There’s an app for that – but it is usable?
Using apps for smoking cessation among young people with serious mental illness

Mary Brunette, MD and Minda Gowarty, MD
C. Everett Koop Tobacco Symposium
September 27, 2019
Disclosures

Funding Sources
• Dartmouth Center for Technology and Behavioral Health (CTBH) Pilot Grant
• Health Resources and Services Administration (HRSA) T32 Postdoctoral Fellowship Grant, Department of Community and Family Medicine
• Substance Abuse and Mental Health Services Administration (SAMHSA) funded large demonstration project

Conflicts of Interest
• none
Agenda

• Background/Rationale for learning more about smartphone apps for cessation and their usability in special populations
• Study Design – how did we learn more about young people with mental illness and their interest and ability to use apps for smoking cessation
• Preliminary Findings
• Preliminary Conclusions
Smoking in young people with mental illness

- **Serious Mental Illness (SMI)** – disabling mood, anxiety, and psychotic disorders
- People with SMI are more likely to have tobacco use disorder (TUD), less likely to quit smoking, and have greater levels of nicotine dependence than the general population [Glasheen et al 2014, Smith et al 2014]
- People with SMI have 10-20 year shorter life expectancy [Walker et al, 2015], with tobacco use being a major contributor

### Prevalence of smoking in different risk groups

<table>
<thead>
<tr>
<th>Risk Group</th>
<th>No MI</th>
<th>MI not SMI</th>
<th>SMI</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; HS ed</td>
<td>20</td>
<td>25</td>
<td>30</td>
</tr>
<tr>
<td>Unemployed</td>
<td>22</td>
<td>27</td>
<td>32</td>
</tr>
<tr>
<td>&lt;100% Poverty</td>
<td>18</td>
<td>23</td>
<td>35</td>
</tr>
<tr>
<td>age 18-25</td>
<td>15</td>
<td>20</td>
<td>25</td>
</tr>
</tbody>
</table>

(Glasheen, 2014)
Quitting improves health at any age –

The British doctors study (Doll et al, 2004)

Quitting smoking by age 35 years old is associated with life expectancy similar to that of a never smoker
People with psychiatric illness can quit with medications and supportive counseling

EAGLES Trial N=8146

Anthenelli et al 2016
Digital technology can improve access to cessation treatment

- Access to treatment is low!! Cessation counseling improves outcomes, but lack of transportation and inadequate clinic staffing are barriers.
- Smartphone apps improve the rate of health behavior change [Zhao et al 2016]
- Most promising interventions for young adults are remotely administered (telephone quit lines and electronic media) [Villanti et al 2010]
- Young people own smartphones, and are not afraid to use them [Pew Mobile Fact Sheet]

[Fig. 1 Technology and social media use in people with SMI, U.S. PEW survey all-income, and U.S. PEW survey low-income (<$30,000/year)]

[Brunette et al, 2019]
NCI’s apps are based on evidence, but have not been tested in young adults with SMI

- Most smoking-related apps are not based on evidence [Hoeppner et al, 2015; Ferron et al 2017]
- The National Cancer Institute (NCI) has developed 2 free smoking cessation apps based on clinical guidelines; available for both iPhone and Android platforms [on Smokefree.gov]
- Cognitive impairment associated with SMI can impact usability [Ferron et al 2012, Rotondi et al, 2017]
- NCI’s apps have not been assessed among young adults (ie Millennials or GenZ), who report greater confidence in using technology than adults of prior generations [Andersen 2017]
Study Goals

• What might make young adults (age 18-35 years old) with SMI want to use or not use smartphone apps to help them quit smoking?

• How easy is it for young adults with SMI to use the NCI’s free smoking cessation apps, and do they like them?

• How can we best guide young adults with SMI in using the NCI’s free smoking cessation apps to help them with their quit attempts?
Study Design

• Mixed methods design: focus groups, usability testing, surveys
• Participants 18-35 years old, stratified by age (18-24, 25-35)
• Daily cigarette smokers
• Recruited from single community mental health center in NH
  • Waiting room flyers, clinician referral
• Focus group recruitment goal: thematic saturation, n~20
• Usability testing recruitment goal: thematic saturation, n~5 per app
  • ≥80% usability issues discovered with n=5 [Nielsen 1993]
Study Goals

• What might make young adults (age 18-35 years old) with SMI want to use or not use smartphone apps to help them quit smoking?

