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SMS USA: Real world experiences fielding a text messaging-based smoking cessation program versus an attention control

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* Thank you for your interest in this presentation. Please note that analyses included herein are preliminary. More recent, finalized analyses may be available by contacting CiPHR for further information.

Background

- Smoking prevalence
  - 22-36% of young adults in the US ages 18-24 are current cigarette smokers (CDC, 2010; SAMHSA, 2010).
  - Over half of young adults report the desire to quit or cut down (Reeder et al., 2001).
- Few smoking cessation programs targeted specifically towards young adults
- Mobile phone use
  - 95% of US adults ages of 18-24 report cell phone ownership (Smith, 2011)
  - 97% of18-24 year old cell phone owners send and receive text messages daily (Smith, 2011)

Presentation Roadmap

1) Designing and implementing a national recruitment and enrollment strategy targeted to a racially and economically diverse sample;
2) Identification, frequency, and type of cell phone access problems among participants;
3) Problems and successes noted for different data collection methodologies
4) Challenges encouraging uptake and ongoing use of intervention components;
5) Retention of participants over a 14-week period

SMS USA: Brief program overview

- Randomized-controlled trial
  - Intervention:
    - 6 week intervention: 2 weeks pre-quit, 4 weeks post-quit
    - Messages based on cognitive-behavior therapy
    - Text buddy and Text crave features for Intervention group
  - Attention-matched Control:
    - 6 week program of messages related to improving sleep and exercise habits
- Eligibility criteria
  - Between 18-25 years old
  - Own a cell phone
  - Enrolled in an unlimited text messaging plan, or plan to enroll in the next 30 days
  - Smoke 4 or more cigs/ day at least 6 days/ wk
  - Seriously thinking about quitting in the next 30 days
  - Informed consent

Designing and implementing a national recruitment and enrollment strategy

Online strategies to recruit SMS USA participants:

Research activity	Facebook	GoogleAds	Craigslist
YAAC (n=7)	4	0	3
Beta Test (n=12)	Not used	Not used	9
Beta Test #2 (n=28)	2	0	26
RCT (n=164)	1	0	163

⇒ Craigslist was the most effective online strategy

Ensuring a racially and economically diverse sample

State	City	White	Black	American Indian	Asian	Native Hawaiian	Other	2+ races	Hispanic
FL	Tallahassee	57.9	35.3	0.3	3	0.1	1.6	1.9	20.1
FL	Fort Myers	53.9	34.4	0.4	1.2	0.0	8.5	1.6	2.2
GA	Valdosta	44.8	49.8	0.3	1.6	0.0	1.2	2.2	8.6
HI		26.9	2.4	0.3	38.5	8.8	1.3	21.7	10.2
IA	Des Moines	79.3	9.2	0.3	3.8	0.0	5	2.4	13.7
IA	Sioux City	84.3	2.8	1.6	2.8	0.4	6	2.1	10.5
ID	Twin Falls	93.0	0.2	0.5	0.8	0.5	3.2	1.8	27.4
IL	Chicago*	41.9	34.1	0.2	4.9	0.0	17.1	1.6	2.7
IN	Bloomington	85	4.5	0.4	7.1	0.1	0.9	2.1	8.9
KS	Topeka	78.5	11.7	1.3	1.1	0.0	4.1	3.3	9.6
KS	Wichita	75.2	11.4	1.2	4.0	0.1	5.1	3.1	5.5
State/ city average:		*67.57*	*18.72*	*1.57*	*3.37*	*0.25*	*5.77*	*2.72*	*14.26*
U.S. average:		**74.5**	**12.4**	**0.8**	**4.4**	**0.1**	**5.6**	**2.2**	**15.1**

Identification, frequency, and type of cell phone access problems among participants

- **Steps taken to identify problems**
  - Daily monitoring of the program online interface
  - Constant and immediate follow up with non-responding participants
  - Contact information easily accessible on project website
- **Type and frequency of access problems**
  - At both 2-day/ 7-day follow up (intervention only):
    - 2 (1%) phones no longer in service
    - All phones compatible with program
  - At 6-week follow up (intervention and control):
    - 11 (7%) phones no longer in service
    - 2 (1%) phones no longer compatible with program

Problems and successes noted for different data collection methodologies (phone, online, text messaging)

- **Phone**
  - Time consuming for participants to complete survey
  - Follow-up with participants (e.g., rescheduling) also time consuming
  - BUT provides chance for staff to engage w/ participant
- **Online**
  - Incomplete surveys (i.e., participant x's out before finishing)
  - Requires Internet access
  - BUT less time consuming compared to phone
  - So, participants more willing to do than phone survey
- **Text messaging**
  - Requires phone to be working and compatible with program
  - BUT most convenient for participant, so results in highest response rates

Challenges encouraging uptake and ongoing use of Text Buddy and Text Crave components

- **Text buddy**
  - Understandability of instruction text
    - Original text message: *Meet your text buddy! You can text each other for extra support with quitting. Visit www.stopmysmoking.com/buddy for instructions. Text 411669 to get started!*
    - Revised text message: *Meet your txt buddy! You can text each other for support. Text the word buddy followed by your msg to 411669. Visit stopmysmoking.com/buddy for help.*
  - Texting the word 'buddy' every time was too cumbersome
- **Text buddy/ Text crave**
  - Some participants actively choose not to use the features (e.g., "I just don't need it")

Retention of participants over the 14 weeks

- Participant retention over 14-week period

Follow up activity	Intervention (n=101)	Control (n=63)	Total (n=164)
2- day post quit date	92%	N/A	92%
7-day post quit date	87%	N/A	87%
6-week follow up	85%	86%	85%
14-week follow up	80%	81%	80%

- Retention was high for all follow up activities, and above the 70% retention feasibility aim

Reflections on experience

Based on the interest demonstrated by young adults to the online advertisements, there is a clear demand for a text-messaging smoking cessation program targeted towards this population.

⇨ Problems occur in field, but with ongoing team communication, flexibility, and responsivity, quality research can still be conducted.

Thanks!

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