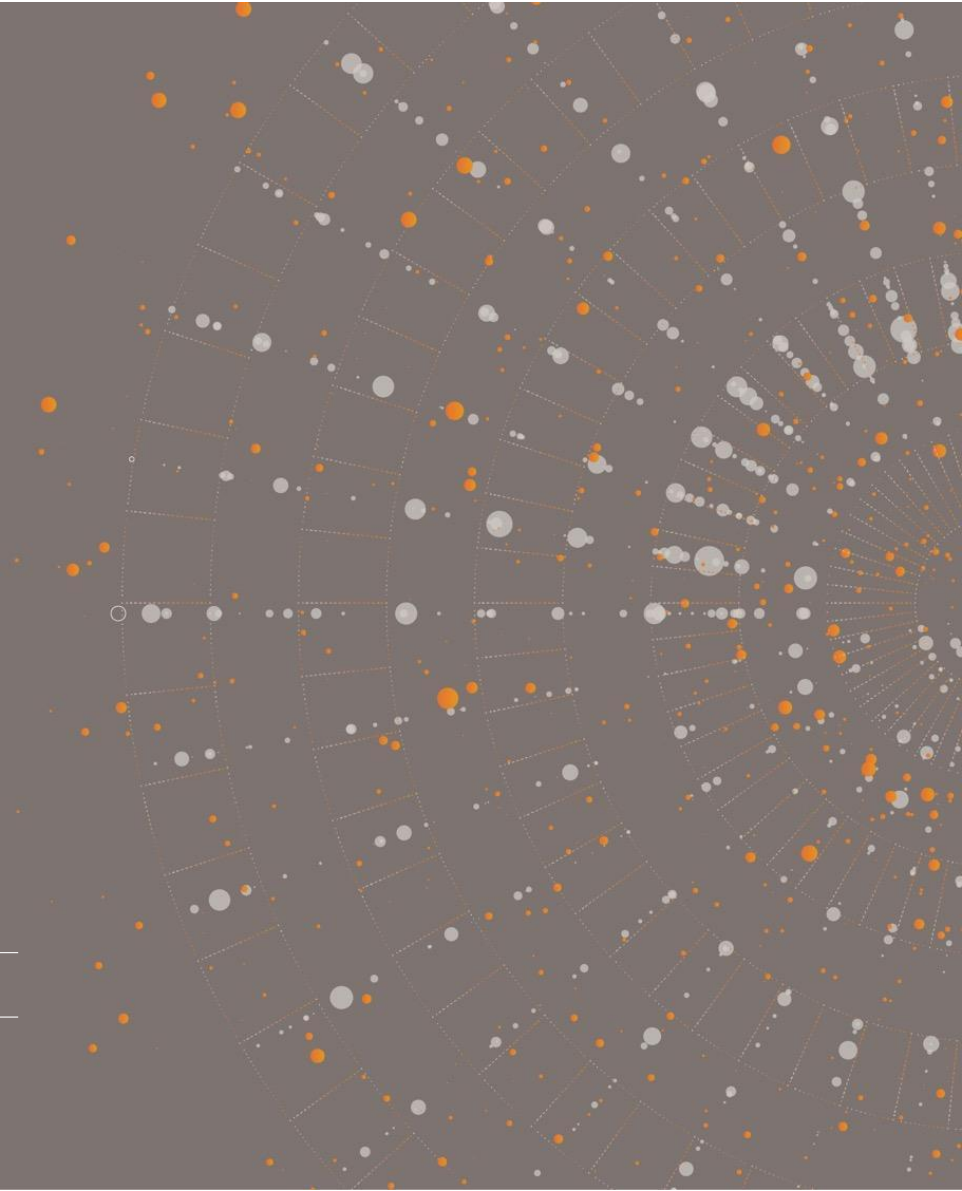


Texting in Mixed-Mode Studies

Results from Recent Research Experimentation

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Agenda

01 Introduction

02 National Survey of Fishing, Hunting, & Wildlife-Associated Recreation

03 Pew Research Center National Study

04 Entrepreneurship in the Population

05 Conclusions and Q&A



Introduction

NORC at the University of Chicago is an objective, nonpartisan, research organization that delivers insights and analysis decision-makers trust.





400+

Active projects

Economics, Education, Global,
Health, Public Affairs, Research
Science, Society & Culture



1,000

NORC professionals

Researchers, Methodologists,
Statisticians, Data Scientists



1,500

Survey interviewers

Telephone, Field

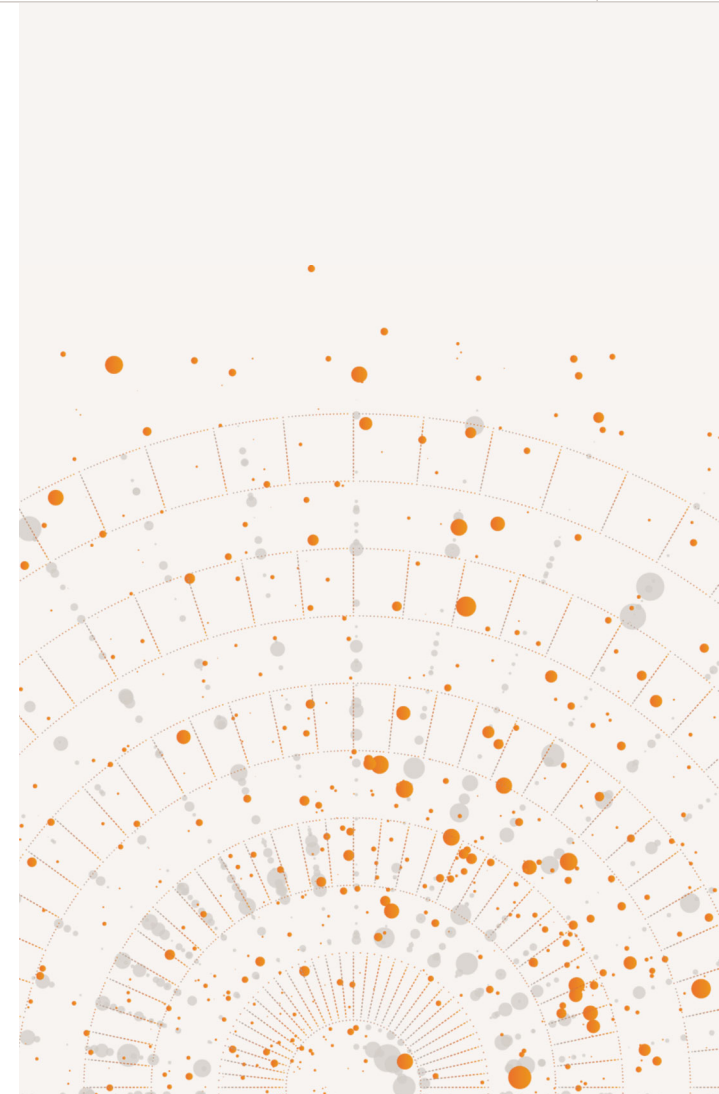


100+

Countries

NORC is continuously looking at ways to innovate our research methods and statistical approaches

- NORC launched a program to invest in building evidence on the best use of texting in survey contacts.
- Our methodologists conducted a research scan to investigate how others are using texting in survey designs.
- NORC conducted experiments in various surveys to help expand the research and knowledge in this area, which will be the focus of today's presentation.



Texting is emerging as a contact mode for surveys, but more research is needed on how best to integrate texting in mixed mode designs.

Contact Modes

Mixed-mode contact designs can improve response rates and representativeness

Text Invites

Prenotifications have had mixed effects; invitations may not be as effective as reminders

Text Reminders

Sending reminder text messages have been effective at improving response rates and representation

Time of Day

Little research on when is the best time of day to send text messages

Other Modes

Little research to directly compare text to modes like email or postcards

NORC has conducted experiments on texting for survey contacts in three major surveys



Text invitations



Text reminders



Sequencing with other modes



Time of day texts are sent

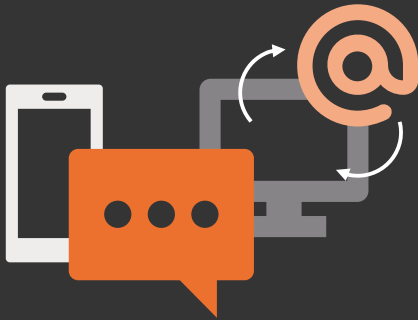


Text message link/phone #



Text vs. postcard reminders

Objectives for today's seminar



- > Understand how texting is used for contacting potential survey respondents at NORC
- > Share examples from texting on specific NORC project
- > Discuss results from recent studies on how best to use texting

