Advancing Quitline Practice through Innovations and Research

NAQC Conference 2017 • March 20-21 • Austin, TX
Advancing Quitline Practice through Innovations and Research

Linda Bailey, JD, MHS
March 20-21, 2017
Austin, Texas
WELCOME
NAQC Conference 2017!

153 Attendees

39 States represented

5 Provincial service providers

1 EU country represented
Acknowledgement and Thanks!

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NAQC Conference 2017!

5 Plenary sessions

16 Breakout sessions

27 Breakout presentations
## Quitline Progress on Benchmarks for FY16

<table>
<thead>
<tr>
<th>METRIC</th>
<th>FY16</th>
<th>GOAL</th>
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<tbody>
<tr>
<td>Treatment reach</td>
<td>1.0%</td>
<td>6%</td>
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<tr>
<td>Spending per smoker</td>
<td>$1.91</td>
<td>$10.53</td>
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<tr>
<td>Quit rate</td>
<td>30.2%</td>
<td>30%</td>
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Congratulations!

States that met/exceeded at least one goal:

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<th>AL</th>
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Pathways to Behavior Change: Celebrating Success and Doubling Down on Challenges

Erik Augustson, PhD, MPH
Director, Smokefree.gov Initiative
Tobacco Control Research Branch
Behavioral Research Program
National Cancer Institute
OUTLINE

- Background & challenges
- Quitlines success & challenges
- mHealth potential
- mHealth design issues
- Smokefree.gov
- Final considerations
Core Phases of Behavioral Interventions

- Reach
- Initial Engage
- Sustain Engagement
- Re-engage
  - High drop out rates
  - Common across all treatment modalities
Theoretical Impact of an Intervention

• Impact = Reach x Effectiveness
  – Implementation & Dissemination

• Impact = Reach x (Initial Engagement + Sustained Engagement)
  – Drill down to elements & objectives in a treatment, and treatment components
Core of Empirically-Based Cessation Tx

- Encourage the use of FDA-approved pharmacotherapy
- Consider potential benefit of combination pharmacotherapy
- Behavioral Treatment/Counseling
  - Encouragement to quit
  - Motivation enhancement
  - Empirically-based tobacco content
  - Empirically-based cessation related content
  - Problem solving skills
  - Withdraw and craving skills training
  - Stress & mood management
Challenges for Traditional Intervention Sustainability

- Cannot match need
- Lack of infrastructure
- Expense
- Realities of healthcare system clinical work flows
- Long gaps in communication between contact
- *Consumers don’t use them
HOW TO ADDRESS?

- Quitlines
- Mobile health (mHealth)
Potential of Quitlines: What You All Have Accomplished

• Proven effectiveness
  – 30 years of clinical research
• With multiple sub-populations
  – Population specific protocols
    • Pregnant smokers
    • Spanish & Asian languages
• Platform can deliver the elements of empirically-based cessation treatment
• Existing infrastructure in all states
• State & national tobacco control programs cornerstone
Core Quitlines Challenges

• Reach is not optimal
  – ~1% of smokers

• Can engagement be improved?

• Core challenges are cyclic & driven by funding
  – Outstanding ROI, and cost seen as too high
  – Funding is fragile
  – Flat and declining budgets
Challenges for Quitline Optimal Impact

• Expanding reach
• Costs of expanding staff
• High dropout rates (Engagement, Sustained Engagement)
  – Common across all treatment modalities
  – Implications for outcome & staffing
• Long gaps in communication between contact
• Increasing reliance on alternate forms of communication
Possible Strategies to Address Challenges

- **Cost Sharing**
  - Insurers
  - Employers
  - Partners
- **Expanding Quitline services**
  - e.g., Triage
- **New treatment elements**
  - Motivational Enhancement (Self-determination theory)
  - Acceptance-based treatment approaches
  - Ambivalent smokers
- **Mobile Health (mHealth)**
MOBILE HEALTH (MHEALTH)

- The use of technology to remotely monitor, track, respond and/or deliver an intervention for health related events.
- Examples of common technology used: mobile-optimized websites, text messaging, Smartphone applications (Apps), and remote sensors.
<table>
<thead>
<tr>
<th></th>
<th>Passive</th>
<th>Active</th>
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<tbody>
<tr>
<td><strong>Monitoring/Tracking</strong></td>
<td></td>
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<tr>
<td>Medical</td>
<td>Physiological data from a sensor</td>
<td>User enters the values from a blood glucose reading, reports taking medication</td>
</tr>
<tr>
<td>Behavioral</td>
<td>Location, physical activity, or lack of activity</td>
<td>User reports activity, food eaten, smoking, alcohol use, mood</td>
</tr>
<tr>
<td><strong>Respond/Intervention</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical</td>
<td>Medication reminders, appointment reminders, If physiological data meet threshold the call is made to user</td>
<td>User responds to Healthcare Team direction or feedback from the device</td>
</tr>
<tr>
<td>Behavioral</td>
<td>Behavioral treatment delivery, Messages sent to user providing skills training, management of mood and craving, social support</td>
<td>User responds to the behavioral treatment or feedback from the device</td>
</tr>
</tbody>
</table>
Why mHealth Platforms?

