Lessons Learned from Incorporating a Text Message Based Program into Elementary Schools

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Promising Findings

• Increase in health knowledge
  • Sexual health  (Lim et al, 2011)
  • Cervical cancer screening  (Lee et al., 2014)

• Increase in positive health behaviors
  – Child immunization  (Stockwell et al., 2012; Brown et al., 2014)
  – Smoking cessation rates  (Free et al., 2011; Rodgers et al., 2005; Whittaker et al., 2012)
  – Physical activity  (Lau et al., 2011)
  – Adherence to appointment schedules  (Koshy et al., 2008; da Costa, 2010)

• Some program results have produced negative or inconclusive findings  (Cocosila et al., 2009; Schwerdtfeger et al., 2012)  

TEXT2BHEALTHY
FOOD AND FUN! TEXTING TIPS FOR FAMILIES
Who Texts?

• U.S. adults
  – 90% own a cell phone (Pew, 2015)
    – 64% have a smartphone
    – 81% send/receive text messages

• Lower income audiences (Pew, 2015)
  – 13% of those who make <$30,000 are smartphone-dependent

• Racial and ethnic minorities (Pew, 2014)
  – 90% of Black and 92% of Latino persons use cell phones

• Text messaging is the most widely-used smartphone feature among users
Benefits of Text Messages

• Access to a diverse audience (DHHS, 2013)
  – Hard-to-reach populations
• Relatively low cost to researchers and participants (Fjeldsoe et al., 2009)
• Easily and quickly sent to a large audience
• Perceived as personal and informal (Gold et al., 2010)
• Easy to incorporate into everyday life
  – Remote (for researchers)
  – Instant & in context (for participants)
  – Reduce participant burden (Marshall et al., 2013)
• Real-time, interactive evaluation
How Has Texting Been Used in Health Promotion?

- Improve attendance in health care settings (Downer et al., 2006; Geraghty et al., 2008; Koshy et al., 2008; Leong et al., 2008)
- Educational/informational- targeted or general
- Reminders
- Develop and track goals (Ahlers-Schmidt, 2010)
- Measure real-time behavior, check-ins
- Feedback/advice

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FOOD AND FUN! TEXTING TIPS FOR FAMILIES

- Social and Cultural Norms and Values
  - Belief Systems
  - Heritage
  - Religion
  - Priorities
  - Lifestyle
  - Body Image

- Sectors of Influence
  - Government
  - Public Health and Health Care Systems
  - Agriculture
  - Marketing/Media
  - Community Design and Safety
  - Foundations and Funders
  - Industry
    - Food
    - Beverage
    - Physical Activity
    - Entertainment

- Environmental Settings
- Individual Factors
- Food and Beverage Intake
- Physical Activity

- Demographic Factors (e.g., age, gender, socioeconomic status, race/ethnicity, disability status)
- Psychosocial Factors
- Knowledge and Skills
- Gene-Environment Interactions
- Other Personal Factors

- Homes
- Schools
- Workplaces
- Recreational Facilities
- Foodservice and Retail Establishments
- Other Community Settings
Targeted Messages

• Elementary schools can help us to know about....
  – Retail
  – Recreation
  – Libraries
  – Weather
  – School schedules, testing, events
  – Lunch menus
  – Local events

.....without even knowing your name!
Nutrition education
School activities
School meals
Active recreation

Fresh berries like strawberries & blackberries are in season now. Visit the Catonsville Market for fresh local fruits & veggies. You can even use EBT cards!

Looking for Friday Fun? Take the family to the FREE Light the Night carnival at 16 Washington St, Cumberland. There will be a bounce house slide and much more!

Oakland Library hosts a Dr. Seuss Party Monday @ 630pm. Bring your child & get a free book! Call to register. While there, find a book on fruits & veggies!

Lansdowne K students had a lesson today on seeds, soil & sun. All students took home a newsletter. Check the backpack for more info on growing plants at home.

Local events
Libraries
SNAP and WIC
Food retail
Farmers’ markets

It's National School Lunch Week! To celebrate encourage your child to try a healthy food. Yough Glades is serving broccoli and orange wedges tomorrow!
Program Recruitment

- Backpack flyers
- Posters
- Incentives
- Events (paper, tablet enrollment)
- Pre/Post Survey-Recruitment Link
- Text2BHealthy Website
- School channels to promote
  - Newsletters, robocalls, parent nights, etc.

**Green** – self-enrollment method
**Purple** – manual enrollment method
Enrollment Barriers

- 26% of non-participants reported not knowing how to enroll or unsuccessful attempts to enroll
- Concern about cost of texting
- Apprehensive about program content
- Disabled short codes
- Knowledge of how to send a message to someone not in address book
- Enrollment of non-targeted individuals
  *Consider Drop-Outs*
Text2BHealthy Program and Participants

- Reaches parents of elementary school children
- 2 community-specific text messages per week

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<td></td>
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Text2BHealthy Evaluation

• Years 1-3:
  – School-wide pre then post survey
  – Texted questions
  – Focus groups
  – Non-intervention/control schools

• Year 4:
  – Participant self-selected and incentivized pre then post surveys and texted questions
    • Maximum of $75 gift card to local grocery store
  – Non-intervention/control schools
Healthy Families Survey

• Pre-then-post tool (September and May)
• Mailed/online surveys
• Eating behaviors, physical activity behaviors, food availability/accessibility, role modeling

Thank you for agreeing to complete this survey. As you read through the questions and provide answers, please:
- Think about what you and your child usually do.
- Do not count food sales or activity done during your child's time at school.
- Answer questions in reference to your youngest child in elementary school.
- Choose only one answer for each question.