National Survey of Fishing, Hunting, & Wildlife-Associated Recreation

Background & Experimental Design

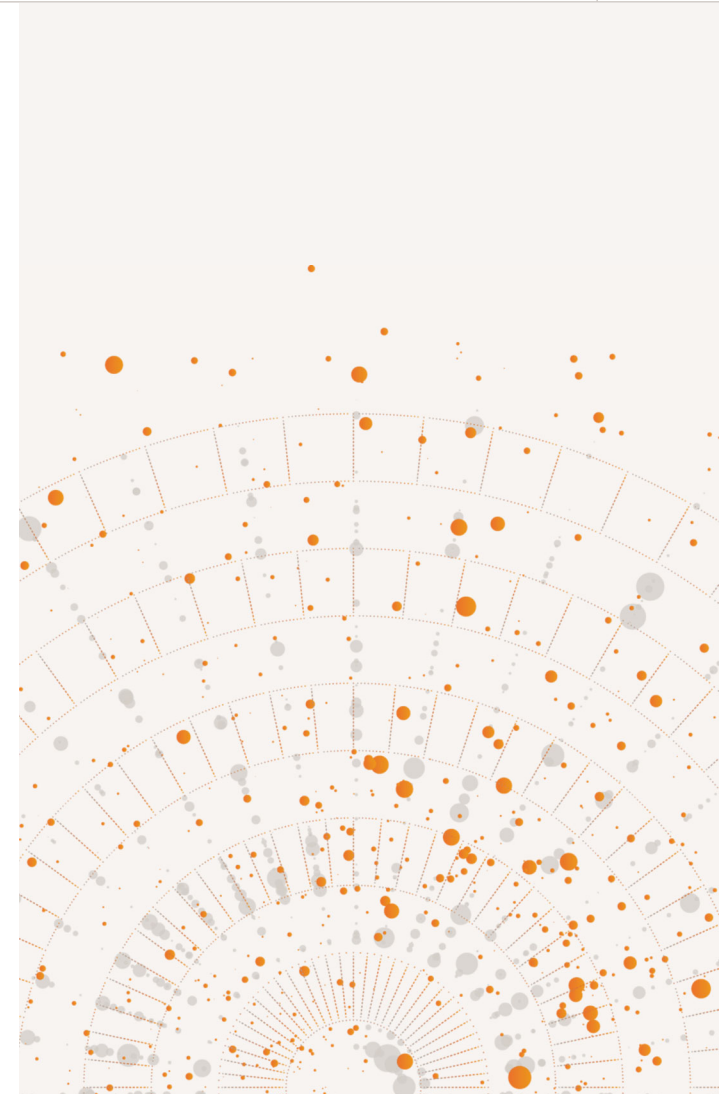
2022 National Survey of Fishing, Hunting, & Wildlife-Associated Recreation

Nationally representative, longitudinal, mixed-mode (web, phone, paper) survey

Used to create estimates of participation and expenditure in fishing, hunting, and wildlife watching activities

Design included a screener instrument to identify those who participate in fishing, hunting, and wildlife watching activities and three waves of surveys

Has traditionally used mail outreach



	WAVE 2	WAVE 3
Experiment	Texting	Email & Texting
Sequencing	Text invite Early text reminder Late text reminder	Text/email invite # of text/email/postcard reminders
Time text messages sent	Morning Afternoon	-- --

Text messages sent via Twilio

Sample members stratified by whether they participated in the prior wave from a text

Cooperative Respondents

Respondents who completed the prior wave after receiving a text

Other Respondents

All other sample members, whether they completed the prior wave or not

We assessed the effectiveness of texting and email contact over several outcome measures.



Completion Rates

Cumulative and final completion rates
Completion rates by mode



Response Speed

Number of days between the 1st contact date and the completion date



Data Quality

Web response time
Web and paper item nonresponse rates

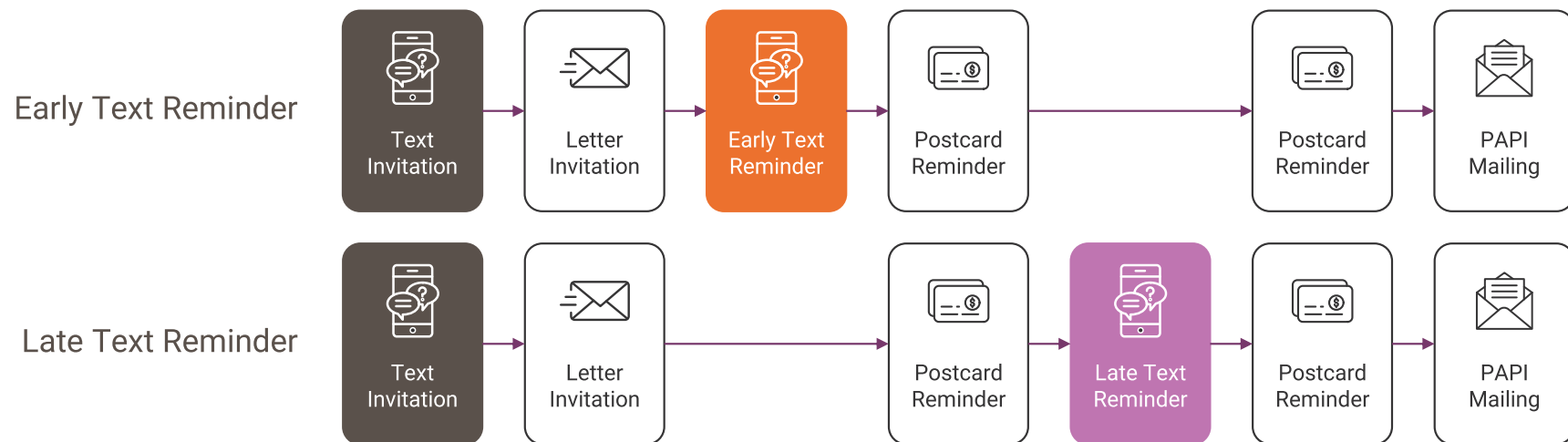


Sample Representation

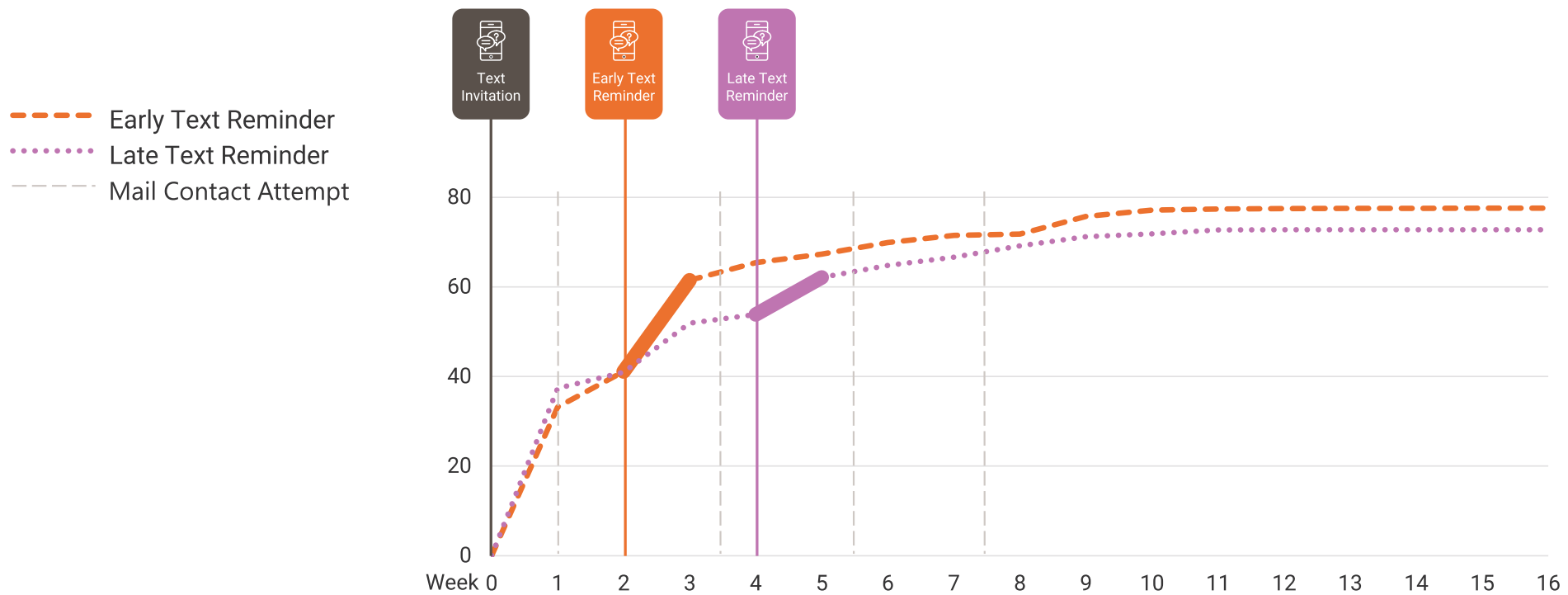
Sample composition across conditions for demographics and selected survey variables

