Willingness to Engage in Health Behavior Change Interventions Among Primary Care Patients Positive For Tobacco Use and At-Risk Drinking

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ABSTRACT

Objective: To examine intervention preferences of primary care patients who recently screened positive for tobacco use and at-risk drinking.

Methods: Primary care patients who screened positive for recent tobacco use and at-risk drinking were eligible to participate in a one-time telephone–based survey conducted from August 2015 to December 2015. The survey asked questions about how willingness to engage in an intervention in integrated primary care was influenced by the described format and focus of the intervention. Data from patients who smoked cigarettes and met criteria for at-risk drinking in the last 30 days (N = 53) were included in the analyses.

Results: Participants reported that they would be more willing to engage in an intervention focused on helping them reduce their risk of medical problems than in services focused specifically on discussing cigarette or alcohol use ($P = .00$). Participants did not indicate a preference related to whether the intervention was delivered during a primary care appointment, immediately following a primary care appointment, or as a scheduled follow-up ($P = .693$).

Conclusions: Patients may be more willing to engage in a behavior intervention when general health is emphasized over a focus specifically on tobacco or alcohol use. Patients were equally receptive to receiving brief interventions in several different formats available within an integrated primary care setting.

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Integrated primary care settings, or those that offer both medical and behavioral health services,[1] are well equipped to offer interventions focused on health behavior change. By definition, these clinics staff behavioral health providers who work as part of the primary care team and assist with the behavioral and mental health concerns of patients. While available for assistance with health behavior change, behavioral health providers are underutilized for this purpose and more routinely provide interventions for concerns such as depression and anxiety.[2] Input from patients who could benefit from health behavior change interventions may help increase rates at which these types of interventions are received in primary care, as consideration of patient preferences enhances treatment engagement, retention, and adherence to medical recommendations.[3]

Tobacco use and at-risk drinking are among the leading causes of preventable death in the United States[4] and are modifiable risk factors of a multitude of health problems. Fortunately, evidence-based brief interventions for patients motivated to change tobacco or alcohol use (such as the 5-As: Ask, Advise, Assess, Assist, and Arrange[5]) and for those not yet ready to change (eg, motivational interviewing[6]) can be provided by behavioral health providers in primary care settings.

While past research[5] has examined patients' perspectives on interventions for tobacco use and at-risk drinking, no prior work has compared willingness to attend a tobacco- or alcohol-specific intervention to an intervention focused more broadly on ways that patients may improve their overall health. Furthermore, the mode by which these interventions could be delivered in an integrated primary care setting has not been investigated (ie, brief interventions could be delivered by a behavioral health provider who joins a primary care appointment, via a behavioral health appointment immediately following the primary care appointment [ie, a "warm handoff"], or during a behavioral health appointment at a later date).

The purpose of this study was to examine intervention preferences of primary care patients who recently screened positive for tobacco use and at-risk drinking. We sampled veterans due to the high prevalence of these conditions in this population and the requirement of integrated primary care in the Veterans Health Administration system. We investigated the extent to which the (1) delivery format of a brief intervention for tobacco or alcohol use and (2) described focus of the intervention influenced self-reported willingness to engage in a primary care–based intervention. We predicted that patients would be more willing to engage when the focus of the intervention was on improving health rather than on tobacco use or at-risk drinking. We did not have an a priori hypothesis about which intervention format would be preferred.

Clinical Points

- Primary care providers may maximize the impact of treatment recommendations for tobacco use and at-risk drinking by presenting behavioral health treatment as an opportunity to reduce risk of medical problems.
- Patients were hypothetically equally willing to engage in interventions delivered before or after a primary care appointment or as a scheduled follow-up appointment.

METHODS

This research was approved by the VA Western New York Healthcare System Institutional Board. Veterans seen in primary care at the VA Western NY Healthcare System (Buffalo, New York) or the Syracuse VA Medical Center (Syracuse, New York) who screened positive for tobacco use in the past year were contacted. Those who endorsed past-year tobacco use and at-risk drinking were invited to participate in this one-time telephone survey. At-risk drinking was defined as a positive score (>3 for males, >2 for females) on the 3 consumption questions of the Alcohol Use Disorders Identification Test–Consumption.[7] The study was conducted from August 2015 to December 2015.

