Where There's an App, There's a Way?

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The National Tobacco Cessation Collaborative identified six core strategies as part of its Consumer Demand Roundtable with the overarching goal of increasing the demand, reach, and use of evidence-based cessation treatments.[1] Two of the six core strategies are especially relevant to the paper by Abroms and her colleagues[2] in this issue of the *American Journal of Preventive Medicine*: (1) redesigning evidence-based products and services to better meet consumers' needs and wants and (2) marketing and promoting cessation products and services in ways that reach smokers. Emerging technologies such as smartphones may offer a resourceful means to achieve these strategies by providing smoking-cessation services via a mobile platform that allows engagement of smokers in real time wherever smokers are.

The penetration of mobile phones is such that they are almost ubiquitous in the U.S. Not only do 82% of all adults have a cell phone, but the use of smartphones is also increasing.[3] By September 2010, smartphones accounted for 28% of all mobile phone subscribers in the U.S., which is an increase of 25% compared with December 2009.[4] In addition, 41% of those buying a new cell phone during the months of July, August, and September 2009 obtained a smartphone compared with 33% in the beginning of 2009.[4] Of particular interest for expanding the reach of evidence-based cessation, smartphones are reaching a diverse audience with high rates of use among young adults and minorities.[3] Consequently, smartphones give us an opportunity to reach and engage audiences that have traditionally been difficult to engage regarding smoking cessation. This notion sits perfectly with the goals of the Consumer Demand Roundtable to increase demand for and use of evidence-based tobacco-cessation products and services.

Developing and downloading smartphone applications (apps) represent an important resource for delivering key information about evidence-based cessation resources as well as serving as a platform from which behavioral interventions themselves can be delivered. However, as Abroms and colleagues[2] report in their analysis of the content of smoking-cessation iPhone (one type of smartphone) apps, the majority of the 47 smoking-cessation apps were not evidence-based, and those that were downloaded the most were also not evidence-based.[4] Although it is encouraging that almost 4 dozen apps for smoking cessation have been developed and are currently available for download to smartphones, it is disappointing that most of them are not based on methods in which there is confidence that they would be useful for smokers. The Abroms paper[2] points out that despite the efforts that have been made to proactively disseminate evidence-based smoking-cessation products and services, we need to do a much better job of getting this information directly into the hands of consumers.

The findings from the Abroms's paper[2] echo those reported in a recent paper analyzing the content of smoking-cessation videos on YouTube,[5] which found that slightly less than half of the YouTube videos tagged as *smoking cessation*, *quit smoking*, and *stop smoking* were evidence-based and that almost one fourth of the videos contained both evidence-based and non-evidence-based smoking-cessation practices. Analyses of web-assisted tobacco interventions (WATIs) at two different time points also found that the majority of smoking-cessation websites were not evidence-based.[6,7] One study[6] found that 65 of 88 websites (74%) and the other[7] found that 156 of 202 (77%) did not include evidence-based smoking-cessation treatments. In all studies, the evidence base was determined by the Clinical Practice Guideline *Treating Tobacco Use and Dependence*.[8] Like that of the paper by Abroms and colleagues,[2] the conclusions of these papers were that a concerted effort is needed to bring evidence-based materials into various new media platforms. If we are going to take advantage of these technologies, we need to assure that we are reaching and engaging the smoking public with evidence-based smoking-cessation tools. In the case of the paper by Abroms and her colleagues, this means capitalizing on

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the ever-widening use of iPhone apps by developing cessation apps that are evidence-based.

Despite the immense promise of technologies such as smartphones, "Where there is an app, there is a way" is undoubtedly overly optimistic. There are of course larger contextual issues that also must be considered. For example, it is important to note that dissemination of evidence-based science is a science in and of itself.[9] A second broad issue is that even if we can effectively reach appropriate audiences, smokers then need to actively engage the app, that is, they not only download it, but use it in a manner that effectively delivers the intervention. For other cessation dissemination and intervention platforms such as websites, the issue of increasing engagement has been addressed in part via an iterative development process based on user-design principles. Increasingly, attention is being focused on building incentives into websites as a means to increase micro-engagements for use and click-through of site features. These types of approaches would also be appropriate for app development. Ultimately, the Abroms' paper[2] and other recent studies highlight the need to proactively address the gap between research and practice.

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