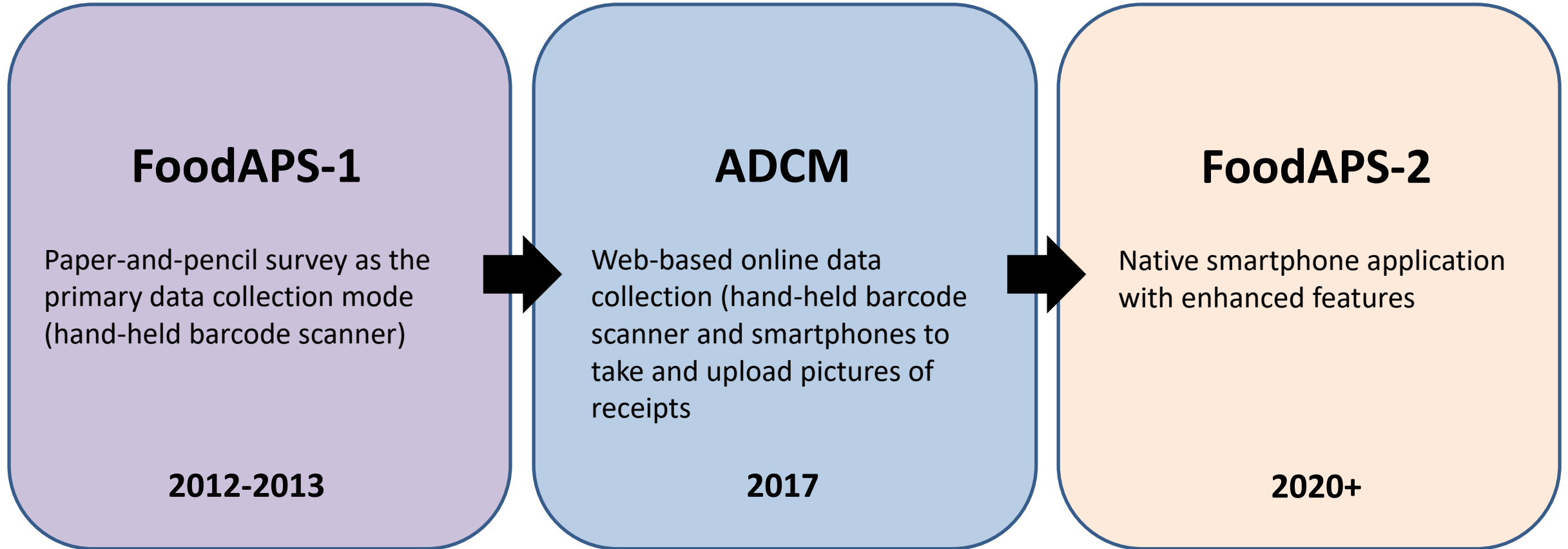
**Relevance:** First *nationally representative* survey to collect *unique* and *comprehensive* data on household food purchases and acquisitions

FoodAPS-1: April 2012-January 2013

1. All acquisitions over a 7-day period, including *FAH*, *FAFH*, and *free foods*
2. Details on *food items* and *acquisition events*
3. Factors that affect *food purchase decisions*
4. Focus on *SNAP* and *low-income* households