Wave 2

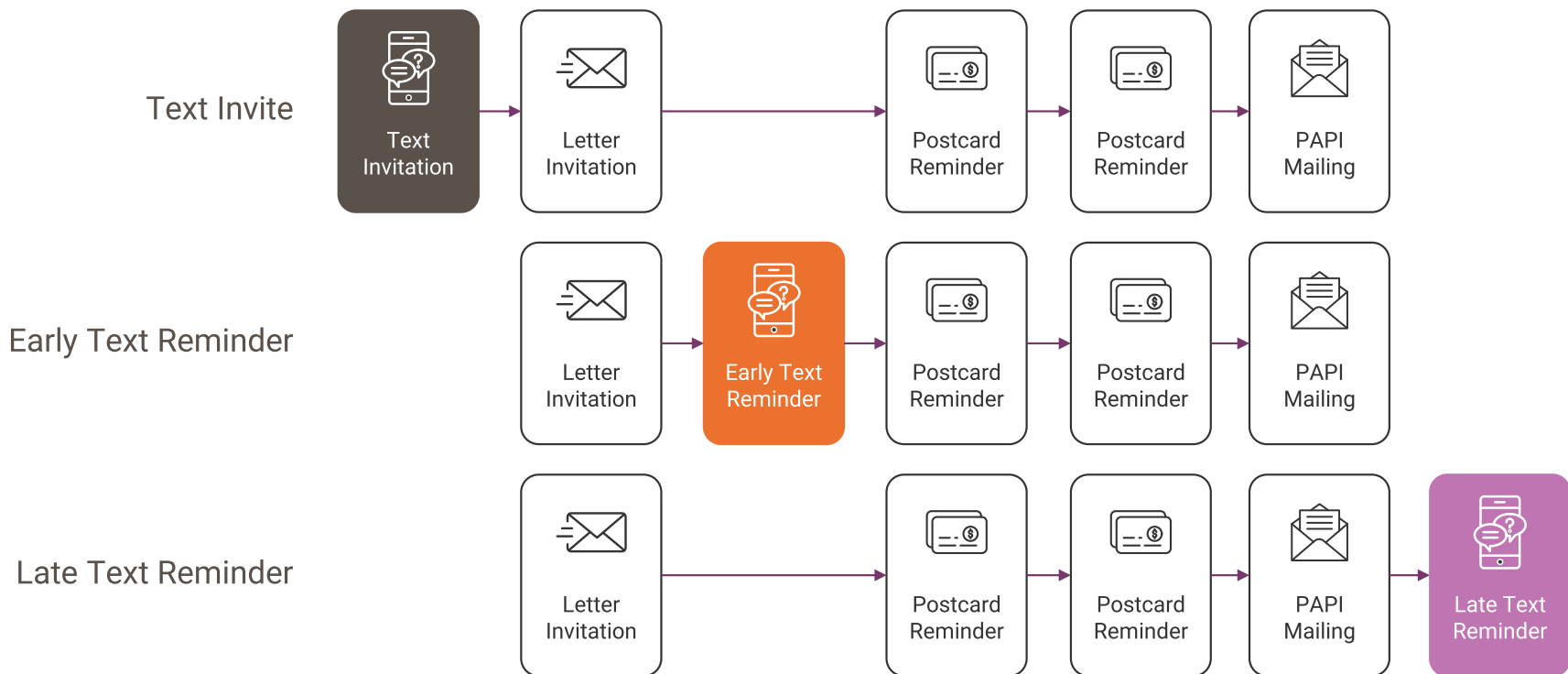
Sequencing Treatments Among Cooperative (Text Friendly) Respondents



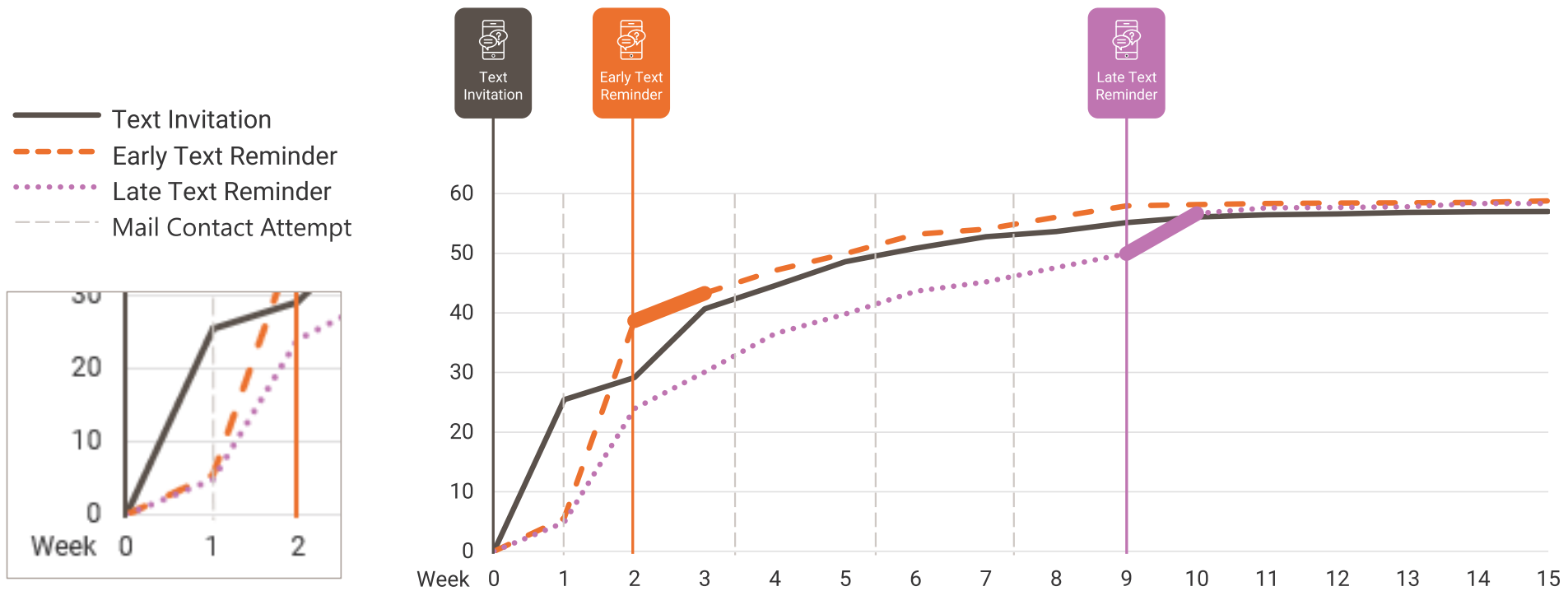
The early text reminder was somewhat more effective than the late reminder, especially in boosting completion early in the field period.



Sequencing Treatments Among Other Respondents



Text invitation group saw early boost in completion, early text reminder similarly more effective than late text reminder



Very few significant differences in other outcomes analyzed

Response Speed

The early text reminder among Other Respondents was the most effective at getting sampled members to complete via web as quickly as possible (average 13 days, compared with 18-21 days)

Data Quality

No significant effects of sequencing on web response time or item nonresponse among Cooperative or Other Respondents

Sample Representation

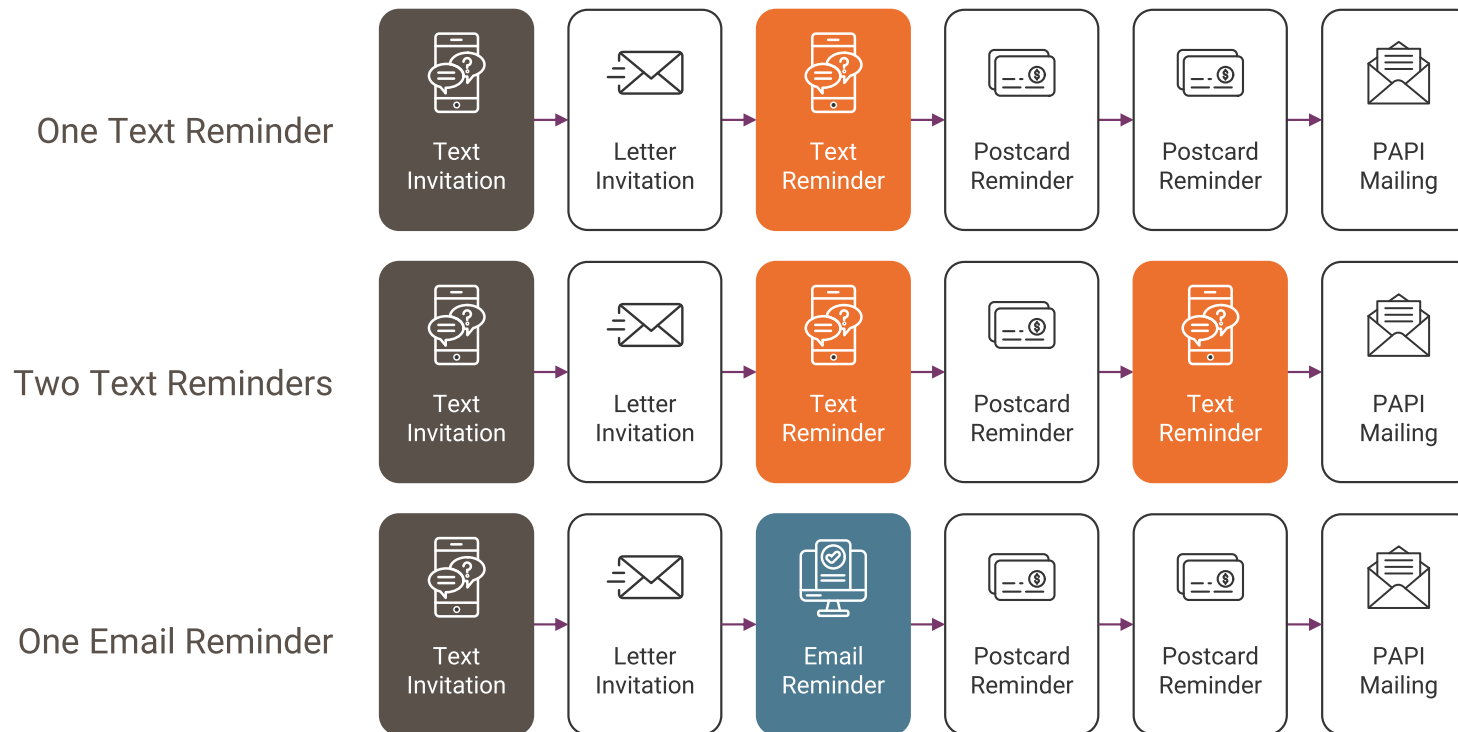
Cooperative Respondents were different demographically than Other respondents, but the sample representation was similar for the experimental groups within each.