• Available communication technologies
• Strong uptake in target populations (Pew Research Center)
  – Cell ownership: 95% Americans
  – Smartphone: 77% Americans
  – High across all demographic categories
• Platform functionality consistent with Tx delivery
• User engagement in the technology matches Tx needs
• Can be independent or integrated into other services
Key mHealth Potential Intervention Benefits

- **Reach**
  - Large audiences
  - Underserved audiences

- Reduces cost burden on healthcare system

- Engagement with intervention platforms
  - Increase access to intervention
  - Decrease barriers to participation (scheduling, transportation, etc.)
  - Decrease space/time gap between treatment & behavior
  - Seamlessly integrate user interaction with treatment within their daily life
  - Interactive functionality & improved “dose”
mHealth Challenges

- “Lighter touch” intervention
- Type of device
- Consistency of cell phone access
- Multiple users per device
- Fee structures and cost
- Populations with Low Literacy
- Role of mHealth interventions with in larger public health infrastructure
  - Integration with existing cessation and clinical services
Quitlines and mHealth

- Quitline Services: Current Practice & Evidence Base (NAQC; Anderson et al., 2016)
  - [link](http://c.ymcdn.com/sites/www.naquitline.org/resource/resmgr/issue_papers/Quitline_Services_issue_pape.pdf)
- 98% have web-based resources
  - Graham, et al, 2017
- 62% have text-based services
  - Hall, Cole-Lewis & Bernhart, 2015
  - Scott-Sheldon, et al., 2016
- 64% have online interactive counseling
  - Support Data?
- Smartphone Mobile Applications (Apps)
  - Limited data, increasingly promising
Quitlines and mHealth

- Solid uptake of mHealth resources
- Are they being used to best potential?
  - Platforms to deliver cessation interventions
  - Means to increase Reach & Engagement
- Can they be improved?
  - Leveraging functionality of platforms
- Can they be better integrated into cessation services?
  - Treatment extenders
  - Stand alone options for non-callers
Technology and platforms are dynamic

Platform functionality
  - What does it do?

Platform limitations
  - What does it not do or do poorly?

How are people using/not using the platform?
  - Having platform users on your team is crucial

What is your goal for being on this platform?
  - Kinds of information?
  - Kinds of tasks?
  - Frequency?
  - Does your goal match user behavior?
Text-Based Platforms

- **Tx Use:** Deliver behavior-change intervention, assessment, user-generated request for help (Keywords)
- Proven efficacious, easily automated, bidirectional allows “conversations”
- Low psychological cost to read text, easily personalized specific populations/user
- Text-format only (changing), user phone access may vary, multiple users access phone, cost, limited character length
Text-Based Platforms

- Widely used, broadly known & performed behavior
- Low-end technology: Phone-based, do not need software & is “device agnostic”
- Not all cell-service providers provide true text messaging
Smartphone Applications (Apps)

- High functionality allows for extremely wide range of uses
- Can draw on a variety of data sources
- External sensors
- Typical user has 40-60 apps on their phone
- Use ~5 regularly-=> Frequently updated personally-relevant content
- Reason to return frequently
Smartphone Applications (Apps)

-Tx use: High functionality/High interactivity cessation intervention
-Incorporate many features and broad content
-Structured or highly personalized & user-driven
Smartphone Apps Have Not Lived Up to Potential

- Many apps are not empirically-based
- Easy to ignore
- Functionality not appropriately leveraged
- Not designed to sustain engagement
Ways to Address App Limitations

- Utilize the functionality
  - Delivery of messages
    - Message push features
    - Geo-tagging & Geo-fencing
    - Signal triggered events
    - Time, location, user input, sensor data
  - EMA/EMI to increase knowledge of user
    - Improve generic treatment
    - Allow for improved tailoring of intervention
    - Increase engagement
  - Multimedia to improve interactivity
    - Use of pictures, video, audio, etc.
- Machine learning
  - Use active and passive data to tailor the intervention and the intervention delivery
mHealth Strategies to Expand Referrals

- LiveHelp pop-up on website
- Cross promotion via multiple mHealth platforms
- Electronic Health Records
  - Closed-loop electronic referral
  - NCI-Univ of WI- EPIC pilot project
Challenge of Multimodal Services

