Do Fences Really Make Good Neighbors?
A Side-by-Side Comparison of RDD and Geofencing Methods Using Risk Factor Surveys

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New Sampling and Measurement Opportunities
Challenges with Traditional Survey Methods

Measurement
- People must notice and encode events to report them later
- Recall of behaviors and events is imperfect; worse with time
- Intentions to act are less predictive than actual behavior

Sampling
- Must screen many households to identify eligible respondents
  - Particularly for rare characteristics or infrequent activities
- Expensive
- Time consuming
Research Motivation

Measurement

*Improve accuracy of health measures by asking respondents about their experiences in situ (e.g., at the doctor’s office or at the gym).*

Sampling

*Know when respondents might be likely to engage in a particular behavior and ask them to report in that moment.*

New Source for Public Health Estimates

*Can the resulting data produce statistical estimates that are comparable to traditional survey methods?*
Our Methodology
Panel

MFour’s *Surveys On The Go®* Opt-in Panel ([www.mfour.com](http://www.mfour.com))

- **Largest mobile panel in US** *(2M active members)*
- **Non-Probability selection, participation largely spread by word-of-mouth**
  - No advertising, no internet pop-up ads
- **Completely owned/managed by MFour**
  - Limited overlap with other online opt-in panels
- **Specializes in:**
  - [Point-of-Emotion®](http://www.mfour.com) measurement
  - Diary studies; in-home measurement; and ad, entertainment, and behavior trackers
So what does it look like?
Smartphone Panel Interface

Panel Member Dashboard

A Single Question

Some surveys address topics that are relevant to specific industries. What is your current employment status?

- Unemployed
- Full-time White Collar/Professional
- Full-time Blue Collar
- Part-time
- Retired
- Homemaker
- Student

Continue
But is it representative?
MFour Panel v. US General Population

- **Sex (Female)**: 53% (MFour) vs. 51% (US)
- **Hispanic/Latino Race/Ethnicity**: 21% (MFour) vs. 18% (US)
- **Black**: 14% (MFour) vs. 13% (US)
- **≤17 Years**: 10% (MFour) vs. 9% (US)
- **18–24 Years**: 23% (MFour) vs. 31% (US)
- **25–34 Years**: 31% (MFour) vs. 31% (US)
- **35–49 Years**: 20% (MFour) vs. 19% (US)
- **50+ Years**: 8% (MFour) vs. 41% (US)
- **Marital Status (% Married)**: 48% (MFour) vs. 41% (US)
- **Education (% College +)**: 27% (MFour) vs. 30% (US)
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Our Study
Questionnaire

Mode
• Smartphone-based app

Topics
• BRFSS and other health-related questions (for benchmarking)
  – Alcohol use
  – Smoking
  – Sugar-sweetened beverage consumption

Nontraditional Survey Tasks
• Image capture of in-store tobacco, alcohol, or sugar-sweetened beverage display (for respondents completing the survey while still in store)
Sampling and Contact Specifications

• Geofenced grocery, liquor, and convenience stores nation-wide
• Invited when cross geofence
  – Cash register “cha-ching” and visual notification
• Reminders at 1, 24, and 36 hours
Analysis Plan

Sample Size
• Planning for 1,500 completes

Benchmarking
• BRFSS (CATI/RDD)
• Similar health behavior data
  – Web and mail
  – Nonprobability web panels
Future Research

Test using probability sample

Utilize time-lapse geo-location tracking of panel members

• Geo-Tracking all panel members who grant permission
  – Targeting respondents who:
    – Visit fast food restaurants at least x times/week
    – Visit hospital or health care provider weekly
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