What we eat or drink at home:
1. My child eats vegetables (including fresh, frozen, or canned vegetables).
   - Never
   - Rarely
   - Some days
   - Most days
   - Every day

2. My child eats fruit (including fresh, frozen, dried, or canned fruit).
   - Never
   - Rarely
   - Some days
   - Most days
   - Every day

3. My child eats breakfast ___ days a week.
   - 0
   - 1
   - 2
   - 3
   - 4
   - 5
   - 6
   - 7
Text2BHealthy Evaluation Group

- N=364 intervention parents randomly selected into evaluation group
  - 171 returned pre-tests (49.7%)
  - 142 returned post-tests (83.4%)
    - 142 total matched pairs
- N=10 parents enrolled from control schools
  - 9 matched pairs
  * Data insufficient for inclusion in data analysis
Text2BHealthy Outcomes: Program Feedback

• 69% of participants felt the information in texts applied to their lives most or all of the time.
Text2BHealthy Outcomes: Children’s Eating Behaviors

• 37% of children increased frequency of eating more than one type of vegetable a day.

• 30% of children decreased frequency of soda/sugar-sweetened beverage consumption.
13%

INCREASE IN THE NUMBER OF CHILDREN WHO:

EAT FRUIT EVERYDAY

PRE: 32%  POST: 45%

EAT VEGETABLES EVERYDAY

PRE: 37%  POST: 50%

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SNACKING BEHAVIORS

FRUITS & VEGETABLES
INCREDASED

PRE  POST
49%  56%

CANDY, CHIPS & COOKIES
DECREASED

PRE  POST
33%  21%

TEXT 2B HEALTHY
FOOD AND FUN! TEXTING TIPS FOR FAMILIES
Text2BHealthy Outcomes: Parental Role Modeling

After Text2BHealthy:

- 9 out of 10 parents eat vegetables in front of their child every day
- 8 out of 10 parents eat fruit in front of their child every day
- 5 out of 10 parents talk about fruits and vegetables with their child
Text2BHealthy Outcomes: Children’s Physical Activity

60 MINUTES OR MORE = THE CDC DAILY RECOMMENDED AMOUNT OF PHYSICAL ACTIVITY FOR KIDS

AFTER TEXT2BHEALTHY: AN AVERAGE OF 9 OUT OF 10 KIDS EXCEEDED THE DAILY RECOMMENDED AMOUNT
Text2BHealthy Outcomes: Children’s Sedentary Behavior

• 35% of children decreased the number of hours of TV watched per day.
Text2BHealthy Outcomes: Food Accessibility/Availability

- Availability of fruits and vegetables
  - 87% of parents reported keeping fruit ready for their children to eat most or every day.
  - 79% of parents reported keeping vegetables ready for their children to eat most or every day.

- Parents’ shopping practices
  - 33% of parents decreased frequency of buying chips, candy, or cookies.
  - 20% of parents increased frequency of buying fruits.
Evaluation Texts

- 10 evaluation texts sent to evaluation group
- 10-minute reminder sent prior to the texted question increased response rates
Contingency Question – With Reminder

- **Reminder text:**
  Text2BHealthy checking in again! We will be texting you a question in about 10 minutes. We want to hear from you!

- **Evaluation question:**
  Last week, we texted about sharing family meals, even during the holiday season. Did you sit down & eat a meal with your child this past week? Reply YES or NO.
  - Sent to 326
    - 163 responses; **50%** response rate

- **Follow-up question:**
  That's great! How many days did your family eat a meal together? A. 1-2 days, B. 3-4 days, C. 5-6 days, D. Everyday
  - Sent to 160 “Yes” responses
    - 152 responses; **95.0%** response rate
Texted Question Response Rates

No incentives, no reminders

Incentives without reminders

Incentives and reminders

Evaluation Text Response Rates

Program Year

Year 1

Year 2

Year 3

Year 4

No incentives, no reminders

Incentives without reminders
Recommendations for Implementation

• Seek substantial buy-in from partners
  – Can help reach audience, promote and incentivize enrollment, and connect program to other activities

• In-person enrollment is critical!
  – Offer to collect mobile phone numbers and manage enrollment for parents; have alternatives

• Focus group test materials, messages
  – Widespread use of cell phones (smart phones, in particular) and text messaging
  – Suggestions for appropriate messages (no textisms, personalized)
  – Preferences for timing of messages
Final Notes

• Targeted and incentivized evaluation strategies work!
• Think about sending “prompt” texts if wanting responses back
• Be flexible – be open to modifying your processes and ALWAYS learn from previous experiences!
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