Participants rated several scenarios based on their willingness to engage in services on a scale from 1 (highly unlikely) to 5 (highly likely). To assess the extent to which intervention format was related to willingness to engage, patients were asked the following questions: (1) "If your VA primary care provider said, 'I'd like to bring another member of my team into our appointment to talk about things you can do to reduce your risk of medical problems,' how likely would you be to agree?" (2) "If your VA primary care provider said, 'I'd like you to meet with another member of our primary care team after our appointment today to discuss things you can do to reduce your risk of medical problems,' how likely would you be to agree?" (3) "If your VA primary care provider said, 'I'd like you to schedule a follow-up appointment with one of our behavioral health providers here in primary care to further discuss things you can do to reduce your risk of medical problems,' how likely would you be to agree?" To assess the extent to which intervention focus was related to willingness to engage, we later asked each question again using the words "your cigarette use" and "your alcohol use" instead of "things you can do to reduce your risk of medical problems."

A Timeline Followback interview[8] was completed to assess the number of standard drinks consumed and cigarettes smoked per day over the past 30 days. Demographic information and military history were also collected. Veterans who completed the survey received $20.

Descriptive statistics were calculated to describe the sample. A 3×3 factorial analysis of variance examined the impact of intervention focus (ways to improve health, cigarette use, alcohol use) and intervention format (during the primary care appointment, immediately following the appointment, follow-up at another time) on the likelihood to agree to services. For post hoc tests, we used a Bonferroni correction of inflated α rate.

Table 1. Sociodemographic Characteristics and Military Service of the Study Participants (N = 53)

Variable	Participants, n (%)
Race	
White	38 (71.7)
Black or African American	13 (24.5)
American Indian or Alaska native	2 (3.8)
Ethnicity	
Not Hispanic or Latino	50 (94.3)
Marital status	
Currently married	23 (43.4)
Currently divorced	13 (24.5)
Single, never married	9 (17.0)
Currently separated	4 (7.5)
Widowed	4 (7.5)
Highest level of education completed	
< high school	4 (7.5)
High school or GED	20 (37.7)
Some college	22 (41.5)
4-year college degree	6 (11.3)
Master's/doctorate/professional degree	1 (1.9)
Employment status	
Disabled	22 (41.5)
Retired	12 (22.6)
Employed full-time	10 (18.9)
Unemployed/student/homemaker	6 (11.3)
Employed part-time	3 (5.7)
Annual household income	
< $20,000	24 (45.3)
$20,000 to $39,999	13 (24.5)
$40,000 to $59,999	9 (17.0)
≥ $60,000	7 (13.2)
Branch of military[a]	
Army	28 (52.8)
Marines	14 (26.4)
Navy	11 (20.8)
Reserves	10 (18.9)
Coast Guard	6 (11.3)
Air Force	2 (3.8)
Military service era[a]	
World War II	1 (1.9)
Korean War	2 (3.8)
Vietnam War	24 (45.3)
Grenada	2 (3.8)
Persian Gulf War	3 (5.7)
Gulf War II (Iraq/Afghanistan)	13 (24.5)
Other (eg, Cold War, Somalia)	19 (35.8)
Combat veteran	
Yes	25 (47.2)

[a]Percentages may add up to more than 100% because participants could select all that applied.

RESULTS

Of the 91 eligible patients, 71 agreed to participate. Fifty-three participants were retained for analyses as they reported recent (past 30 days) use of both tobacco and alcohol. Participants were mostly male (n=51, 96%), were a mean of 55.0 years of age (SD = 14.4), and consumed a mean of 2.70 (SD = 2.47, median = 2.0) drinks per day and a mean of 11.51 (SD = 8.25, median = 9.73) cigarettes per day. Table 1 contains sample characteristics.