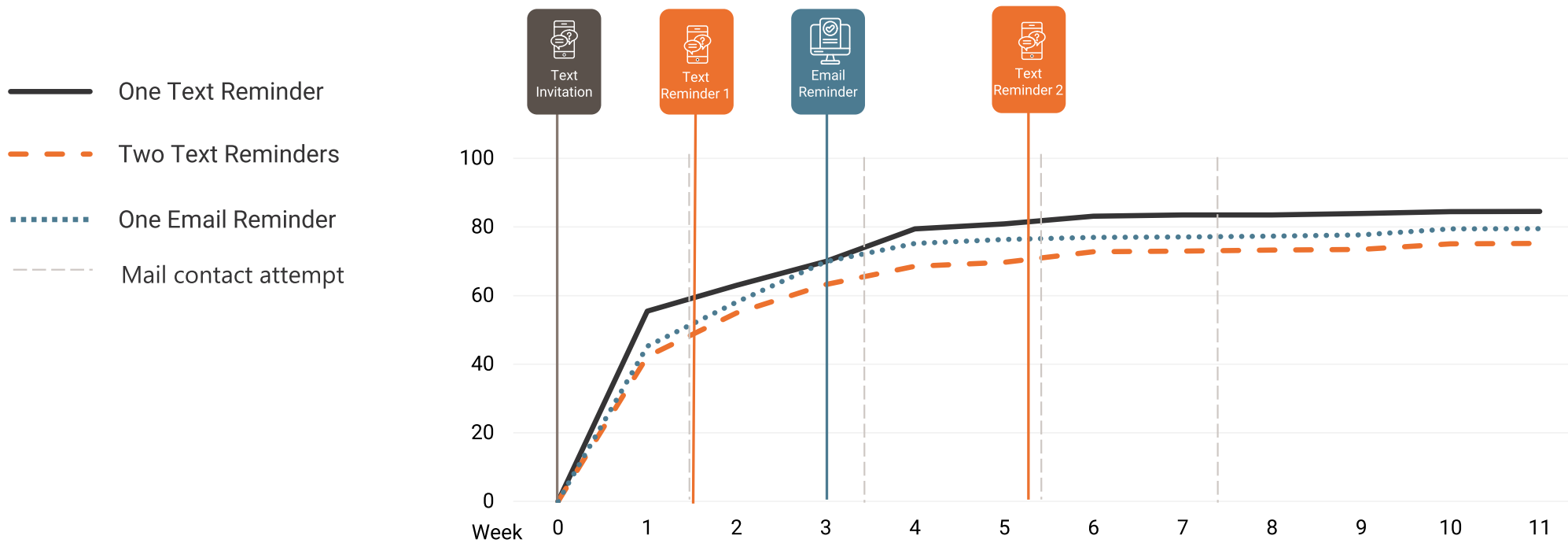
Early text reminder saw response speeds of 5 to 8 days shorter for Other Respondents.

Wave 3

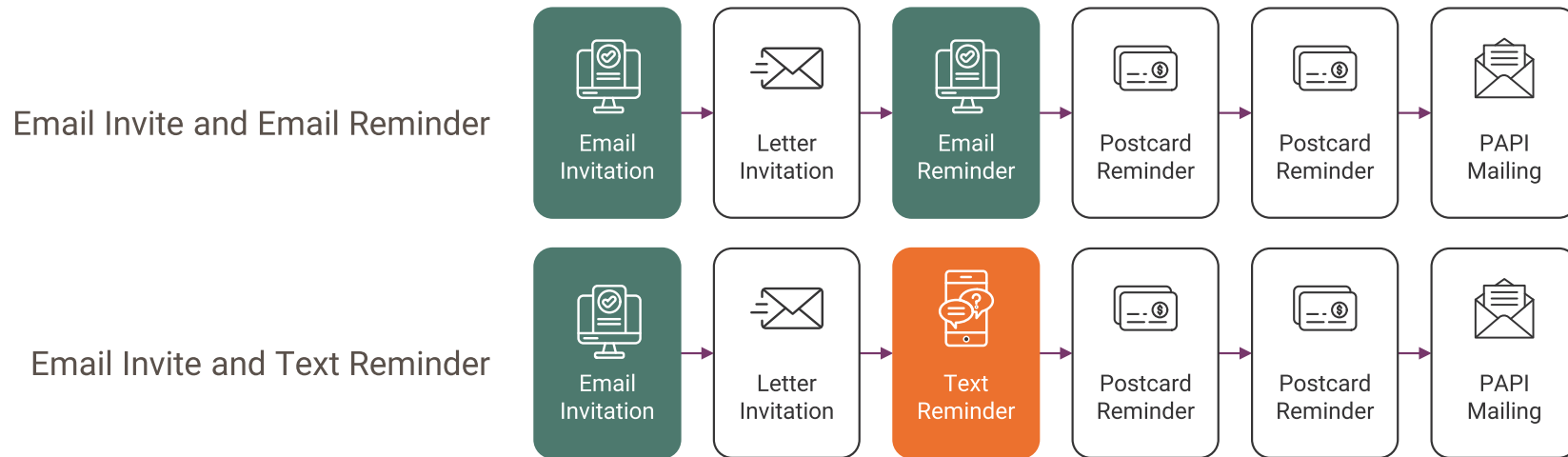
Sequencing Treatments Among Cooperative (Text Friendly) Respondents



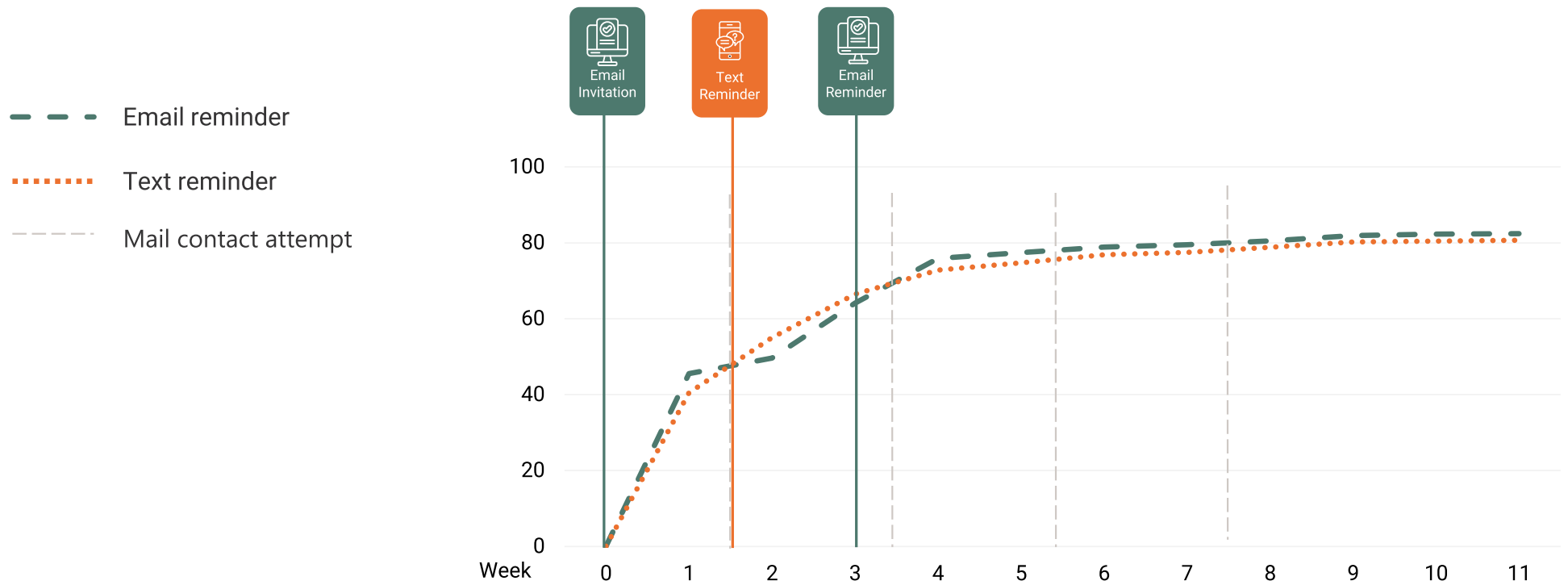
One text reminder was more effective than two text reminders.



