



# Mobile Apps, Text Messages, & Social Media

Can They Really Help Smokers Quit?

PRESENTED BY:





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# Executive Summary

Tobacco use remains the number one cause of preventable death and disease in the United States. Each smoker you employ costs an estimated \$21 per day or \$7,874 per year in excess medical costs and lost productivity. Your organization may currently offer a tobacco cessation program, but if your employees are not using it, their chances of quitting are slim. The question remains – how do you get smokers to enroll and stay actively engaged in your tobacco cessation program, which will boost their chances of success and improve your return on investment?

With a growing number of adults turning to mobile phones and social networking sites to better connect and self-educate, it seems that we have the opportunity to reach and support employees who smoke in new ways. Today, 47 percent of adults use social media, 85 percent own cell phones, and 72 percent use their phones to send and receive text messages. In addition, 15 percent of U.S. adults have used their mobile devices to look for health information.

The new frontier for driving engagement in behavior change programs may be mobile technology and social media. Not only are these platforms specifically designed to expand reach and engage users in a personalized way, they are utilized by populations which have been traditionally considered “hard to reach,” such as minorities and youth.

This white paper discusses how new technologies, if implemented correctly, can effect real, measurable behavior change in the tobacco users at your organization – and save you from excess healthcare costs.



# Tobacco Cessation: Evidence & Best Practices

According to the 2008 update to the United States Public Health Service Clinical Practice Guideline, *Treating Tobacco Use and Dependence*, the most effective methods for treating tobacco dependence combine counseling, medication, and social support. These guidelines also state that more intensive interventions and interventions that are multi-modality are more effective.

Tobacco users must learn to deal with their psychological addiction to nicotine by learning new coping strategies to get through cravings. They have to combat behavioral addiction or habits by practicing new ways of acting without relying on tobacco use. They must fight physical addiction to nicotine, which can often be helped with medication. Finding encouragement through social support may help by reminding them they are not alone in their journey, and that others before them have been successful, which gives hope that they will also succeed.

A qualified evidence-based program will address addiction at the psychological, behavioral, and physical level. It will also have the capacity to allow participants to make multiple quit attempts - tobacco use is an addiction and as such often requires repeated intervention and multiple attempts to quit.

## THE PROBLEM WITH PROGRAM ENGAGEMENT

You may currently offer an evidence-based tobacco cessation program at your worksite, but doing so is only half the battle. If your employees aren't actively engaged in your cessation program, they are likely to give up on the process before they have quit successfully.

Many employers experience difficulty in recruiting and maintaining employee participation in their tobacco cessation initiatives, and the question remains - how do you increase enrollment and program participation?

With a growing number of adults turning to mobile phones and social networking sites to better connect and self-educate, it seems that we have the opportunity to reach and support employees who smoke in new ways.



# Mobile Phones & Smartphones

## Phone Services for Health Behavior Change

### REACH OF MOBILE PHONES

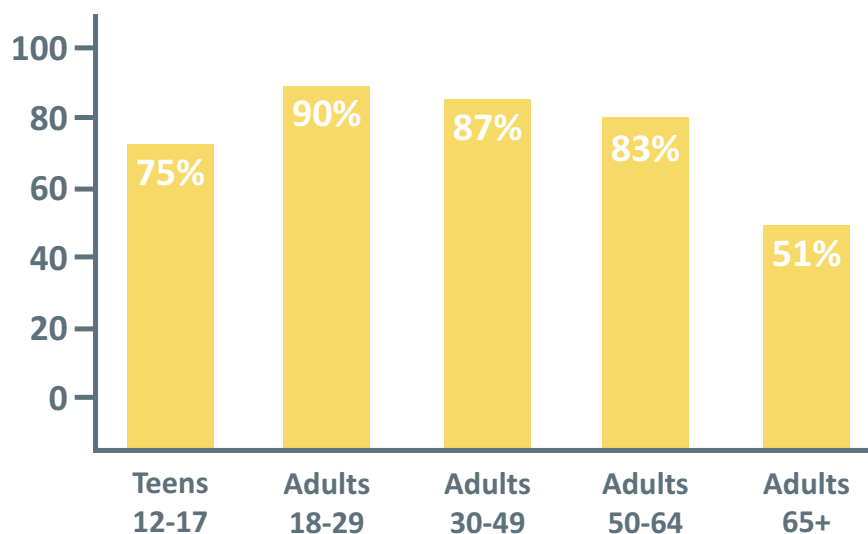
We have long known that phones can promote health behavior change. Quitlines and other kinds of phone-based counseling services have been shown to be very effective in promoting tobacco cessation, weight loss and physical activity, and in modifying other health behaviors.