• How easy is it for young adults with SMI to use the NCI’s free smoking cessation apps, and do they like them?

• How can we best guide young adults with SMI in using the NCI’s free smoking cessation apps to help them with their quit attempts?
Focus Groups

- 5 focus groups
- 3-6 participants each
- 1-hour long discussions
- Audio-recorded
- 10-item survey
- Topics included:
  - Smoking Initiation
  - Quit Attempts
  - Reasons to Quit
  - Experience with Health Apps
  - Ideas about Smoking Apps

www.pexels.com
## Focus Groups – Participant Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>N (%) or Mean ± SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Demographic and Clinical Characteristics</strong></td>
<td>Total n = 22</td>
</tr>
<tr>
<td>Female, N (%)</td>
<td>10 (45%)</td>
</tr>
<tr>
<td>White, N (%)</td>
<td>20 (91%)</td>
</tr>
<tr>
<td>Daily cigarette smoker, N (%)</td>
<td>22 (100%)</td>
</tr>
<tr>
<td>Psychotic disorder, N (%)</td>
<td>9 (41%)</td>
</tr>
<tr>
<td><strong>Technology Use Characteristics</strong></td>
<td>Total n = 19</td>
</tr>
<tr>
<td>Use internet ≥ twice daily, N (%)</td>
<td>18 (94.7%)</td>
</tr>
<tr>
<td>Ever downloaded an app, N (%)</td>
<td>18 (94.7%)</td>
</tr>
<tr>
<td>Ever downloaded a health app, N (%)</td>
<td>16 (84.2%)</td>
</tr>
<tr>
<td>Would try an app recommended by a doctor, N (%)</td>
<td>15 (78.9%)</td>
</tr>
</tbody>
</table>
### Focus Groups – Facilitators and Barriers to Quitting Smoking

<table>
<thead>
<tr>
<th><strong>Facilitators to Quitting</strong></th>
<th><strong>Barriers to Quitting</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Motivators</strong></td>
<td><strong>Personal</strong></td>
</tr>
<tr>
<td>• saving money</td>
<td>• uncontrolled stress, depression, anxiety</td>
</tr>
<tr>
<td>• health (own and children’s)</td>
<td>• addiction, “can’t resist”</td>
</tr>
<tr>
<td>• social consequences of being a smoker</td>
<td>• habit/routine</td>
</tr>
<tr>
<td><strong>Assistors</strong></td>
<td><strong>Social</strong></td>
</tr>
<tr>
<td>• distraction</td>
<td>• social interaction involves smoking</td>
</tr>
<tr>
<td>• social support</td>
<td>• smelling smoke on someone else</td>
</tr>
<tr>
<td>• cigarettes not being available/sold</td>
<td>• commercials or tv shows that depict smoking</td>
</tr>
</tbody>
</table>
## Motivators for Quitting

<table>
<thead>
<tr>
<th>Facilitators to Quitting</th>
<th>Emblematic Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>saving money</td>
<td>“I cry when I think of how much money I’ve spent over, like, the fifteen years of smoking that I’ve spent on cigarettes.”</td>
</tr>
<tr>
<td>health (own and children’s)</td>
<td>“I feel like whenever I quit smoking, I can smell things easier, I can taste things more, and I can breathe better. Definitely breathe better.”</td>
</tr>
<tr>
<td>social consequences of being a smoker</td>
<td>“My kids don’t want me to smoke, my boyfriend doesn’t smoke...me being the lone ranger is a real motivator.”</td>
</tr>
</tbody>
</table>
# Assistors to Quitting

## Facilitators to Quitting

<table>
<thead>
<tr>
<th>Facilitators to Quitting</th>
<th>Emblematic Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>distraction</td>
<td>“...things that come up that keep you busy, like, instead of thinking about having a cigarette, you know, like, doing other things...”</td>
</tr>
<tr>
<td>social support</td>
<td>“My boyfriend had to keep taking my cigarettes from me, and I had, like, a freak out moment where I started screaming at him and it was really bad. But he stuck with it, and so did I...”</td>
</tr>
<tr>
<td>cigarettes not being available/sold</td>
<td>“Taking them off the shelves would be a pretty decent option. Some people would go above and beyond to get it, whatever. But other people, it would stop them.”</td>
</tr>
</tbody>
</table>
# Personal Barriers to Quitting