- Integration of the technology is *difficult*
  - Devil is in the details
- What is goal of each platform in itself?
- How does this goal align with other platforms (e.g., quitline structure and services)?
- How to understand data gathered across platforms?
- How to coordinate treatment platforms?
A Few Thoughts on mHealth Evaluation Issues

- Traditional RCTs less relevant?
- Alternative designs
  - Factorial
  - ABA
  - Iterative
- Alternative data
  - User data
  - Metrics
  - Google Analytics
SMOKEFREE.GOV INITIATIVE (SFGI)

- Empirically-Informed Behavioral mHealth Intervention
- Reach & engage multiple groups
- Multiple health risk behaviors
- Population scale
  - 3,000,000-6,000,000 users/year
- Efficacy 10-25%
- Multi-platform
  - Websites
  - Text-based intervention programs
  - Smartphone Apps
  - Social media platforms
SFG Topic Areas Include:

- Smoking and Smokeless Tobacco Cessation
- Healthy Lifestyle: Diet, Physical Activity, Weight Management
- Depression & Anxiety Management
- Stress Management
- Pre & Post Natal Health
- Parenting and Relationships
- Veteran’s Health
- LGBT Topics
- Symptom management in Cancer Survivors
SMOKEFREE.GOV INITIATIVE DOMESTIC PROJECTS

- **Smokefree.gov**
  - Mobile-optimized Website
  - Mobile apps: QuitGuide; quitSTART
  - LiveHelp
- **Smokefree Women**
  - Mobile-optimized Website
  - Mobile apps: QuitGuide; quitSTART
  - Expanded content: diet, physical activity, weight management, Pre/Post Natal Health
- **Smokefree Teen**
  - Mobile-optimized Website
  - Mobile app: quitSTART
- **Smokefree Español**
  - Mobile-optimized Website
- **Smokefree 60+**
  - Mobile-optimized Website
- **SmokefreeVET**
  - Mobile-optimized Website
  - Social media: Facebook
- **Smokefree Pregnancy**
  - Web content
  - Online video
  - SmokefreeMOM text
- **Springboard Beyond Cancer**
  - Mobile-optimized Website
- **SmokefreeTXT**
  - 15 Domestic Libraries
  - Social Media (SFTXT Facebook)
- **Social Media Platforms**
  - Facebook
  - Twitter
  - Pinterest
  - Instagram
Emerging Technologies

- Integration of Electronic Health Records and Cessation Resources
- Use of “Chat Bots” and Interstitial Apps as means to expand functionality, reach & engagement of text-like programs.
  - Natural Language Processing
  - Machine Learning
- Increase relevance of data to users via Ecological Momentary Assessment and other strategies
- Smartphone Apps: Engagement, Expanding geolocation functionality & integration, Just In Time Interventions, Exploiting device functionality
Difficult Choices: Target? Resource Mix?

- Easy to reach with good outcomes
  - Outcomes-based approaches
- Harder to reach, more vulnerable with poorer outcomes
  - Target-reaching approaches
- When and how to explain to your funder?
Given all that, at the end of the day

- This work matters
- What you do is support some of our most vulnerable, marginalized fellow humans
- In an impossibly difficult task
- In a context where they have little effective support & high levels of stress
- after they have been manipulative by an industry with an insatiable appetite for profits
- Thank you for doing such crucial work
- **Give yourselves a round of applause!!**
Thank you for your attention
Questions?
Questions for Discussion

**PROMOTION:** For U.S.: If the national media campaign TIPS FROM FORMER SMOKERS were to go away, how would your quitline maintain or increase call volume?

For Canada: Is promotion on cigarette packages enough? What else is needed to increase call volume?

**SUSTAINABILITY:** What information do you need to take to your funders in order to enhance the sustainability of your program?

**IMPACT:** Consider the formula Impact = Reach x (Initial Engagement + Sustained Engagement). What elements of your treatment protocol address each of these variables (Reach, Initial Engagement, Sustained Engagement)? Are there easy modifications you could make to enhance Impact by improving performance on these variables?

**mHEALTH:** Based on the presentation, what are three actionable activities you could do to improve your use of mHealth platforms? If time allows, please also consider who on your team is most suited to enhance your use of mHealth and how you can better engage him/her in big picture planning.
BUZZ GROUP ACTIVITY

Each table will receive a copy of the questions.

Please discuss the questions and decide which ones you want to respond to (one, two, three or all of them)!

You will have 15 minutes for discussion at your table.

Write down highlights from your discussion to submit.

Volunteers will report in on highlights from discussions.
Thanks to our sponsors and supporters for making NAQC Conference 2017 possible!

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<td>ClearWay MNESOTA</td>
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<td>ARIZONA DEPARTMENT OF HEALTH SERVICES</td>
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<td>American Cancer Society</td>
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