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Combining Web, Email and Telephone Counseling for Behavioral Change

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Abstract and objective

Proactive telephone counseling is one of the most effective non-pharmacological approaches for smoking cessation. This study examines the effectiveness of combining proactive telephone counseling with web/email counseling to improve efficiency and reduce costs. In a randomized trial of 219 smokers with Internet and email access at home and interested in web based support, we observed low rates of use of Internet methods in practice (45%) but no statistically significant difference quit rates (31% at 6 months among respondents.)

Keywords:

smoking cessation, computers, telephone, Internet, counseling, behavior therapy, randomized trial

Introduction

Proactive telephone counseling is one of the most effective tools available for smoking cessation. However, this approach is expensive. Proactive methods require counselors to repeated initiate calls to smokers, many of which are missed, incomplete, etc. Even so, a large part of the effectiveness of proactive protocols is this outreach and the sense of accountability it creates in clients. The purpose of this study was, within the established workflow of a busy telephone helpline, to create an integrated system web-based and email methods with telephone counseling, in the hopes of improve efficiency.

Methods

We created series of web based systems including a client site, a counselor site, and an automated email messaging system to alerted was designed to present a tailored experience to the client based on the stage of their smoking cessation effort. To support modular and reusable systems for tailoring of web sites to clients in a federated environment, we created middleware for dynamic assembly of web pages. The specifications for tailoring of the site, including tailoring based on data in either of the two databases, were represented in XML in an external file. This approach allowed us to rapidly change the nature of interactions on the site without rebuilding all of the linkages and other tools for state maintenance. The counselor site was design allowed counselors to review their panel of assigned clients on the left hand bar, and activities on the right-hand side. This included automated email messages that could to be edited before delivery by system, messages from clients, and scheduled appointments with clients. Counselors would be able to view and edit these messages for 24 hours before delivery. When a message was delivered to a client or counselor, they were notified by open email (nonsecure) of the message. They could then log into the web site and read the message on the secure email server portion of the site and then respond.

Results

219 smokers were randomized to receive either Web/email only follow up counseling, ad hoc telephone/web, or telephone counseling. The demographics of enrollees were surprisingly similar to Internet studies with a high educational level among participants (70% with some college education), a preponderance of female subjects (69%), and of younger subjects (64% under 45 years of age). Among smokers randomized to web access, about 45% logged in and access web/email tools for smoking cessation and communications with counselors. Amongst enrollees, 67% responded to request for follow up information 6 months after enrollment in the program. Only a few participants had used other web based cessation services (11%). Most subjects reported being satisfied with services received (more than 75%). Smokers receiving Internet counseling tended to believe that the right mix was a equal proportion Internet and telephone counseling (50% of respondents) The overall quit rate among respondents was 31% and there were not statistically significant differences between groups.

Discussion

This study was among the first studies to attempt to combine web/email and telephone counseling. It was difficult toconvert helpline callers Internet communications with counselors. However, most participants thought that telephone counseling had a place in communications (even though they may not have used it). While this study was not powered to detect small differences in quit rates, com-

bined modality counseling appeared as effective as telephone counseling alone.