Recent growth in the usage of mobile phones and more recently smartphones raises the question of what advances these new technologies and their associated features provide beyond those associated with landlines and voice capabilities.

Today, mobile phones are ubiquitous, reaching more U.S. adults than ever before. As this table shows, 85 percent of U.S. adults own a cell phone. Even adults 65 and up are using mobile phones these days - more than half, at 61 percent.

## 85% of U.S. Adults Have a Cell Phone

% of Each Age Group Who Have a Cell Phone



*Teens data Sept 2009 | Adults data Nov 2010*



## “MARRIED” TO OUR MOBILE PHONES

Mobile phones have changed our culture - they allow instant access, anywhere, anytime. Increasingly, people rate mobile phones as possessions they are “not willing to live without;” youth responders have even claimed they would rather live without television than without their cell phones. Americans keep their mobile phones so close to their hearts that we could almost say that we “marry” our mobile phones - 82 percent of users never leave home without them and 68 percent sleep with their mobile device by the bedside.

Our increasing proximity to these devices as well as their ever-expanding menu of features make it possible for further reach in less time: 72 percent of adults use their mobile devices to send and receive text messages and 40 percent use them to regularly browse the internet.

## REACH OF SMARTPHONES

Smartphones further expand the reach and impact of mobile technology – their sophisticated operating systems connect with third party applications (apps) which provide expert systems, games, multimedia such as music and video, email, and social networking.

Smartphones now make up 30 percent of the mobile market, a number which is increasing every day. The users of smartphones are predominantly young, wealthy, and male - but this is changing rapidly. Usage is rising fastest among lower socioeconomic groups.

The rise in smartphone usage and expansion of reach has led to an increase in the development of third-party mobile apps - there are currently 225,000 iPhone apps with an estimated 6 billion downloads.

## User Appeal of Smartphones

Mobile phones provide great user appeal, offering assistance on several fronts:

- **Concierge:** A mobile phone can now provide information such as directions when a user is lost, restaurants when a user is hungry, even hotels when a user needs accommodations.
- **Court jester:** A mobile phone can act as a court jester, providing hours of entertainment through games and other distractions.
- **Friend:** A mobile phone can provide company either by connecting users with their friends through text messages, connecting to social networking sites, or by simply providing a feeling of companionship.
- **Coach:** A mobile phone can help a user to track goals and offer encouragement and motivation to push him further than he might on his own.



## Mobile Technology and the Appeal for Tobacco Cessation

The reach and appeal of smartphones and mobile devices of all kinds certainly translates into a great opportunity for the field of tobacco cessation.

Here are a few of the most appealing features of mobile technology for tobacco cessation:

- **Users can receive support anywhere, anytime.** Instant support leads to increased confidence and a feeling of security, as well as a potential increase in contact time with specially trained tobacco cessation coaches.
- **Users receive increased contact time with the cessation program.** Whether through text messages, games, or other mobile applications, users can choose activities that personally appeal to them, and therefore remain actively engaged in their quit process between counseling sessions with their coaches.
- **Personalized interaction with coaches:** Interacting with coaches through text messages or evidence-based applications is appealing due to the unobtrusive nature of mobile devices.
- **Mobile phones allow unobtrusive and confidential support.** Users have the added comfort of confidentiality and a feeling of anonymity while at the same time experiencing social support.
- **Mobile phones can help reach the unreachable:** Those with the highest disease burden, and those who have been traditionally “unreachable,” such as youth and minority groups, can be contacted and helped through the expansive reach of mobile technology.



# Evidence for Mobile Technology & Behavior Change

This reach and the appeal of mobile features certainly seem to fall in line with clinically proven methods of tobacco cessation. But where is the evidence that these methods actually work?

## **Text Messaging**

Sending text messages, or “texting”, has a great deal of appeal. A text is less intrusive than a phone call - it can be dealt with at the convenience of its recipient. Texting provides users with instant access to socialization with friends, information from designated contacts (such as retailers, websites, news portals), and access to personalized help should they need it.

In recent years, there has been evidence to show text messaging to work for tobacco cessation as well as losing weight, increasing physical activity, and managing chronic diseases like diabetes.

## **Evidence for Text Messaging & Behavior Change**

This July, a randomized clinical trial of 5,800 participants in England showed that a tobacco cessation program delivered via text messages significantly increased quit rates in the short term, measured at 6 months after program enrollment. To ensure accurate reporting, participants were tested for traces of nicotine in their saliva through the presence of a chemical called cotinine. Of the 2,911 smokers who received the motivational text messages, 10.7 percent were found to be smoke free, compared to only 4.9 percent of the 2,881 smokers in the control group.