# History of FoodAPS survey development



# Goals for FoodAPS-2

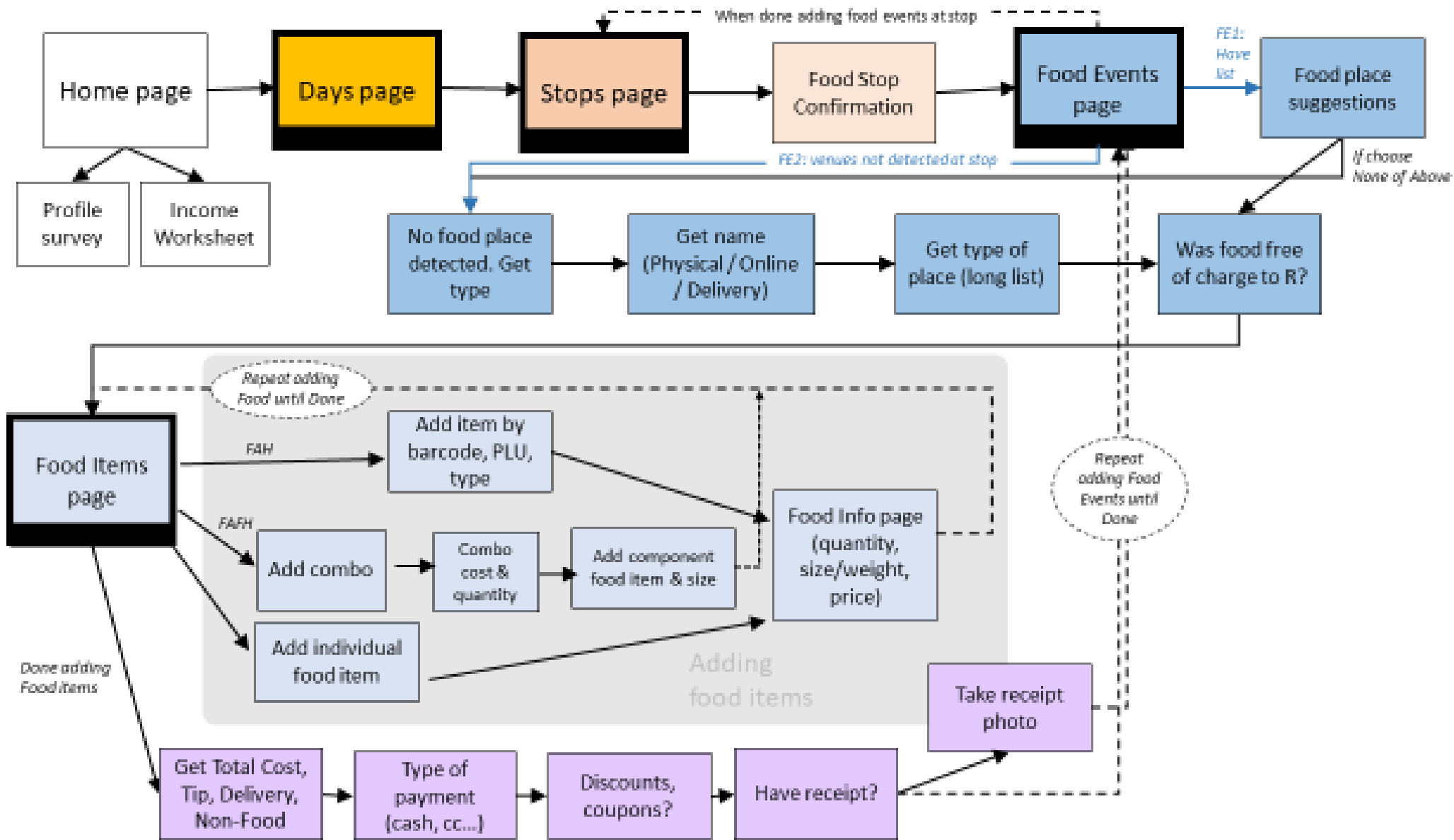
Survey design aims to **capture higher quality data** by reducing

- Nonresponse bias and measurement errors
- Respondent burden and reporting fatigue
- Backend processing time