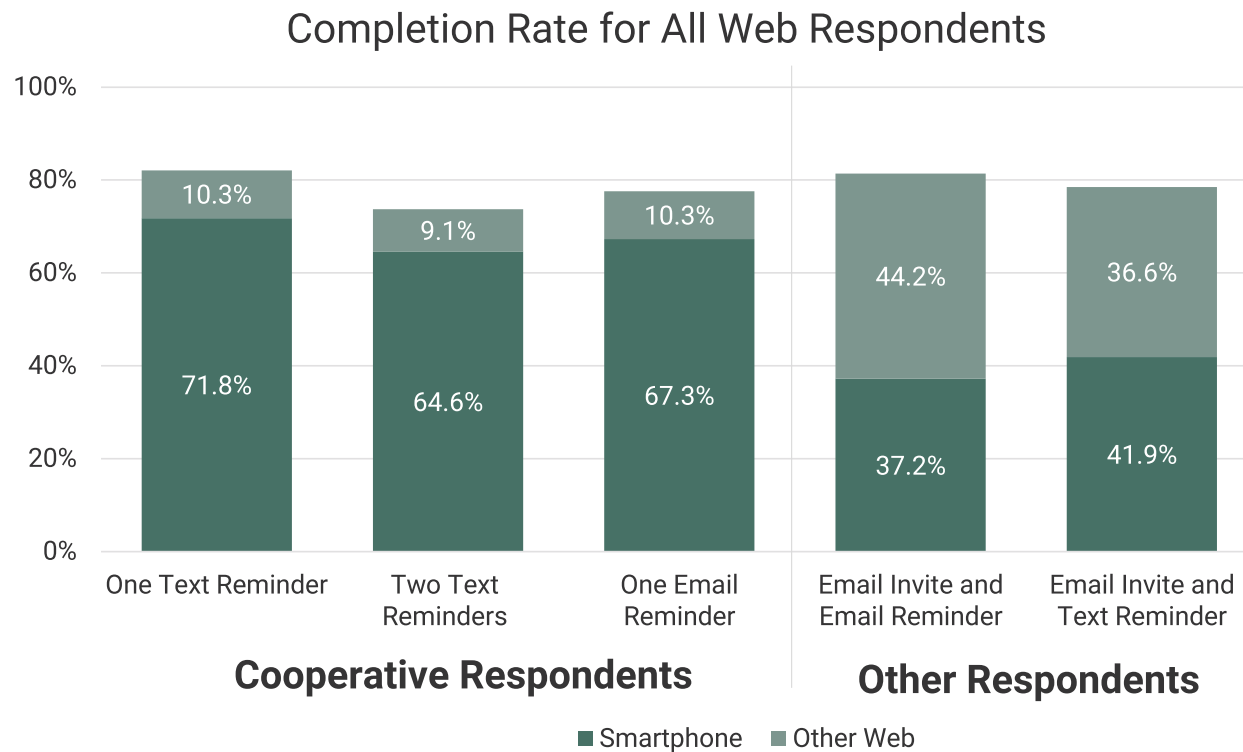
Sequencing Treatments Among Other Respondents



There was no real difference in completion rates after receiving an email or text reminder.



Texting encouraged a higher completion rate via smartphone, while email led to a mix of smartphone and other web completes.



Few significant differences in other outcomes analyzed

Response Time

For Other Respondents, text reminders led to earlier completion than emails (13 vs. 15 days). However, emails went out 11 days later than texts, which may have impacted results.

No significant differences for Cooperative Respondents.

Data Quality

For Cooperative Respondents, those who received only one reminder text had quicker web response times than those who received two text reminders (10 vs. 11 min). No significant differences for Other Respondents.

No significant differences for item nonresponse.

Sample Representation

Minimal demographic differences which did not affect survey results.

Conclusions

Both texting and emailing are likely to play a key role in contact strategies for mixed-mode surveys, especially those with short field periods

Text Sequencing

Text reminders may be more effective than text invites

An early text reminder was more effective than a late text reminder, shortening response time and raising completion early

Time of Day

Sending the text in the morning vs. afternoon did not have a significant impact on the outcome measures analyzed

Text vs. Postcard Reminders

Sending 1 reminder text and 2 postcards resulted in higher completion rates than 2 text reminders and only 1 postcard

Text Reminders

Sending text reminders was not negatively associated with data quality or sample representation

Text vs. Email Invitations

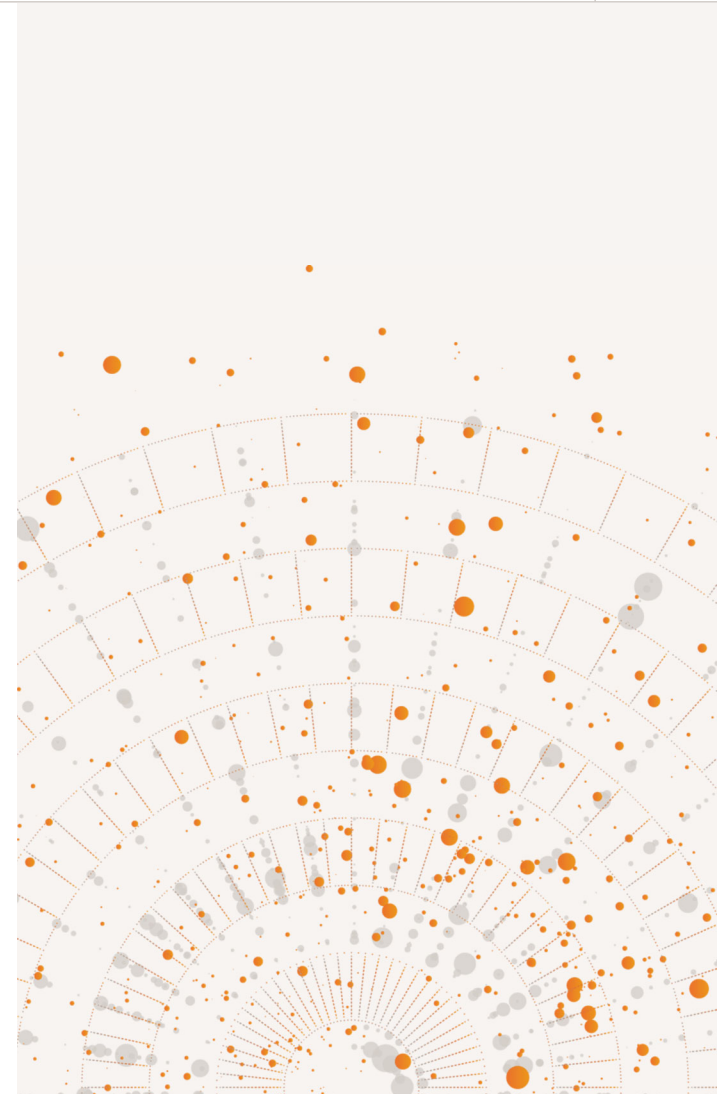
Text invitations resulted in more completes via smartphone

2023 Pew National Study

Background & Experimental Design

2023 Pew National Study

- Nationally representative, address-based, mixed-mode (web, phone, paper) survey
- Surveys more than 35,000 Americans from all 50 states about a variety of topics
- Initially planned to use all mail outreach
- Sample split across two batches to better control hitting state-specific targets



Pew Texting Experiment

Text messages sent via RumbleUp

Likely Spanish speakers were sent English and Spanish texts

Batch 1 – Late Text Reminder

Sampled addresses with a matching cellphone number that had not completed the survey after 6 mail contacts

Batch 2 – Mid Fieldwork Text Reminder

Sampled addresses with a matching cellphone number that had not completed the survey after 3 mail contacts. Push for completes before expensive paper survey packet was sent.

Experimental Groups – Batch 1



Text Web

Received text message with a direct link to complete the survey via web



Text Phone

Received a text message containing both a direct web link and a phone number to complete the survey over the phone