There was a significant and large main effect of intervention focus ($F_{2,51} = 23.27$, $P = .000$, partial eta squared [η_p^2] = 0.44). Analysis of the univariate effects indicated that

Table 2. Willingness to Attend Interventions; Ratings Provided Are on a Scale of 1 (highly unlikely to attend) to 5 (highly likely to attend)

	Mean	SD
Focus of the intervention		
Things you can do to reduce your risk of medical problems	4.42	0.81
Cigarette use	3.77	1.55
Alcohol use	3.35	1.49
Format of the intervention		
During primary care appointment	3.87	1.13
After primary care appointment ("warm handoff")	3.85	1.18
Scheduled follow-up in primary care	3.81	1.19

participants were more likely to agree to an intervention that focused on "things you can do to reduce your risk of medical problems" than an intervention focused on alcohol ($P = .000$) or cigarette ($P = .002$) use and that they were more likely to agree to an intervention that focused on cigarette use than alcohol use ($P = .017$, Table 2).

There was no significant effect of intervention format ($F_{2,51} = 0.26$, $P = .693$, $\eta_p^2 = 0.014$), suggesting that participants did not differ in their degree of agreement to receive an intervention that occurred during, immediately following, or as a scheduled follow-up to the primary care appointment. There was no significant interaction between focus and format of the intervention ($F_{6,47} = 2.07$, $P = .829$, $\eta_p^2 = 0.029$).

DISCUSSION

Participants in this study were more willing to discuss ways to reduce their risk of medical problems compared to specifically discussing cigarette or alcohol use and were more willing to discuss their cigarette use than their alcohol use. Prior studies have not compared willingness to engage in a brief intervention as a function of using a general health improvement focus compared to smoking or alcohol specific. However, past research[9,10] has suggested that the way one communicates with prospective patients about an intervention can affect their willingness to engage. These principles have been used to enhance at-risk alcohol use and tobacco use intervention uptake in college samples, reduce binge drinking on college campuses, and encourage the use of tobacco cessation quitlines.

Medical providers have the opportunity to assist with increasing engagement in behavioral health services. Primary care providers who work in an integrated setting have the advantage of being readily able to collaborate with colocated behavioral health providers who have expertise in behavior change interventions and who can deliver treatments for tobacco use and at-risk drinking. In addition, patients report trusting their primary care providers and that they are very likely to follow through with behavioral health recommendations when suggested by their primary care provider.[11] Primary care providers may benefit from having information on how to most effectively present behavioral interventions to patients. Our results suggest that using broad, holistic language may improve rates at which patients engage in behavioral health treatment. In addition, this approach would be consistent with one of the touted benefits of behavioral health in primary care, which is to reduce the stigma associated with behavioral health services.[12]

Patients in this study did not indicate a preference for one modality of intervention within primary care over another of those included in the survey. These findings are important because the availability of the different intervention modalities varies across clinic settings. In this regard, some integrated primary care clinics may rely heavily on warm handoffs, while others may only schedule patients for follow-up appointments. Our data suggest that patients are equally open to each of these formats, and, therefore, clinic flow and setup may be more important determinants of how behavioral interventions are delivered.

Limitations

Patients were asked to report on their hypothetical willingness to engage in an intervention. Future research would ideally randomly assign patients to receive different messages and measure engagement with and retention in services as a function of message type. The sample is small and homogenous, limiting generalizability. Finally, the order of the questions was not randomized, and, thus, order effects may have impacted participants' responses to survey items.

CONCLUSION

These data provide preliminary evidence that primary care providers have the opportunity to maximize the impact of treatment recommendations for tobacco use and at-risk drinking by presenting behavioral health treatment as an opportunity to reduce risk of medical problems. Patients may be more willing to engage when general health is emphasized. Further, the format in which brief tobacco and alcohol interventions are delivered may be accommodated with an existing clinic setup, as patients did not endorse a significant treatment format preference.

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