This was not the first study to produce such results: a randomized clinical trial of 1,705 smokers in New Zealand showed that a tobacco cessation program based on text messages nearly doubled the quit rates of participants; a study of 396 smokers in Norway produced similar results.

Most striking about these studies is the conclusion that text messaging-based intervention not only increased quit rates, but also that it seems to prove what we might hope to be true - that modern mass communication technology can contribute psychological support to the behavior change process.



## Evidence for Mobile Apps & Behavior Change

In the wake of such promising evidence for text messaging for tobacco cessation, it would seem that smartphones could take mobile technology for behavior change to the next level, as they not only have the capacity to perform text messaging, but also offer the capability to connect with third-party applications. Yet despite the vast potential of smartphone apps to encourage behavior change, there has not been any evidence proving their efficacy.

In June of 2009, Dr. Lorien Abrams and her colleagues at the George Washington University created a study to rate the 47 tobacco cessation applications available to iPhone users, using the United States Public Health Service's Clinical Practice Guidelines as their standard of clinical efficacy. The researchers were met with disheartening results: not a single application was found to be effective. Only one app received a 30 out of a total of 60 points; this was much better than the average app, which received a 7.8 out of 60.



## Current Quit Smoking Apps – What Doesn't Work

The researchers found that few apps followed or supported clinically proven methods for quitting:

- **Few apps asked for tobacco use status or assessed willingness to quit.** Few apps asked for tobacco use status or assessed willingness to quit. Determining the readiness of a tobacco user to quit is necessary to create truly personalized assistance along the quit continuum. Individualized support can only be so unique if the application isn't attuned to where a user is in the quit process.
- **Few apps recommended evidence-based treatment.** Few apps recommended or linked the user to proven treatments such as counseling, medication support, or provided resource information like the phone number for a state quitline or clinic.
- **Few apps offered effective social support.** While the apps offered the promise of social support through email and links to social networking sites, they failed to truly provide the support needed by a tobacco user, through social connections with quit coaches or their own friends and family members whom have been selected as designated quit buddies.

## Current Quit Smoking Apps – What Works

While the study proved disappointing, not all hope was lost. The researchers were encouraged to learn the following:

- **Most apps focused solely on quitting tobacco.** Overall, these apps were specifically designed to address tobacco use and did not extend their resources to include other health initiatives. Clinical evidence has shown that a tobacco user has the best chance of success if he makes his quit his primary focus and his other health goals secondary. The quit should always take precedence over other health goals.
- **Most apps utilized incentives to help people quit.** Most of the apps studied enhanced user motivation by reminding smokers of the rewards they would receive after quitting.
- **Most apps offered personalized support.** The designers of these apps made an effort to create a personalized user experience, which showed their understanding that tobacco users need individualized support to help them along the quit continuum.



# Social Networking Sites & Behavior Change

## Reach of Online Social Networking

Social networking platforms are built with the purpose to encourage personal connection with others through communication and interactivity. Platforms like Facebook thrive on the idea of sharing one's life with others, and in turn, building a community of people who want to encourage, support, and comment on the information that one shares. Whether a user tweets an update to thousands of followers who only know him as a persona or he's updating a "close" circle of a few hundred friends on Facebook, the capacity to distribute information and request immediate feedback continues to grow.

If the current trend continues, online social engagement will only increase in the coming years, as the popularity of sites like Facebook, LinkedIn, and Twitter continue to grow at an impressive rate. Nearly 60 percent of Twitter users, 39 percent of Facebook users, and 36 percent of LinkedIn users joined within the past year.

A Pew Internet sample showed that 79 percent of adults said they use the internet, and nearly half of adults (47 percent) or 59 percent of internet users, say they use at least one social networking site. This is almost double the 26 percent of adults (34 percent internet users) who reported they used a social networking site in 2008. It seems promising to make use of social platforms to distribute health-related information and encourage personalized interaction and engagement in tobacco cessation initiatives.

## Appeal of Online Social Networking

Also out of the Pew Research Center was a study this June which looked at how much support adults receive, tracking total support, emotional support (such as receiving advice), companionship (such as having friends or family to spend time with), and tangible support (such as having someone who will offer aid if they are sick or need help of some kind).

On a scale of 100, the average American scored 75 in total support, 75 in emotional support, 76 in companionship, and 75 in tangible support. In general, internet users scored 3 points higher in total support, 6 higher in companionship, and 4 points higher in tangible assistance.

Facebook users' sense of social support was 5 points greater than the average internet user in the areas of emotional support and companionship. To put this in perspective, the average American boosts their sense of support by 10 points by getting married or cohabitating with a partner.