## Barriers to Quitting

<table>
<thead>
<tr>
<th>Barriers to Quitting</th>
<th>Emblematic Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>uncontrolled stress, depression, anxiety</td>
<td>“But I mean, if I could go back to quitting smoking, I would. But I got to get my stress and anxiety under control before I can make that step forward of quitting.”</td>
</tr>
<tr>
<td>addiction, “can’t resist”</td>
<td>“…it was just craving after craving after craving, until I finally gave in and smoked again.”</td>
</tr>
<tr>
<td>habit/routine</td>
<td>“It’s just part of the routine now, man, definitely.”</td>
</tr>
</tbody>
</table>
# Social Barriers to Quitting

<table>
<thead>
<tr>
<th><strong>Barriers to Quitting</strong></th>
<th><strong>Emblematic Quotes</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>social interaction involves smoking</td>
<td>“I’ve been sober for like three, uh, four years at this point and it makes me feel like I’m part of the group...at least I’m participating...”</td>
</tr>
<tr>
<td>smelling smoke on someone else</td>
<td>“I can be around cigarettes, but if I smell ‘em, that’s it. I end up craving them back.”</td>
</tr>
<tr>
<td>commercials or tv shows that depict smoking</td>
<td>“…I’m sitting in my room and I’ll see, like, a commercial and someone lights up a cigarette. I’ll be like, ‘Ah, I gotta go outside.’”</td>
</tr>
</tbody>
</table>
E-cigarettes a prominent, unanticipated topic

<table>
<thead>
<tr>
<th>Unanticipated Ecig Themes</th>
<th>Emblematic Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>less enjoyable</td>
<td>“And the thing is, it didn’t do it for me anyway, even if I could afford it, because I’d rather have the real deal...I prefer real smoke from a real cigarette...”</td>
</tr>
<tr>
<td>too expensive</td>
<td>“And besides, even if I went straight to vape, it’s too expensive.”</td>
</tr>
<tr>
<td>smoke more</td>
<td>“No, I would smoke, like, a bunch of drags of that and then still need a cigarette. It just made me want cigs more. I’d smoke more cigarettes by smoking that thing.”</td>
</tr>
</tbody>
</table>
## Facilitators to App Use

<table>
<thead>
<tr>
<th>Facilitators</th>
<th>Emblematic Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>always have phone</td>
<td>“Uh, most people have their phone on them, so you basically have it on the go. So, it’s wherever you want.”</td>
</tr>
<tr>
<td>free</td>
<td>“It’s free.”</td>
</tr>
<tr>
<td>private</td>
<td>“It’s kinda private and you can do it on your own.”</td>
</tr>
<tr>
<td>self paced</td>
<td>“You can do it on your own time and you can try to set goals as you go along.”</td>
</tr>
</tbody>
</table>
## Barriers to App Use

<table>
<thead>
<tr>
<th>Barriers</th>
<th>Emblematic Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Being busy, forgetting to use it</td>
<td>“A lot of people are just too, they’re busy or they’re not thinking, like, ‘Oh well, you know, I’m thinking about smoking a cigarette right now. Let me go on my phone and prevent me from doing it.’”</td>
</tr>
<tr>
<td>lack of accountability</td>
<td>“I tried a cigarette counter once, and realized it wasn’t gonna work to help me quit smoking because at that time I would cheat and not log all of my cigarettes.”</td>
</tr>
<tr>
<td>limited internet access</td>
<td>“...some people aren’t going to have access to the internet all the time.”</td>
</tr>
<tr>
<td>storage space or battery life</td>
<td>“Phone broken, battery drainage.”</td>
</tr>
</tbody>
</table>
# Features that Should Be Included in Apps

<table>
<thead>
<tr>
<th><strong>App Features</strong></th>
<th><strong>Emblematic Quotes</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>cigarette and money tracking</td>
<td>“I think the tracker...of the money and the amount smoked...is a sick idea.”</td>
</tr>
<tr>
<td>tools for distraction</td>
<td>“Yeah, it would be cool if it was, like, if it would pop up with something you had to do, instead of smoking at that time, like a quiz to take...”</td>
</tr>
<tr>
<td>rewards (eg. badges)</td>
<td>“I think that those badges, you know, when I get those rewards...it’s a reward to myself...Nobody can take it from me.”</td>
</tr>
<tr>
<td>Positive messages, encouragement</td>
<td>“Get a little message, you know, daily or whatever, to motivate you and remind you of why you wanted to stop smoking.”</td>
</tr>
</tbody>
</table>
## Features that Should Not Be Included in Apps