## ***FoodLogger features***

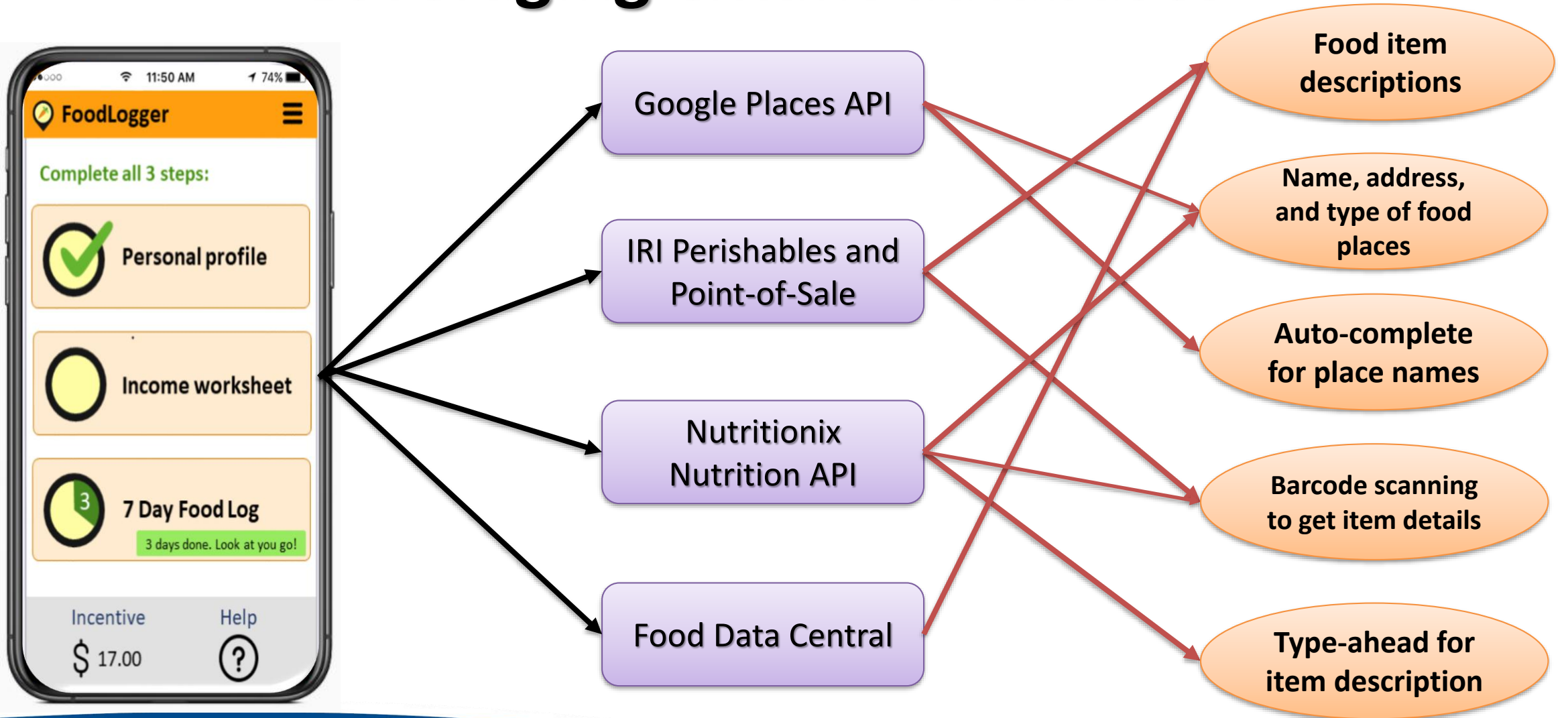
- ***GPS-location services*** to facilitate food place identification
- Access to built-in camera for ***receipt and food item picture upload, bar code scan***
- ***Linkages to extant databases*** (e.g., IRI, NutritionIX)