Experimental Group – Batch 2



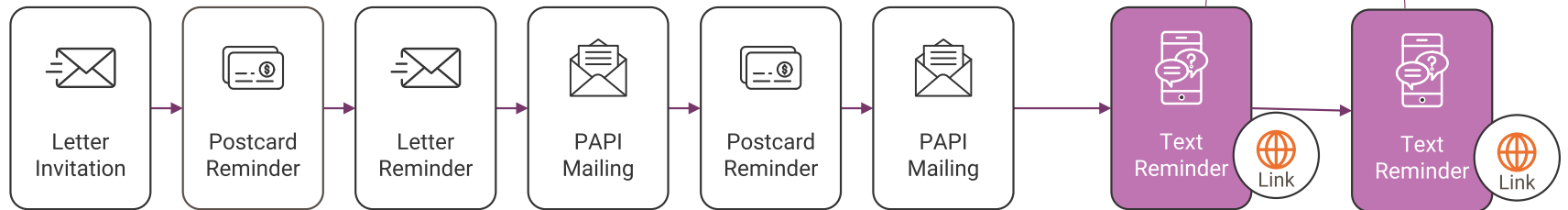
Text Web

Received text message with a direct link to complete the survey via web

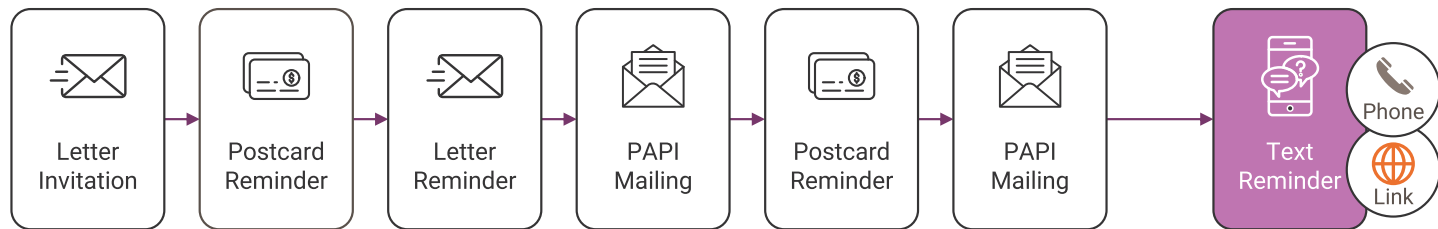
Sequencing of Pew Texting Experiments

Batch 1

Text Web

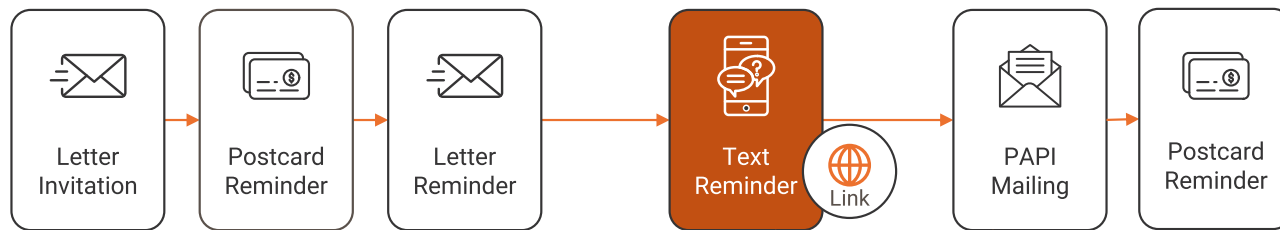


Text Phone



Batch 2

Text Web



Dispositions and Completion Rates

Batch 1 - Late Text Dispositions and Completion Rates

	Control		Text Web		Text Phone		<i>Text Web+Phone</i>		Text Web 2	
	Count	%	Count	%	Count	%	<i>Count</i>	<i>%</i>	Count	%
Received 0.5% completes from extra effort of initial text.										
Total sample	14,741	-	31,606	-	10,576	-	42,182	-	31,040	-
No differences between Text Web and Text Phone groups										
Sent to carriers	-	-	31,338	99.2	10,475	99.0	41,813	99.1	29,425	94.8
Delivered	-	-	27,958	88.5	9,289	87.8	37,247	88.3	25,997	83.8
Received another 0.3% completes from second late reminder text.										
Undelivered	-	-	3,380	10.7	1,086	10.3	4,466	10.6	3,428	11.0
“Stop” requests	-	-	1,353	4.3	474	4.5	1,827	4.3	735	2.4
Entered survey	-	-	586	1.9	236	2.2	822	1.9	425	1.4
Completes	34	0.2	167	0.5	62	0.6	229	0.5	106	0.3

Some of the control group did respond during this period (23).

Batch 2 – Text Reminder Dispositions and Completion Rates

Received 0.9% completes from text messages sent during fieldwork.

Only those that completed the survey were not sent subsequent mailings.

Consistent results across batches – sending a text reminder doubled the number of completes compared to the control groups

	Control		Text Web	
	Count	%	Count	%
Total sample	9,986	-	39,905	-
Sent to carriers	-	-	39,531	99.1
Delivered	-	-	35,265	88.4
Undelivered	-	-	4,266	10.7
“Stop” requests	-	-	1,756	4.4
Completes	45	0.5	379	0.9

Additional Results

Batch 1 Text Message Content Comparison

Compared the demographics of completes based on which text message they received

- Gender, age, race/ethnicity, education, political ideology, income
- No significant differences in demographics between Text Web and Text Web/Phone completes

Providing a phone number to call did not push for more inbound CATI completes.

- No differences on the proportion of people who entered the survey for the first time because of the initial texts.

Compared the demographics of completes between Text Web 1 and Text Web 2 groups

- No significant differences in demographics found between these two groups of respondents



No differences were found across the experimental groups.

Mode Comparisons

Compared the demographics of completes from those after receiving a text message with those that completed before text messages were sent by mode (web/phone)

No significant differences in demographics between web respondents before texts and those who completed the survey after receiving a text message

Significant differences between inbound phone and text respondents (same differences between phone and web)

- Phone respondents were more male, older, less educated, and lower income than text respondents

Costs per complete by mode – Web were the most cost efficient, phone most expensive, and texts and paper cost about the same.

- Cost analyses accounted for all the contact attempts before getting a complete.



Overall, text respondents were just like early web respondents.

Address Verification

Address verification

Address verification question only asked if survey was entered through the text message – using a PIN bypassed verification question.

Needed to confirm phone number correctly matched to sampled address.

If address verification failed, respondent could not use web link from text message.

Survey could be completed on the web if PIN on mailings was entered even after failing address verification.

Thank you for agreeing to participate in the Pew Research Center's 2023 national survey! This survey asks about a range of topics that affect you and your community. The results can be used by students for learning, on the news to keep people up to date, and by local groups to help communities.

You will receive a \$10 eGift card for completing this survey.

Your answers are confidential.

Please use the "Continue" and "Previous" buttons to navigate between the questions within the questionnaire. Do not use your browser buttons.

Before we begin, we'd like to verify that we've reached the correct person. Can you confirm your street address is: [\[P_ADD1\]](#)

RESPONSE OPTIONS:

- 1 Yes
- 2 No

Address verification

Around **50%** of respondents passed the address verification question from the initial late reminder text.

- **39%** failed verification
- **10%** didn't respond

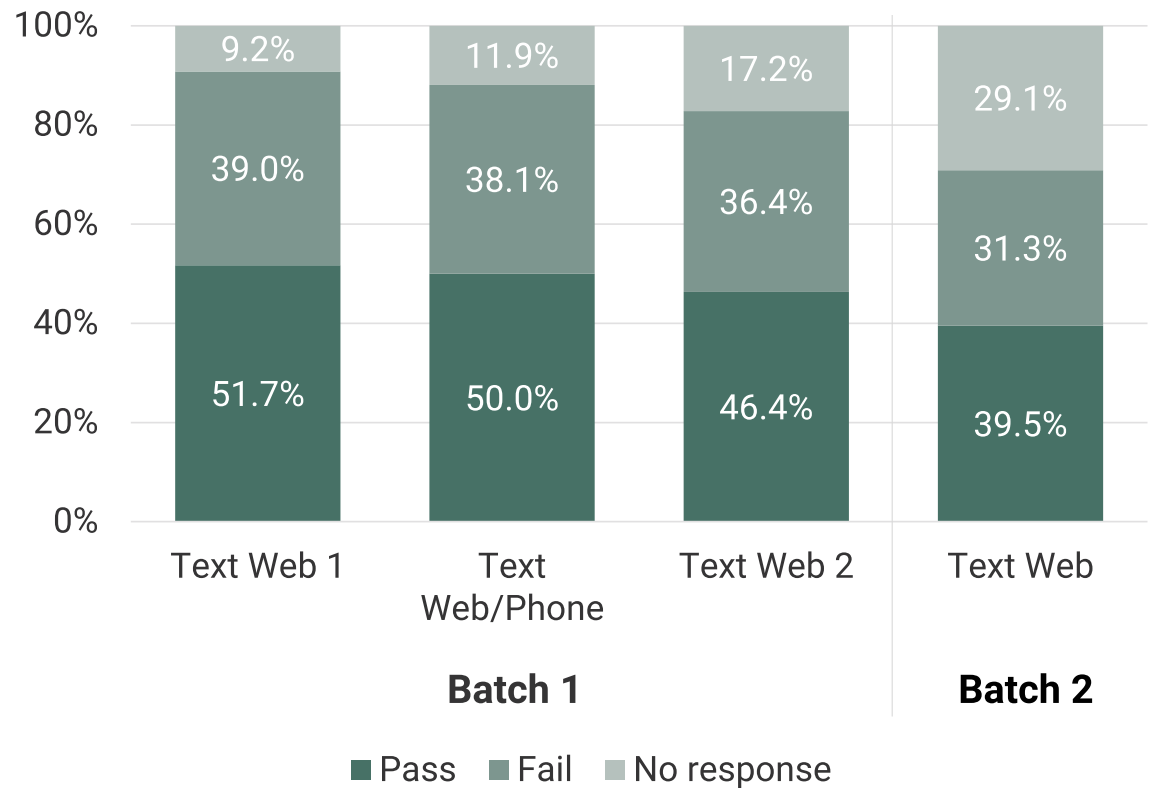
Similar results for second late reminder.