## Clinical Guidelines and Social Support

How does this all translate into the kind of social support a tobacco user needs to quit smoking?

According to the United States Public Health Service Clinical Practice Guideline, there are three types of counseling and behavioral therapies found to be especially effective in a successful quit. The first is practical counseling and skills training - the kind of coaching and education that participants receive from specially trained quit coaches. This kind of support has historically been provided telephonically, but now some programs offer a web-based application as part of their program, allowing coaches to interact with participants via chat, discussion forums, and email.

In addition to practical counseling, the guideline recommends social support both in and outside of treatment. “Extra-treatment” social support refers to the kind of social support an individual might receive from a friend or family member in the areas of emotional support, tangible support, and companionship in addition to any support they receive inside the program. “Intra-treatment” social support refers to the kind of community support a participant might find chatting with other smokers within the program, whether on a discussion forum or program-specific Facebook page. This kind of emotional support and companionship is crucial to the quitting process.

## Evidence for Social Networking Sites & Behavior Change

While clinical studies have shown that social support is crucial to the quitting process (and other forms of long-term behavior change) and recent research has shown that users of social networking sites perceive more social support than those who are not on similar sites, there have been no formal studies on the relationship between the two. There is currently no evidence that solidly proves the efficacy of these sites as tools in behavior change over the long term; however, there is also no evidence that suggests the contrary.

Similar to the case of mobile apps for smoking cessation, much work needs to be done in this field of study. Yet current trends show that social networking platforms will only continue to grow and develop in the coming years, and the potential for effective online social support is undeniable.



# Employer Solutions

You want to offer the most effective solution to tobacco users at your worksite, and you want to offer the most cutting edge technology to do so. Yet while there is a great deal of promise in the emerging field of mobile technology and social networking for behavior change, there are not many clear examples of appropriate products to offer tobacco users at the current time. How can you be sure you're offering the best product to your workforce?

The first and most crucial step is to make sure that you already offer your workforce an evidence-based tobacco cessation program based on clinical guidelines.

## Evidence for Social Networking Sites & Behavior Change

According to the United States Public Health Service's 2008 Clinical Practice Guideline update, *Treating Tobacco Use and Dependence*, the most effective methods for treating tobacco dependence combine counseling, medication, and social support. These guidelines also state that more intensive interventions and interventions that are multi-modality are more effective.

Tobacco users must learn to deal with their psychological addiction to nicotine by learning new coping strategies to get through cravings. They have to combat behavioral addiction or habits by practicing new ways of acting without relying on tobacco use. They must fight physical addiction to nicotine, which can often be helped with medication. Finding encouragement through social support may help by reminding them they are not alone in their journey, and that others before them have been successful, which gives hope that they will also succeed.

A qualified evidence-based program will address addiction at the psychological, behavioral, and physical level. It will also have the capacity to allow participants to make multiple quit attempts - tobacco use is an addiction and as such often requires repeated intervention and multiple attempts to quit.

If you do decide to offer a text messaging suite or mobile app to your tobacco cessation initiative, remember that it should always point back to your evidence-based program and not try to take its place as a treatment method. If you decide to add mobile technology or social networking as supplements to your tobacco cessation program, make sure you measure them against the same clinical guidelines as you did the program offering.



## Measure Texts & Apps Against Clinically Proven Methods

Before you offer a new text messaging suite or quit smoking app to your tobacco cessation benefit, determine whether the supplemental program is built on the clinically proven methods laid out the Clinical Practice Guideline. Then, look the following specific features: 1) Ask for tobacco use status, 2) Advise every user to quit, 3) Assess willingness to quit, 4) Assist with a quitting plan (such as: recommending approved medications, offering practical counseling and intra-treatment social support, connecting user to a quitline), and 5) Arrange for follow-up communication. Once you've determined that you're working with clinically proven methods, here are a few specific features to look for:

- **Tailored messages that meet the unique needs of the individual:** Make sure that the messages are also personalized along the quit continuum. Pre-quit, quit day, and post-quit messages help participants increase their motivation and stay on track.
- **Educational tips for tobacco users:** If the app or text messages provide quit tips, make sure they are based on clinical evidence.
- **Tracking and goal-setting tools that will provide feedback:** Help smokers track their tobacco usage, cost savings, urges, and other markers that will enhance their motivation to quit.
- **Games, quizzes, and other interactive methods of engagement:** See whether users receive helpful reminders to take medications, schedule coaching calls, or reminders about an upcoming quit date or other important date.
- **Communications delivered at an appropriate health literacy level for your workforce:** The more personalized the communication, the more comfortable your employees will feel using the program.