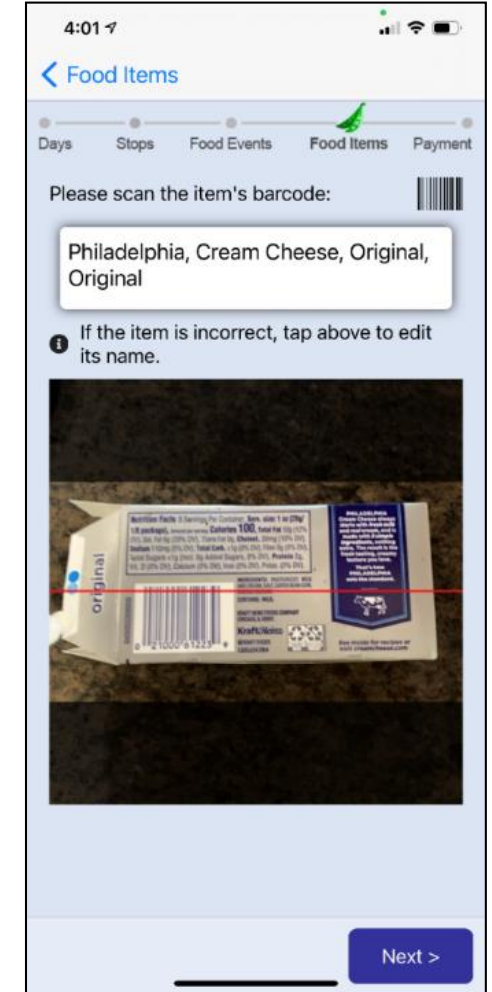
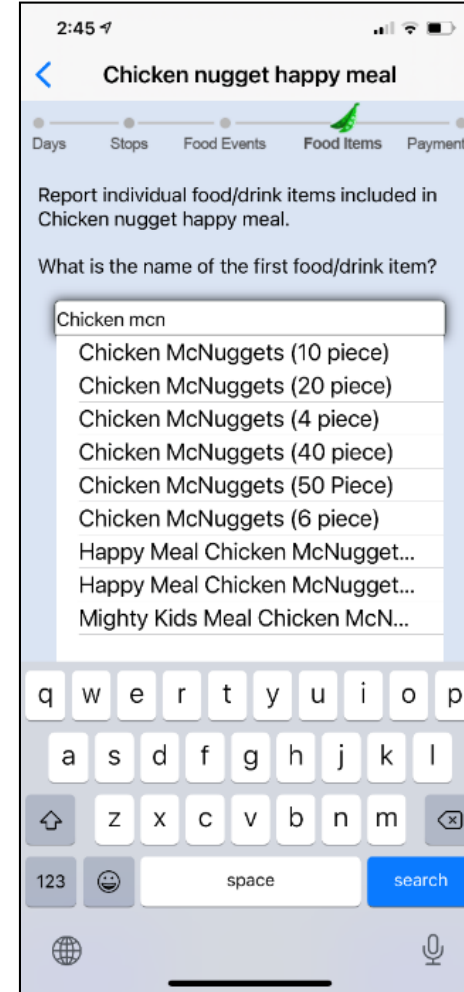
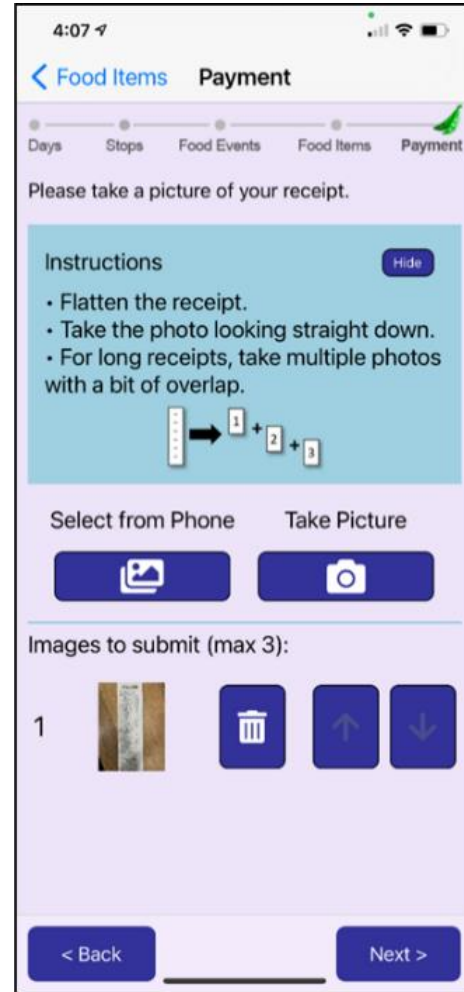
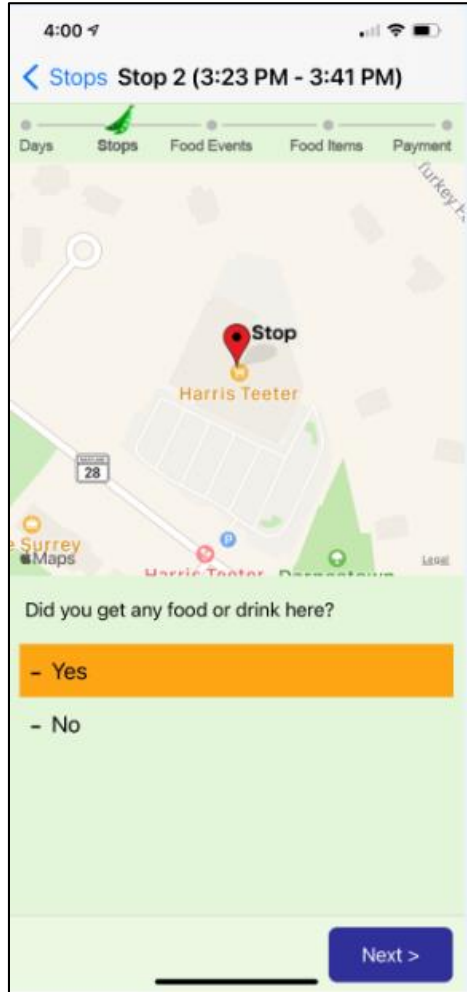