- Additional **8%** of people did not answer question

Mid-fieldwork text had different results

- **40%** passed
- **31%** failed
- **29%** did not respond

Address Verification Results



Conclusions

Conclusions

Late text reminders did increase response rates slightly (0.5% yield), with another text increasing response (0.3%)

A mid-fieldwork text also increased response rates (0.9% yield)

Text reminder completes were similar to web respondents in terms of sample composition

Just over half of the late texted numbers corresponded to the sampled address

People that received mid-fieldwork text were more reluctant to answer the question

Web completes were the most cost efficient.

The cost per text complete was similar to paper because both received the mail contacts.

Entrepreneurship in the Population Survey (EPOP)

Background & Experimental Design

The EPOP Survey is designed to provide national and local estimates of entrepreneurship

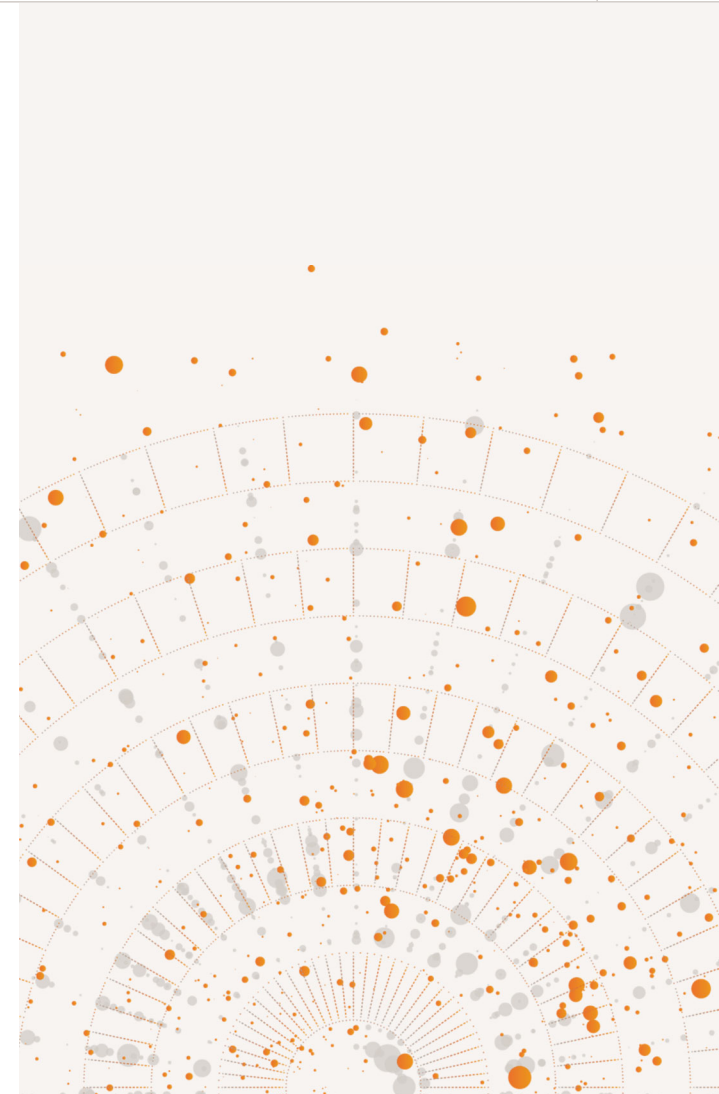
Nationally representative sample of over 30,000 individuals

Includes 5 years of survey collection from 2022 to 2026 to support trend analysis

Provides various measures of entrepreneurial behavior at national, state, and local levels

The EPOP sample comes from three sources:

- **Addressed Based Sample**
- AmeriSpeak® Panel
- Opt-In Panels from 3rd party data vendors



How can text or postcard outreach increase completion rates late in fielding period?

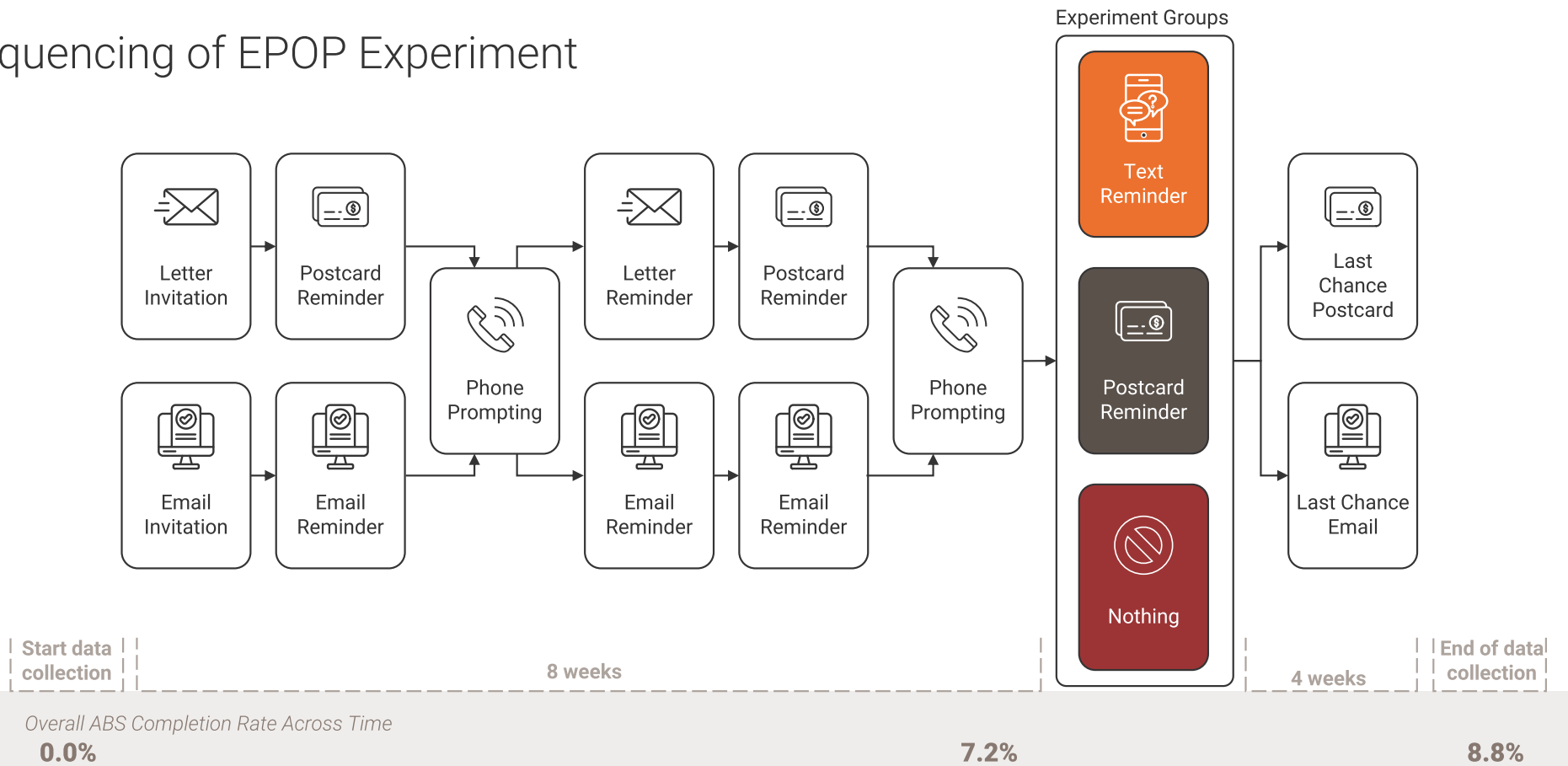
5,544 nonrespondents met eligibility criteria in EPOP:2023

- Nonresponding sample members
- With a mobile phone number on record
- Who were not selected for an incentive increase

Participants were assigned to 1 of 3 groups using stratified random assignment:

1. Control – received no additional contact
2. Postcard – were mailed “small” postcard reminder (4x6 card)
3. Text Message – were sent an MMS text message reminder

Sequencing of EPOP Experiment



Note: Phone numbers and email addresses were obtained from locating vendor, TLO, based on provided addresses.

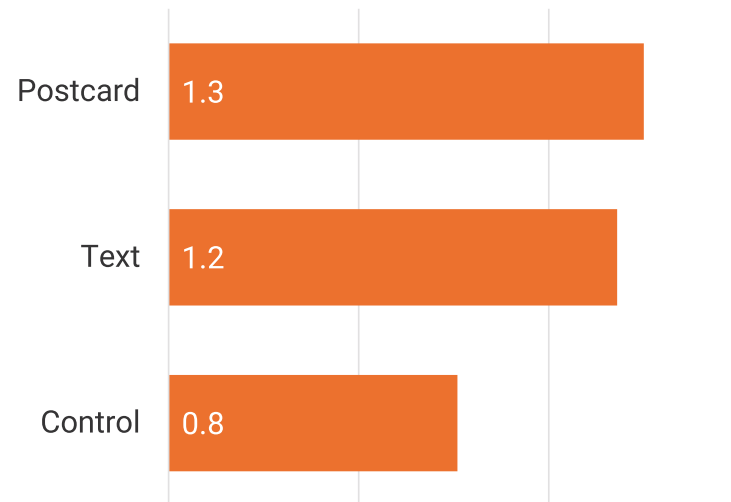
Experiment Results

Completion Rates for 3 Experiment Groups

Compared to the control group, postcard outreach increased rates from .8% to 1.3% ($p < 0.10$) and text outreach increased completion rates from .8% to 1.2% ($p < 0.10$).

