Background

REACH U.S.

- Racial and Ethnic Approaches to Community Health Across the U.S.
- CDC program to eliminate health disparities among racial and ethnic minority populations
- Risk factor survey in 28 communities
- Phone, mail, and field; address-based sample

Why Answering Machines?

- Ubiquitous barrier to participation
  - (Holbrook, Kiranick, and Pfent, 2008; Roth, 2001; Tourangeau, 2004)

- Increase in proportion and diversity of respondents using answering machines to screen calls
  - (Link and Oldendick, 1999)

- Analogue to advance letters: provide legitimacy and information about study
  - (Holbrook, Kiranick, and Pfent, 2008; Link and Mokdad, 2005)
Background

Conversational Messages

- Research focuses on whether or not to leave a message
  - (Link and Mokdad, 2005; Link, et al., 2003)
- Few studies examine effects of different text
  - (Tuckel and Schulman, 2000; Xu, Bates, and Schweitzer, 1993)
- Focus groups suggest respondents prefer personal, not too professional tone
  - (NORC internal report; Link and Mokdad, 2005)
- Rigid, repetitive nature of interview impersonal, detracts from sense of involvement and responsibility
  - (Groves, et al., 1992; Suchman and Jordan, 1990)

Experiment Design

- Traditional message text
  Hello. I am calling on behalf of the Centers for Disease Control and Prevention. We would like to speak with you regarding an important survey on health in your community. Your participation is very important to us. Please call us toll free at 877-375-5964 to either complete the interview or to make an appointment to do so. The number again is 877-375-5964.

- Conversational message text
  INTERVIEWER: LEAVE CONVERSATIONAL ANSWERING MACHINE MESSAGE. INCLUDE THE FOLLOWING:
  - interviewer name
  - Centers for Disease Control and Prevention or CDC
  - health survey
  - toll-free number: 1-877-375-6594

Experiment Design

- Telephone (CATI) sample split randomly
  - Half received conversational AM messages
  - Half received traditional scripted AM messages
- Conversational messages displayed bullet point text
- Control group displayed traditional scripted message text
- All interviewers trained in leaving both types of messages
**Expectations**

- Conversational messages will entice respondents to pick up the phone and participate
- Conversational messages will improve key rates
  - Resolution
  - Screener response
- Conversational messages will reduce negative events
  - Refusal and Take-Me-Off-Your-List (TMOL) requests
- Households with conversational messages will reach finalized status in fewer dials

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### Results and Analysis

#### Comparison of Key Events

<table>
<thead>
<tr>
<th>Dials and Messages per Case</th>
<th>Experiment</th>
<th>Control</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of messages left</td>
<td>31,359</td>
<td>31,738</td>
<td>---</td>
</tr>
<tr>
<td>Average dials per case</td>
<td>11.2</td>
<td>11.1</td>
<td>1.149</td>
</tr>
<tr>
<td>Average messages per case</td>
<td>2.2</td>
<td>2.2</td>
<td>.480</td>
</tr>
<tr>
<td>Average length of message ***</td>
<td>50 seconds</td>
<td>55 seconds</td>
<td>.0001</td>
</tr>
</tbody>
</table>

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#### Contact Rates

<table>
<thead>
<tr>
<th>Contact Rate</th>
<th>Experiment</th>
<th>Control</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Lines †</td>
<td>14,000</td>
<td>13,909</td>
<td>---</td>
</tr>
<tr>
<td>Contact rate</td>
<td>63.1%</td>
<td>62.5%</td>
<td>.2964</td>
</tr>
<tr>
<td>Contact on next dial **</td>
<td>7.6%</td>
<td>8.1%</td>
<td>.0164</td>
</tr>
</tbody>
</table>

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† Sample lines = cases with at least one message left
** Contact on next dial = contact rates for cases with at least one message left
*** = p < .0001, ** = p < .05, * = p < .1
## Results and Analysis

### Comparison of Key Rates

<table>
<thead>
<tr>
<th>Key Rate</th>
<th>Experiment</th>
<th>Control</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Lines †</td>
<td>14,000</td>
<td>13,909</td>
<td>---</td>
</tr>
<tr>
<td>Resolution Rate</td>
<td>47.9%</td>
<td>46.1%</td>
<td>0.3794</td>
</tr>
<tr>
<td>Screener Completion Rate **</td>
<td>56.8%</td>
<td>56.7%</td>
<td>0.0401</td>
</tr>
<tr>
<td>Household Completion Rate</td>
<td>68.3%</td>
<td>69.2%</td>
<td>0.5273</td>
</tr>
<tr>
<td>Member Completion Rate</td>
<td>46.8%</td>
<td>46.6%</td>
<td>0.1264</td>
</tr>
</tbody>
</table>


† Sample lines = cases with at least one message left

** p < .05; *** p < .0001; * p < .1

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### Refusal Rates and Call History Analysis

<table>
<thead>
<tr>
<th>Refusal Rates</th>
<th>Experiment</th>
<th>Control</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Lines †</td>
<td>14,000</td>
<td>13,909</td>
<td>---</td>
</tr>
<tr>
<td>Refusal after first message</td>
<td>16.3%</td>
<td>16.5%</td>
<td>.6234</td>
</tr>
<tr>
<td>Initial refusal after first message</td>
<td>14.3%</td>
<td>14.4%</td>
<td>.8390</td>
</tr>
<tr>
<td>TMOL after first message</td>
<td>4.88%</td>
<td>5.04%</td>
<td>.5297</td>
</tr>
<tr>
<td>Hostile refusal after first message **</td>
<td>0.7%</td>
<td>0.5%</td>
<td>.0246</td>
</tr>
</tbody>
</table>

Call History Analysis

| Number of dials to finalize * (after first message) | 11.8 | 11.5 | .0590 |

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## Results and Analysis

### Are the two types of messages really that different?

- Both sound equally professional
- Text remains very similar
- High voice quality and pacing may lead respondents to believe that conversational messages are scripted
Results and Analysis

Key aspects of conversational messages

- Included more information than script
  - Interviewer name
  - Respondent city or region
  - Motivation for participating

- Included less information than script
  - Omit motivation for participating
  - Do not repeat toll-free number
  - Cut off before end of message

- More prone to awkward wording or pauses

Conclusions

- Conversational messages do not have a dramatic effect and may lead to slightly lower rates
- Messages are not significantly different in text or tone
- Conversational messages more prone to stumbling, missing information
- Scripted messages may have vocal qualities associated with lower refusal rates (Oksenberg et al., 1986)
  - Higher, more varied pitch, clear enunciation, faster pace

References

Thank You!

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