

Has Text Messaging Increased Participant Compliance in NHANES?

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What is NHANES?

- The National Health and Nutrition Examination Survey (NHANES) is one of several Centers for Disease Control and Prevention (CDC) surveys used for assessing the health of the United States population.
- The primary objective of NHANES is to collect high quality health and nutrition data and to release it for public use in a timely manner.



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NHANES

- 5000 Participants
- 15 Counties / year
- All ages
- 12 months / year
- HH screening and interview
- Mobile Exam Center exam, interview, blood draw



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NHANES



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Need people to be scheduled

NHANES Text Messaging Objectives

1. To reduce fasting noncompliance
(by sending out a text message reminder)
2. To improve the communication of STD
test results
(by sending out text message reminder to call-in)



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Although text messaging may have wider applications in a survey setting, this protocol will be a first step for NHANES to develop sound methods implementing this new technology

Background

- Text messaging study began in May 2011
- We conducted a pilot test to assess the acceptance rate for receiving text messages and
- To test the implementation of the text messaging systems.

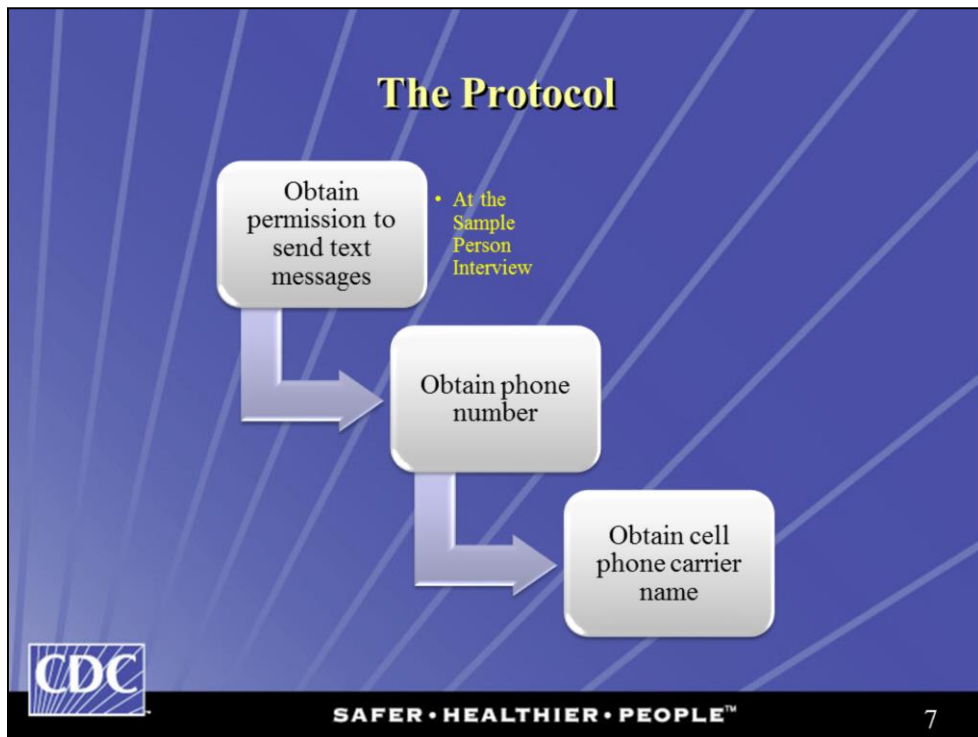


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Need to know if it would work at all from an IT standpoint and the SP standpoint.

We did not evaluate a test/control group. We wanted to know if we could do it? Should we do it?



16+ for themselves but parents of children 12-15 years of age would respond for their child

Information is gathered at the end of the Sample Person Interview.

First obtain permission to send text messages. Messages do not contain any confidential information. We also disclose that there may be fees associated with the text message depending on the respondent's plan. Secondly, obtain phone number and then cell phone carrier name.

If a participant or parent refuses, no text message will be sent

FASTING SUMMARY for OGTT



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OGTT Component

- In 2005, an oral glucose tolerance test was added into the survey.
- Goal was to reassess the prevalence of diabetes and impaired glucose tolerance in the US population
- Fasting glucose test is performed on all participants 12 years and older who are examined in the morning session after an 9-hour fast





Currently, when the interviewer appoints a participant to a MEC session, an appointment slip is filled out and copy is given to the participant.

In addition the NHANES field office, calls a participant the day before their scheduled appointment to remind them about the instructions on fasting.

Communication Challenges

- Reminder letters and phone calls are suppose to reinforce fasting instructions
- Administrative data had shown that these efforts are not achieving the desired results.
- We had retrained all field staff when necessary on the importance of conveying instructions on fasting.



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There is a usual lowering of the fasting non-compliance post retraining

We could not do better with existing protocol. Text messaging could give us additional reinforcement by utilizing an inexpensive and effective method to reach participants

What did we do?