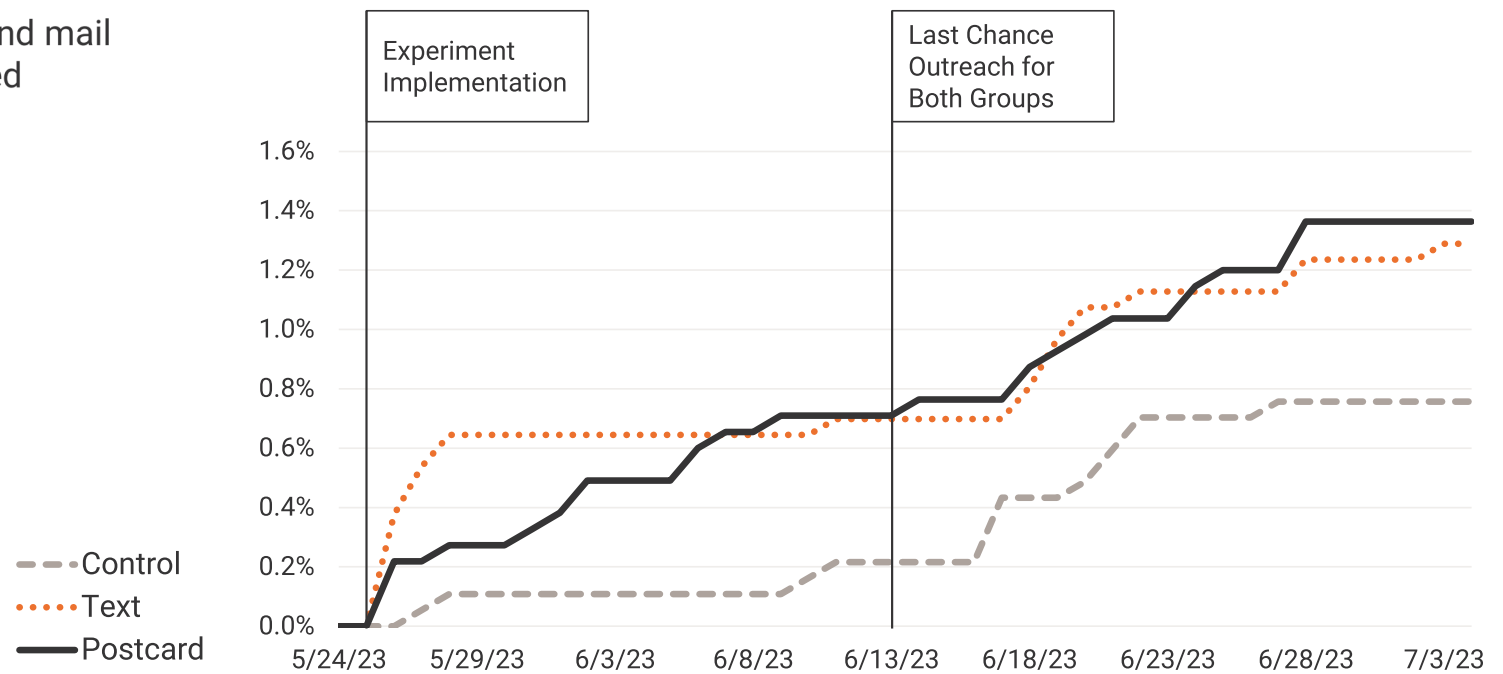
The difference in completion rates between the text and postcard group is not significant

Completion Rates (%) by Experiment Group



Completion Rates Across Time for 3 Experiment Groups

The figure shows both text and mail outreach marginally increased response rates.



Respondent Characteristics

Text and postcard groups appear to have more high school educated and male completers

Statistical testing shows:

- Text and postcard groups were more likely to have male completers compared to the control ($p < 0.05$)
- The postcard group was more likely to have completers with a high school education or less ($p < 0.05$)
- No differences for racial composition

Group	N	Men	HS or less	Non-White
Control	14	21%	14%	29%
Text	22	32%	18%	46%
Postcard	23	39%	30%	48%

For our experiment, **texting** was a cheaper outreach method compared to sending **postcards**.



Cost per respondent (printing, assembly, & postage)	\$0.66	--
Flat cost for labor and text services	--	\$708
Total costs	\$1,210 (1,833 postcards)	\$708 (1,862 texts)
Cost per complete	\$55	\$30.78

Conclusions

Text and mailing outreach can be useful for increasing completion rates at the end of fielding

The results show that text and mailing outreach can be useful for increasing completion rates among those who are nonrespondents for the majority of the fielding period

There is some evidence that texting and sending postcards can increase completion rates for demographic groups that have the lowest completion rates

There is very little difference between the efficacy of text and mailing

Although texting was the cheaper outreach method, it's important to note that texting has lower coverage compared to mailing for ABS samples

Seminar Wrap Up

Texting Takeaways

Response increased from texting, with early texts often boosting completion rates early in the field period

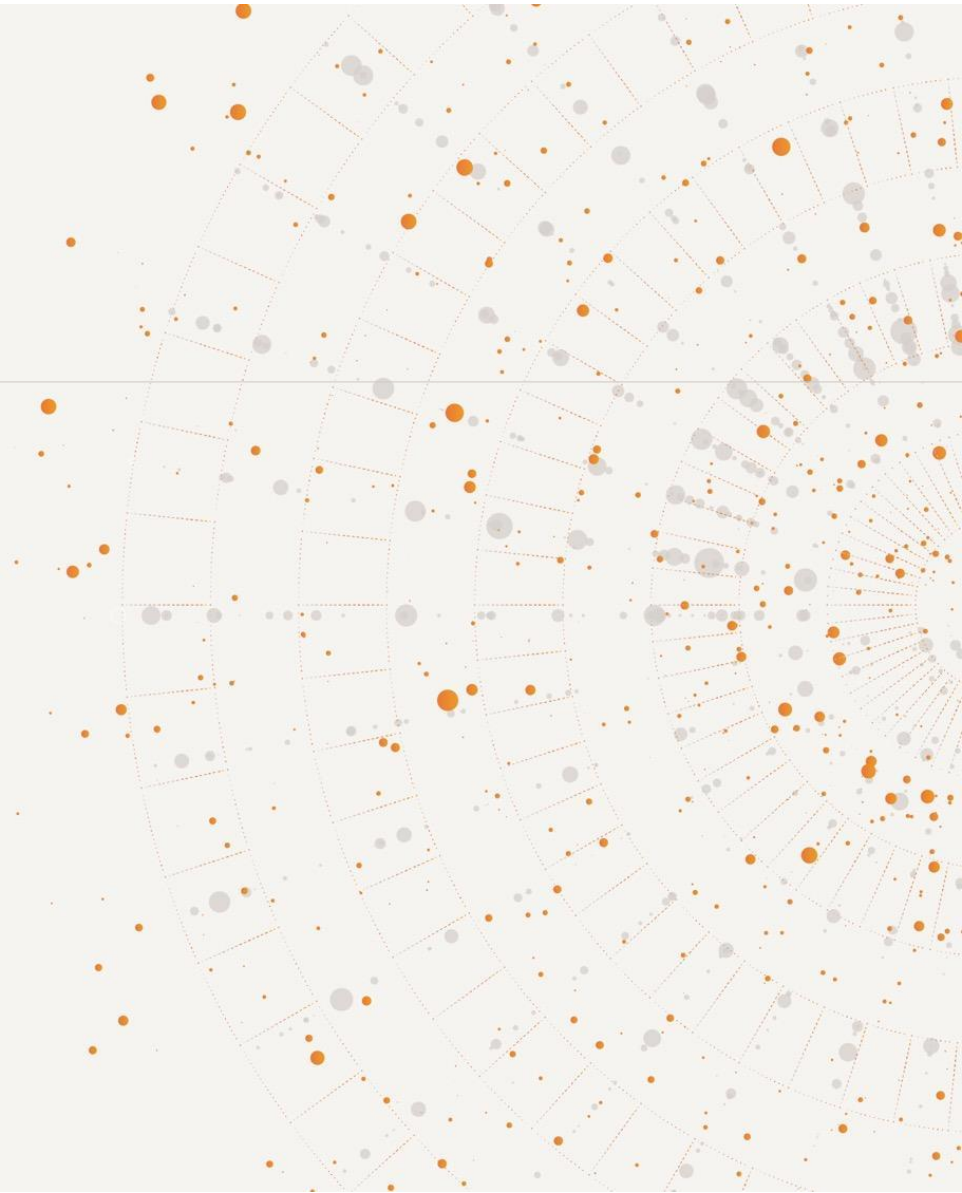
Introducing text as a new reminder mode helped improve response over another reminder in the same mode

Text recipients were more likely to complete the web survey via smartphone than another device

Faster response was seen with text and often at a lower cost than another mail contact

Sample representation was similar across experimental treatments

Questions?



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Thank you.

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