<table>
<thead>
<tr>
<th>App Features</th>
<th>Emblematic Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>mention of cigarettes or pictures of cigarettes</td>
<td>“... once they think ‘cigarette,’ uh, they’re more likely to smoke.”</td>
</tr>
</tbody>
</table>
Study Goals

• What might make young adults (age 18-35 years old) with SMI want to use or not use smartphone apps to help them quit smoking?

• **How easy is it for young adults with SMI to use the NCI’s free smoking cessation apps, and do they like them?**

• How can we best guide young adults with SMI in using the NCI’s free smoking cessation apps to help them with their quit attempts?
Usability Testing

• Individual 2-hour session
• Random assignment to 1 of the 2 NCI apps
• Surveys, app testing, semi-structured interviews
• Audio and video recorded
• 2 study visits, 2 weeks apart
• Home app use between visits
QuitGuide and quitSTART – the NCI’s free smoking cessation apps
Downloading the Apps

• [https://smokefree.gov/](https://smokefree.gov/)
Downloading the Apps

- [https://smokefree.gov/](https://smokefree.gov/)
Would you like our tip at this time every day or would you like to write your own tip?

Send my tip above

Send me a QuitGuide Tip

Cravings

The urge to smoke will come and go. There are people, places, things, and situations that may trigger the urge to smoke. How are you going to handle it?

Identify Smoking Triggers

Everyone who smokes has smoking triggers. Knowing your triggers helps you stay in control. At first, you might want to avoid triggers all together. After staying quit for awhile, you may be able to find other ways to handle your triggers. Here are some common smoking triggers:

- Feeling stressed
- Feeling down
- Talking on the phone
- Drinking alcohol
- Watching TV
- Driving
- Finishing a meal
- Taking a work break
- Going to a bar
quitSTART

What's Up?

Did you know... Your smoking impacts others in ways beyond their health.

quitSTART

Distract Me

quitSTART

131 days, 20 hr 21 m 0 s

Joined for

Quit Date
05/20/19

18 cravings

15 slips

I'm Great

$92

You've completed
0 check-ins.

Wednesday, June 19

CHALLENGE ACCEPTED
Set aside 15 minutes of your d...

BADGE UNLOCKED
Smokefree 30 days

Tuesday, June 18

Monday, June 17

Sunday, June 16

Saturday, June 15
Cigarette smoke can harm your pets.

Animals can get sick and die from secondhand smoke! It sinks into their fur, feathers, eyes, and skin.

Think about what you will do with all the time and money you gain from not smoking!

Finish a project you started? Learn to play a new instrument? Find something you love or have always wanted to do. Now that you're smokefree, the possibilities are endless!

Throw a frisbee with a friend for 20 minutes.

Grab a friend or two and head to a park for a frisbee toss. You can get your heart rate up and practice your aim!
Usability Tasks

1. Set a new quit date
2. Tell the app how many cigarettes per day you are smoking
3. Tell the app that you’re feeling good right now
4. Tell the app that you want a cigarette right now
5. Find information on things you can do to help you quit or reduce your smoking. Please read a little bit of what you find out loud.
6. Tell the app that you smoked a cigarette today
7. Find where there is information on how much you have been smoking (or how many cigarettes you’ve avoided) since you downloaded the app
8. Find out how you can connect with other people on social media about quitting or reducing smoking
9. Find where in the app you can take a photo or upload a photo
App Use Measures

- System Usability Scale (SUS)
- Observed Task Completion
- Acceptability Questions
- Qualitative Feedback
System Usability Scale

- 10 item survey
- 5 point Likert scale
- Validated
- Widely used for usability testing
- Range of scores: 0-100
- “Average” usability: 68