# Leveraging extant databases



# FoodLogger screenshots





# Usability testing plan

**Objectives:** Assess the user experience and ensure respondents enter food acquisition data effectively, efficiently, and with satisfaction

## High-level *test methodology*

1. Multiple rounds, recruitment within FoodAPS-relevant domains
2. Passive observation, probing, and think aloud
3. Critical response tasks (e.g., downloading FoodLogger, receipt upload)
4. Acquisition event scenarios (e.g., FAH, FAFH, school meal)
5. Accommodations for COVID-19

Usability findings will be used by the FoodLogger development team to **modify** and **improve** the smartphone application



# FoodAPS-2 large-scale Field Test

**Purpose:** Evaluate and finalize main survey design procedures and data collection protocols for the Full Survey

Primary **research questions:**

1. FoodLogger leads to reduced respondent burden and more complete data
2. Optimal incentive strategy to stem the drop-off in reporting across the week

Expected **sample size: 430** household completes collected **late 2021/early 2022**



# Incentives experiment

Condition	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Total
Control	\$5	\$5	\$5	\$5	\$5	\$5	\$5	\$35
Treatment	\$5	\$5	\$5	\$10	\$10	\$10	\$10	\$55

- **Goal:** Stem the drop-off in response after day 3 ([Hu et al 2020](#))
- Structure
  - \$2 mail screener, \$5 in-person screener, all other amounts the same
  - Incentive tied to each day of data collection to each person within household
  - Receipt unconditional if day complete
  - Reminder of increase at Day 3
  - Incremental amount displayed in FoodLogger



# Field Test and incentives experiment evaluations

Across *multiple dimensions*, when necessary, across *week* and *by day*:

1. Response rates
2. Response quality
  - Item nonresponse
  - Confirmed acquisition status
  - Total number and average cost of events/items (FAH, FAFH)
3. Sample composition
4. Use of FoodLogger features
  - GPS-enabled
  - Built-in camera (e.g., barcode scan, receipt upload, and food item picture)