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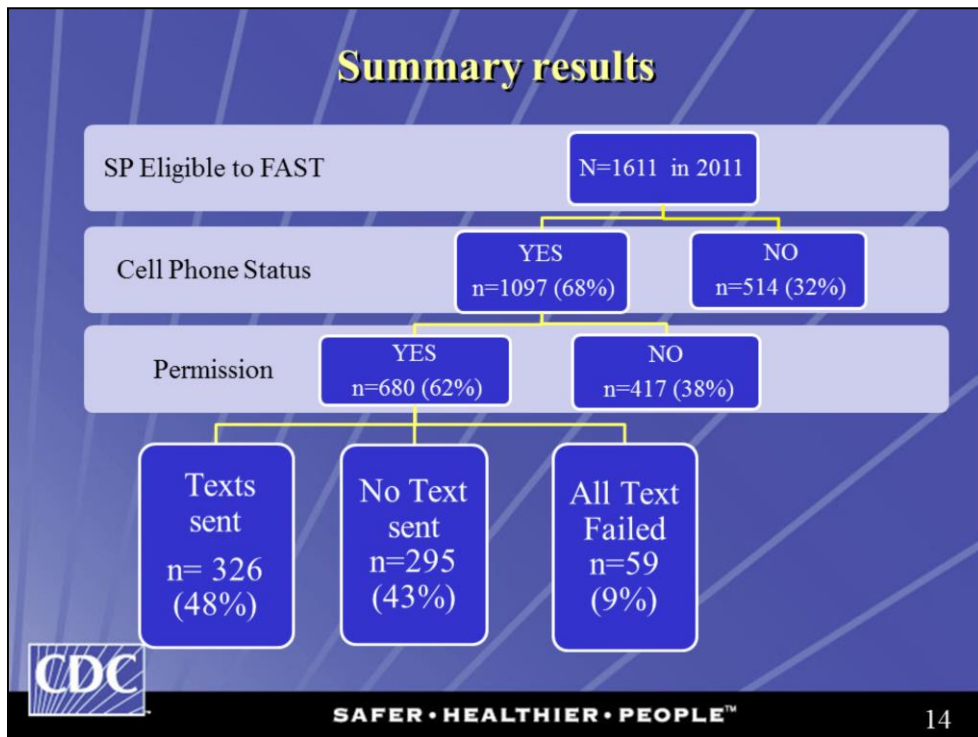
Texting a reminder to fast



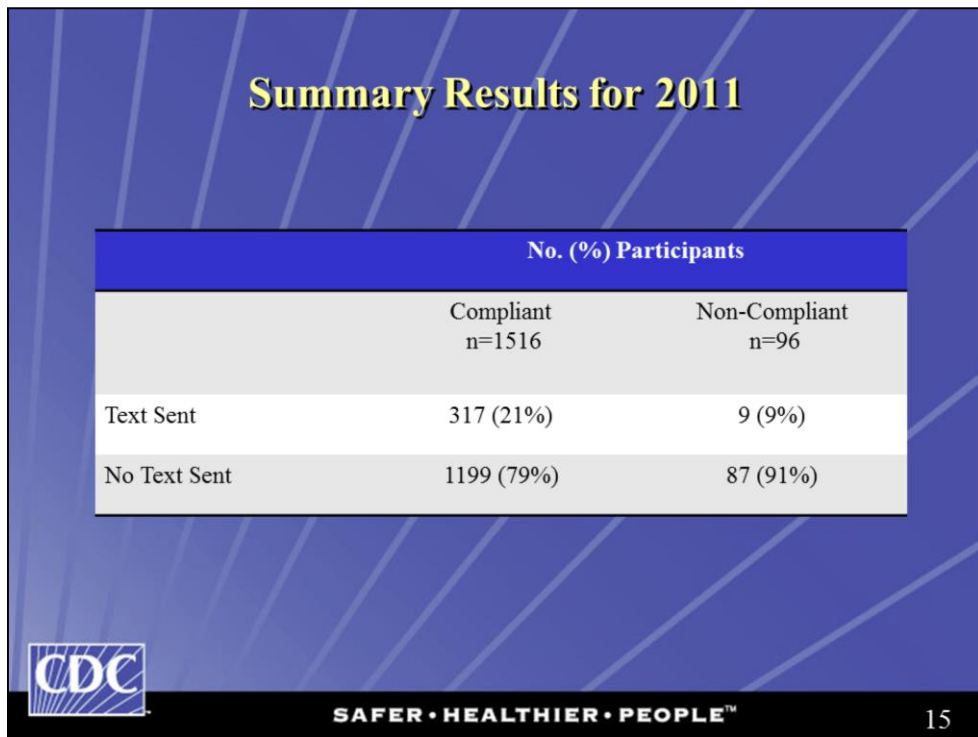
- Two text messages will be sent to participants ages 12 and older who are assigned to the morning session
- The message is sent at 1:00pm and 7:00 pm the day before the participant's examination



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No text sent- no time delay- if SP scheduled for next day. Even though Text messaging is instantaneous, there is an embedded operational delay



Did it work???

Observationally, it does not seem to hurt, it's inexpensive and no complaints were reported.