Brooke 1996
## Results – Participant Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Total n = 12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Demographic and Clinical Characteristics</strong></td>
<td>N (%) or Mean ± SD</td>
</tr>
<tr>
<td>Mean age ± SD</td>
<td>30.5 ± 3.48</td>
</tr>
<tr>
<td>Female, N (%)</td>
<td>5 (41.7%)</td>
</tr>
<tr>
<td>White, N (%)</td>
<td>11 (91.7%)</td>
</tr>
<tr>
<td>High school diploma, N (%)</td>
<td>9 (75%)</td>
</tr>
<tr>
<td>Psychotic disorder, N (%)</td>
<td>5 (41.7%)</td>
</tr>
<tr>
<td>Focus group participant, N (%)</td>
<td>10 (83.3%)</td>
</tr>
<tr>
<td><strong>Tobacco Use Characteristics</strong></td>
<td></td>
</tr>
<tr>
<td>Mean cigarettes/day ± SD</td>
<td>17 ± 7.31</td>
</tr>
<tr>
<td>Mean age started smoking ± SD</td>
<td>13.42 ± 3.53</td>
</tr>
<tr>
<td><strong>Smartphone Use Characteristics</strong></td>
<td></td>
</tr>
<tr>
<td>Use smartphone ≥ twice daily, N (%)</td>
<td>11 (91.7%)</td>
</tr>
<tr>
<td>Use ≥ two apps per day, N (%)</td>
<td>10 (83.3%)</td>
</tr>
<tr>
<td>Ever downloaded a health app, N (%)</td>
<td>11 (91.7%)</td>
</tr>
<tr>
<td>Ever tried an app to quit smoking, N (%)</td>
<td>3 (25%)</td>
</tr>
<tr>
<td>Current phone is iPhone, N (%)</td>
<td>5 (41.7%)</td>
</tr>
</tbody>
</table>
Usability of QuitGuide and quitSTART before and after 2 weeks of use

SUS Scores QuitGuide
Visit 1 vs Visit 2

SUS Scores quitSTART
Visit 1 vs Visit 2
Usability By Observed Task Completion

QuitGuide

• very high levels of usability at both visits
  • 4/5 participants correctly completed 9/9 tasks at Visit 1 (the other: 7/9)
  • 3/5 participants correctly completed 9/9 tasks at Visit 2 (the others: 8/9)

quitSTART

• lower levels of usability at Visit 1
  • 2/7 participants correctly completed 9/9 tasks at Visit 1 (the others: 4-8/9)

• improved by Visit 2
  • 3/7 participants correctly completed 9/9 tasks at Visit 2 (the others: 5-8/9)
Task Completion Results

Usability Task Outcomes
Quit Guide Visit 1

Usability Task Outcomes
quitSTART Visit 1

Usability Task Outcomes
Quit Guide Visit 2

Usability Task Outcomes
quitSTART Visit 2
Usability Testing – Emblematic Quotes

QuitGuide
• “If it’s there, it’s not easy to find.”
• “I feel like if I just hit buttons, eventually I’ll figure it out.”
• “It’s very positive. I’m glad it’s not too negative.”
• “This is cool. It gives you the option to take a photo, write yourself a note...”

quitSTART
• “I already did this before, why can’t I find it again?!?”
• “Ugh, this is frustrating.”
• “Yeah, these are good tips.”
• “Ooh, they have games!”
# Usability and Acceptability Survey Results

