Smoking Cessation: Do We Have an App for That?

Frontiers in Tobacco Control
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Topics I’ll cover

I. Intro to mHealth
II. Why mHealth for Smoking cessation?
III. Evidence
mHealth can be defined as:

“Health related services delivered via mobile communications devices”

[Vital Wave Consulting, 2009]
State of the field of mHealth

“The science of mobile and wireless health (mHealth) is a nascent and rapidly growing field. These technologies provide the potential to advance research, prevent disease, enhance diagnostics, improve treatment, reduce disparities, increase access to health services and lower health care costs in ways previously unimaginable.”

# mHealth for Tobacco Control

## mPrevention
- **mAdvocacy**
  - Messages sent to population on:
    - Harms of Smoking
    - New Anti Smoking Laws to help enforcement
    - Health risks from smoking
    - Supported by mass and social media campaigns

- **mTraining**
  - Mobile based training of Health workers
    - Help spread advocacy
    - Help direct smokers to assistance
    - Help pregnant mothers to avoid tobacco use
  - Mobile based training of teachers

## mEnforcement
- **mSmokeFree**
  - Smoke free zone detectors
  - Smoke measurement devices
  - GeoTagging and Heat maps of smoke free zones, POSs etc

- **mIllicit**
  - Tracking illicit trade

## mCessation
- **SMS Based**
  - Smokers recruited through
  - Health system databases, Mass campaigns, Quit lines
  - Automated messages sent based on Algorithm to different sets (willing quitters, non willing, sponsored, by age, by level of addiction etc.)
  - Algorithm to pick Different messages and different frequency based on attributes
  - Follow-up

- **Apps Based**

## mSurveillance
- Data from all other tools feed into a monitoring and evaluation mechanism for ongoing assessment and
- Measuring use and impact
- Conduct surveys for measurement
Areas for mCessation

1. SMS Programs
2. Smartphone Apps
(3. Mobile Web)
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I. Intro to mHealth

II. Why mHealth for Smoking cessation?

III. Evidence
Impact = Efficacy X Reach

(Abrams et al. 1996)
IIa. Reach
Reach of Mobile Phones

- Use widespread in developed and developing countries
  - 67% of people globally;
  - 87% of US adults (Pew 2013)
  - Globally greater penetration than landlines, PCs, and television

- Of those with cell phones in US,
  - 80% Text message
  - 45% have smartphones
    (Pew 2013)
Infiltration: “We Marry Them!”

- 82% of mobile phone owners never leave home without their phones
- 68% sleep with device by bedside
- We invite them to interrupt us (at family gatherings, at restaurant, at board meetings)
- Increasingly rate as something “not willing to live without”
People will stop doing almost anything to check their text messages
Reach of mHealth Services

- 31% use cell phone to look for health information (2012)
- 11% report having downloaded a health app
- 9% report receiving health-related text

(Pew 2013)
mCessation Text Messaging Services

- New Zealand Quitline (since 2008)
- UK National Health Service
- Australia
- U.S.
  - SmokefreeTXT
    - Text QUIT to 47848
  - Text2Quit
    - 30,000+ users since April 2011
    - Integrated with 1-800-QUITNOW in 8 States
- Coming soon: Costa Rica and Israel
mCessation Apps

Android Apps

Quit Smoking: Cessation Nation
RON HORNER / HEALTH & FITNESS

Quit smoking! Join the Nation of Ex Smokers Join the Cessation Nation. Quit smoking with the over 17 million people in the USA who try to quit smoking every year or s...

Quit Smoking
AZATI / HEALTH & FITNESS

Quit is a widget application to gradually wean you from dependency on cigarettes Quit is a widget application designed to gradually wean you from dependency on cigaret...

Time To Quit Smoke
VANTUSMANTUS / HEALTH & FITNESS

This application was created for people who want to quit smoking. With the application you can find out how much time has passed since you last smoked cigarettes, how...

Quit Smoking
LUIS SALCEDO / HEALTH & FITNESS

helps you quit smoking by showing the money and time you have saved What Happens When You Quit? helps you quit smoking by showing the money and time you have saved
IIb. Efficacy
Attributes that may promote Smoking Cessation (Efficacy)

1. Help anywhere and anytime
2. Proactive messages interrupt you
3. Interactive help
4. Personalized help
5. Increase contact time
6. Unobtrusive and confidential
7. (Goes with smoking)

Source: Abroms, Padmanabhan, and Evans 2011
About Text2Quit

- Interactive, personalized text messages for quitting smoking
  - Supporting website and emails
- Messages are timed around quit date
  - Proactive: Advice on quitting, peer ex-smoker messages, medication msgs, games, and relapse messages.
  - On-Demand: need additional motivation, having a craving, relapse.
- 2-3 messages/day following quit date
Advice on Quitting

Text2Quit. Tomorrow’s the big day! Throw out all your cigs & clean out ashtrays. Keep busy & avoid smokers. Text CRAVE to fight cravings.

Peer ex-smoker msg

Dee/Text2Quit. 4 more days to go. Don’t talk yourself out of it. Think of why you’re quitting & stay committed. You’ll love being smoke-free! Ttxt STOP2end.

Medication msg

MEDS/Text2Quit. Be sure to have your NRT Patch on hand. Open the pack & read the instructions so you’re ready to use it tomorrow when you quit. Ttxt STOP2end.

On demand games & tips

Text2Quit. Reply TIP for tips to get through your craving or reply GAME to play celebrity trivia and earn Craving Points. Std msg rates apply. Ttxt STOP2end.

Check-ins

Text2Quit. Please be honest, did you quit smoking today? Reply YES or NO. Ttxt STOP2end.
Interaction:

- **Pre-Quit**
  - Track smoking
  - “Are You Ready?” survey
- **Quit & Post-Quit**
  - Track how day went (urges and smoking)
  - Weekly smokefree pledge
  - “Did you Quit?” surveys

Text2Quit. Time for a pre-quit check-in. Reply with the number of cigarettes you smoked yesterday (e.g. 16). Find out if you've met your goal.
Personalization

- QuitDate/No Date
- Reasons for quitting
- Triggers
- Gender
- Use of pharmacotherapy
- Stats on money saved and health benefits accrued

Text2Quit. Lorien’s reasons to quit are: To improve my health, To save money, So that I can be there for my kids Lailah, David & Maya
24-7 Help

☞ CRAVE
☞ REASONS
☞ SMOKED
☞ STATS

(1/2) Text2Quit. Sorry to hear you smoked! You made a mistake, but you can go back to being a non-smoker.

(2/2) Is this a SLIP where you can go back to not smoking? Or RELAPSE where you are now smoking again? Reply SLIP or RELAPSE.
Interactive: (Goal setting, tracker, feedback); social networking