## Make Social Platforms Work For Your Organization

As for social networking platforms, the first thing to do is to consider the needs of your particular workforce. Are your employees more inclined to read and share blog posts than post regular updates on Facebook or Twitter? Consider taking a survey to gain an understanding of which types of platforms would perform best at your worksite.

When evaluating different platforms, consider how the design allows users to interact and receive feedback. Intra-treatment social support is a crucial element in a successful quit. Are there discussion forums, chat functions, or blogs? Can participants easily share successes and failures? Just as importantly – will your employees be comfortable sharing successes and failures in an open format? Or would they be afraid of meeting with discrimination? Consider the measures needed to prevent stigma from arising.

Most importantly, use whatever platform you choose to direct employees back to your evidence-based program. Offer supplemental educational tips and post the telephone number to reach coaches in a prominent position on the platform. If possible, connect the social platform to the web-based portal to your program.



# Conclusion

While there seems to be great opportunity for health behavior change with the advent of mobile technology and social networking, it's important to remember the inherent risks of entering a new frontier. As we've seen, current mobile and online offerings are far from perfect, and oftentimes do not follow clinically proven methods for tobacco cessation support.

Does this mean your organization should steer clear of mobile and online technology for tobacco cessation? Not necessarily. Just remember that while new technology is promising, it should be a supplement to – not a replacement for – an evidence-based behavior change treatment.

Find out which tools your employees use in their everyday lives and leverage these tools to better reach them. You'll find that some tobacco cessation vendors have already integrated connections between their web-based applications and participants' favorite social networking platforms like Facebook and Twitter.

Provide your employees with an evidence-based program that takes a multi-modal approach, addressing the different sides of addiction through a variety of clinically proven methods. An effective tobacco cessation vendor will not only offer you an evidence-based program, but also provide you with cutting edge technology that is clinically based. Look for opportunities to use new technology to enhance your program, not replace it.

Finally, keep in mind that like all forms of behavior change, quitting tobacco is a process unique to every individual and requires personalized treatment. Thanks to the ongoing developments in mobile and social technology, the future of individualized treatment seems quite promising.



# About Us

## Alere Wellbeing

Alere Wellbeing (formerly Free & Clear) drives sustained health behavior change by connecting individuals with knowledge and information, and then empowering them to act on that knowledge to improve their own health and wellbeing. Alere Wellbeing's evidence-based programs address modifiable health risks that contribute to chronic disease: tobacco use, poor nutrition, physical inactivity, and stress. Current clients include 27 state governments and more than 650 health plans and employers, 63 of which are in the Fortune 500. Alere Wellbeing is known and respected for its pay-for-performance business model, intense focus on scalable service quality, dedicated account management, continuous program improvement, and transparent reporting of measurable outcomes at the individual participant and aggregate population level. Alere Wellbeing has contributed to more than 100 published research studies and maintains collaboration with the American Cancer Society<sup>®</sup> and an active research program funded by the Centers for Disease Control, American Legacy Foundation, and the National Institutes of Health. More information about Alere Wellbeing can be found at [www.alerewellbeing.com](http://www.alerewellbeing.com).

## Quit For Life<sup>®</sup> Program

Offered in collaboration with the American Cancer Society<sup>®</sup>, the Quit For Life<sup>®</sup> Program has been the nation's leading evidence-based tobacco cessation program for more than 25 years. The Quit For Life<sup>®</sup> Program employs an evidence-based combination of physical, psychological and behavioral strategies to enable participants to take responsibility for and overcome their addiction to tobacco use.

## Text2Quit<sup>SM</sup>

Starting in early 2012, a customized version of Text2Quit<sup>SM</sup>, developed by Voxiva in collaboration with George Washington University, will be integrated with our industry-leading Quit For Life<sup>®</sup> Program. Text2Quit<sup>SM</sup> will allow our participants to get support and stay on track with their quit using text messaging in addition to the support they already received from our Quit Coaches and Web Coach, our private interactive learning and social support community.

<sup>1</sup> Anderson & Zhu 2007; Eakin et al. 2007; Castro and King 2002.

<sup>2</sup> Free et al. 2011.

<sup>3</sup> Rodgers et al. 2005.

<sup>4</sup> Fjeldsoe et al. 2009.

<sup>5</sup> Abroms, Lorien C., Nalini Padmanabhan, Lalida Thaweethai, Todd Phillips. "iPhone Apps for Smoking Cessation: A Content Analysis," American Journal of Preventative Medicine. Volume 4, Issue 3, Pages 279-285, March 2011.



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