<table>
<thead>
<tr>
<th>Survey Question</th>
<th>QG Visit 1</th>
<th>QG Visit 2</th>
<th>qS Visit 1</th>
<th>qS Visit 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Overall, I am satisfied with how easy it is to use the app</td>
<td>80</td>
<td>60</td>
<td>57</td>
<td>71</td>
</tr>
<tr>
<td>2. I felt comfortable using the app</td>
<td>60</td>
<td>60</td>
<td>43</td>
<td>71</td>
</tr>
<tr>
<td>3. It was easy to learn to use the app</td>
<td>80</td>
<td>80</td>
<td>29</td>
<td>57</td>
</tr>
<tr>
<td>4. Whenever I made a mistake using the app, I could recover quickly and easily</td>
<td>80</td>
<td>60</td>
<td>71</td>
<td>57</td>
</tr>
<tr>
<td>5. It was easy to find the information I needed</td>
<td>80</td>
<td>60</td>
<td>14</td>
<td>57</td>
</tr>
<tr>
<td>6. How things appeared on the screen was clear</td>
<td>60</td>
<td>80</td>
<td>57</td>
<td>71</td>
</tr>
<tr>
<td>7. I liked using the app</td>
<td>60</td>
<td>40</td>
<td>29</td>
<td>57</td>
</tr>
<tr>
<td>8. The app has all the functions and capabilities I expect it to have</td>
<td>60</td>
<td>40</td>
<td>43</td>
<td>29</td>
</tr>
<tr>
<td>9. Overall, I am satisfied with the app</td>
<td>60</td>
<td>40</td>
<td>43</td>
<td>57</td>
</tr>
<tr>
<td>10. I would recommend the app to a friend</td>
<td>60</td>
<td>40</td>
<td>43</td>
<td>57</td>
</tr>
<tr>
<td>11. The app is fun to use</td>
<td>40</td>
<td>40</td>
<td>43</td>
<td>29</td>
</tr>
<tr>
<td>12. The app works the way I want it to</td>
<td>60</td>
<td>40</td>
<td>29</td>
<td>14</td>
</tr>
<tr>
<td>13. The app can help me quit smoking</td>
<td>40</td>
<td>40</td>
<td>14</td>
<td>57</td>
</tr>
<tr>
<td>14. The app was interactive enough</td>
<td>60</td>
<td>40</td>
<td>43</td>
<td>57</td>
</tr>
</tbody>
</table>

Percent of Participants that Agree or Strongly Agree (QG n=5, qS n=7)
Desirability of Various App Features

Percent Participants Who Agree or Strongly Agree Task Is Important

[Bar chart showing the percentage of participants who agree or strongly agree that various app features are important. The x-axis represents different app features, and the y-axis represents the percentage of participants. The chart compares Visit 1 and Visit 2.]
Desirability of Various App Features

Percent Participants Who Agree or Strongly Agree Task Is Important

App Feature

<table>
<thead>
<tr>
<th>Quit Date</th>
<th>Quit Plan</th>
<th>Enter Crp</th>
<th>Triggers</th>
<th>Crying</th>
<th>Location</th>
<th>Why Quit</th>
<th>How To Quit</th>
<th>Review Crp</th>
<th>$ Saved</th>
<th>Social Media</th>
<th>Other Resources</th>
<th>Distraction</th>
<th>Reminders</th>
<th>Motivational Messages</th>
</tr>
</thead>
</table>

- Visit 1
- Visit 2
Desirability of Various App Features

Percent Participants Who Agree or Strongly Agree Task Is Important

App Feature

- Quit Date
- Quit Plan
- Enter Cig
- Triggers
- Cigarettes
- Location
- Why Quit
- How To Quit
- Review Cig
- $ Saved
- Social Media
- Other Resources
- Distraction
- Reinforcer's
- Motivational Messages

Visit 1
Visit 2
Limitations

• Participants were not required to quit or attempt to quit for this study, which may affect their perceptions of appeal or utility of various app features
Study Goals

• What might make young adults (age 18-35 years old) with SMI want to use or not use smartphone apps to help them quit smoking?
• How easy is it for young adults with SMI to use the NCI’s free smoking cessation apps, and do they like them?
• How can we best guide young adults with SMI in using the NCI’s free smoking cessation apps to help them with their quit attempts?
Preliminary Conclusions

• Our focus groups indicated that:
  • young adults with SMI experience similar facilitators and barriers to quitting smoking as adults
  • mobile apps are appealing as a vehicle for delivery of tobacco treatment due to their convenience, availability, and potential for independent use. However lack of accountability and ease of forgetting the apps may limit their use.

• Our usability testing indicated that:
  • the NCI’s QuitGuide app scores very highly on usability, but a lower level of appeal may limit its utility for young adults with SMI.
  • the NCI’s quitSTART app scores moderately on initial usability, which improved after two weeks of use. Its higher level of appeal likely contributed to its favorable usability ratings by young adults with SMI.

• Overall, our study suggests a role for guided use of NCI’s apps to support quit attempts among young adults with SMI
References


Acknowledgments

• Martha Bruce, PhD
• Cathleen Morrow, MD
• Joelle Ferron, PhD
• Nathan Kung
• Ashley Maher
• Sue Guarino, RNBC
• Jason Welsh, MS