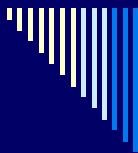


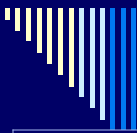
Text Messaging in the Management of Diabetes and Obesity

Ben Gerber, MD, MPH
Section of Health Promotion Research
University of Illinois at Chicago



Text Messaging/Weight Maintenance (ORBIT Study, PI: Fitzgibbon)

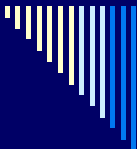
- 95 African-American women
 - First weight loss (in-person)
 - Then weight maintenance
- Less frequent face-to-face meetings
- Text messages (3+ each week)
 - Half identified their own personal messages and when to receive them



Example Text Messages

Healthy Eating	Don't 4-get to eat breakfast! STOP! Are you really hungry? Pack your lunch. Don't eat junk food...cook dinner!
Physical Activity	Make sure you get your walk in today. Do your total gym workout. Walk up those stairs. Did you walk today?
Encouragement	One step = to one less pound. Don't give up! Remember your goal! The more pounds you lose, the less you carry.

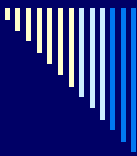
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Attitudes Towards Text Messages

- *"I have read the text messages...it's help[ed] me make better choices, of deciding what I'll have to eat for the day."*
- *"You should text more because that is like a little person on your shoulder helping you make the right choice."*

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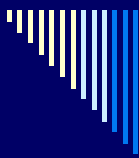
mytapp: Text Message App

- Created at UIC
- Ruby on Rails / Twilio
- Schedule text messages
- Recur (daily/weekly)
- Individual or group
- Store responses and download

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The screenshot shows the mytapp web interface. At the top, there is a navigation bar with links for Users, Templates, Subjects, Groups, Cohorts, and Account. The main content area is divided into two columns. The left column is for the user 'Gerber, Ben' and contains a 'Details' section, a 'Groups (7)' section, a 'Message' input field with a character count of 102, a 'Template' dropdown menu, and a 'Schedule' section with fields for time (08:00 AM), frequency (Daily), start date (03/18/2013), and end date (05/25/2013). A blue 'Schedule' button is at the bottom of this section. The right column is titled 'Messages (67)' and displays a list of messages. The first message is a 'Weekly message test for [NAME]' scheduled for 03:00 PM on Friday, Mar 22, 2013. Other messages include 'Hi Ben. No Class today due to weather. Please be safe out there. -Moving Forward', 'Got the test message, thank you', 'Additional test to clear error...', 'Another test for Ben', 'Weekly message test for Ben', 'OK', 'Writing back test...', 'Test write back', and 'Please eat healthy.'. A pagination bar at the bottom of the message list shows 'Previous', '1', '2', '3', '4', '5', '6', '7', and 'Next'.

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Conceptual Framework (Moving Forward, PI: Stolley)

Moving Forward
Weight Loss
Program for Breast
Cancer Survivors

Mediators

Individual: Self-Efficacy

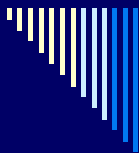
Interpersonal: Social Support

Community:

Perceived Access to Healthy
Eating and Exercise,
Community Resources

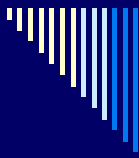
Outcomes

Weight
Quality of Life
Fatigue



Moving Forward

- In progress...
- 26 women from Roseland and South Shore attend weight loss classes
- Weekly messages:
 - Class reminders (2)
 - Support, information, motivation, self-efficacy, community resources (3)

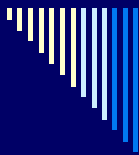


Effective Text Messages

- Follow up
- Tailoring
- Relevance
- Interesting/Interactive
- Link out
- Refinement

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*Tomlinson M et al. Scaling Up mHealth: Where is the Evidence? PLOS Medicine, 2013.
SMS Best Practices: Lessons Learned from CDC's Text Messaging Program*

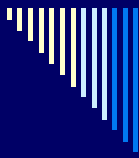


Lessons Learned

- Automated texts acknowledged
- Tailored messages desired
 - Personal goals
 - Class topics
- Reassurance of behaviors needed
- Time required to create messages



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Challenges

- Translating reminders into behaviors
- Information overload
- Predictability
- Finding the optimum frequency (daily?)
- Cost