This is not a statistical test. In view of the numbers and with no evidence that text messaging hurt, this was a favorable outcome.

Of those who were sent a text message, we had a (97%) [$9/326 = 2.8\%$] success while of those who were not sent a text message we had (93%) [$87/1286 = 6.8\%$] success rate

Reporting Sexually Transmitted Disease Test Results



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The numbers are evenly distributed between genders but there were more women who did not fast. The age group that had the lowest compliance is the 60+

STD Component

- NHANES is the only national health survey that assesses sexually transmitted diseases
- Questions and testing are performed on both males and females 14 -59 years old
- Test results are not mailed to examinees for reasons of confidentiality
- Examinees are given a toll-free number to call with the use of a self-selected password, to obtain their results.



Current Test Result Protocol

Adults 18-59 years

If not called for STD results, a reminder letter is sent:

38 days after exam

48 days after exam

58 days after exam

Teenagers 14-17 years

If not called for STD results, a call is made:

38 days after exam

48 days after exam

58 days after exam



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The NHANES program sends up to three reminder letters to adults who have not called

The protocol also allows NHANES program staff to call teenagers (14-17 years) who have not called for results. NHANES make three attempts to reach teenagers.

When possible, a message is left with a family member or on an answering machine

Communication Concerns

- There has also been a general decline in the proportion of participants who receive test results.
- Administrative data have shown the proportion of participants who received STD test results by calling the designated toll-free line declined from 69% to 58%.



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Since sexually transmitted disease (STD) testing started in 1999, there has also been a general decline in the proportion of participants who receive test results.



What did we do?



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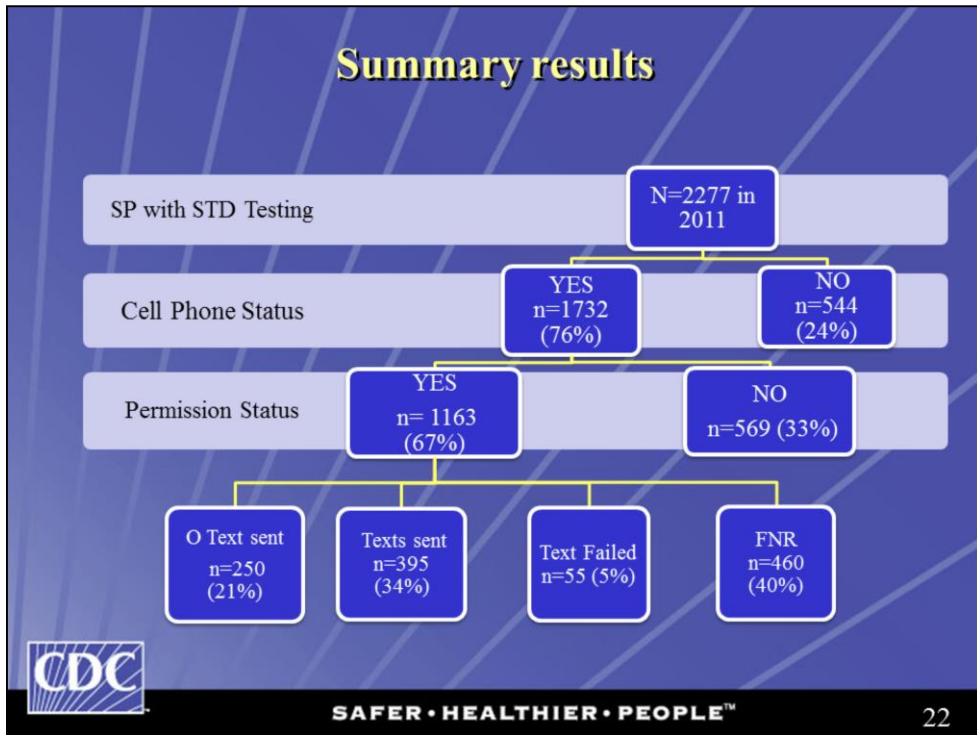
Text message reminder



- The message is sent at 3:00 pm on day 38, day 48 and day 58.



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One text n=231 (20%)

Two texts n= 106 (9%)

Three texts n=56 (5%)

Summary Results

No. (%) of Participants		
	Call-In N=1253	No Call- In N= 968
Text Sent	645 (51%)	463 (48%)
No Text Sent	608 (49%)	505 (52%)



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Impressions and Next Steps

- This was not a statistically based test
- These were visceral, targeted messages specifically used for a call to action
- On balance there were no complaints and easy to execute.
- In consequence, expanded use of text reminders for other NHANES component has been initiated.



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Data collection started in May 2011

This was not a full year worth of data

OGTT component did experience a slight decrease in non-compliance

STD reporting results are mixed- factors to keep in mind Fear and Time Zone

Expanded use of text reminders for other NHANES component

Acknowledgement

Thank you to Debbie Reed-Gillette for her thoughtful insight and support on this presentation



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<http://www.cdc.gov/nchs/nhanes.htm>



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