Facilitators and Barriers to Implementing Screening, Brief Intervention, and Referral to Treatment (SBIRT) in Primary Care in Integrated Health Care Settings

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Accepted author version posted online: 15 Aug 2014. Published online: 15 Aug 2014.

To cite this article: Alanna Kulchak Rahm PhD, MS, Jennifer M. Boggs MSW, Carmen Martin MPH, David W. Price MD, Arne Beck PhD, Thomas E. Backer PhD & James W. Dearing PhD (2014): Facilitators and Barriers to Implementing Screening, Brief Intervention, and Referral to Treatment (SBIRT) in Primary Care in Integrated Health Care Settings, Substance Abuse, DOI: 10.1080/08897077.2014.951140

To link to this article: http://dx.doi.org/10.1080/08897077.2014.951140

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Facilitators and Barriers to Implementing Screening, Brief Intervention, and Referral to Treatment (SBIRT) in Primary Care in Integrated Health Care Settings

Alanna Kulchak Rahm, PhD, MS,1,3 Jennifer M. Boggs, MSW,1 Carmen Martin, MPH,1 David W. Price, MD,1 Arne Beck, PhD,1 Thomas E. Backer, PhD,2 and James W. Dearing, PhD1,4

ABSTRACT. Background: Substance abuse in the United States is a serious public health concern impacting morbidity and mortality. However, systematic screening and intervention has not been widely adopted into routine practice by health care organizations and routine screening and intervention is not currently in place for primary care at Kaiser Permanente Colorado. Therefore, a formative evaluation was conducted to explore and enhance implementation of the Substance Abuse and Mental Health Services Administration (SAMHSA) screening, brief intervention, and referral to treatment (SBIRT) approach in the organization. Methods: Key clinical stakeholders, including internal and family medicine physicians, primary care nurses, mental health therapists, chemical dependency clinicians, and clinic-based psychologists provided feedback. Two focus groups were also conducted with patient stakeholders: one in English and one in Spanish. Results: All clinical stakeholders promoted clinic-based psychologists to conduct brief intervention and determine referral to treatment as the optimal implementation program. Inclusion of the patient perspective also highlighted the importance of considering this perspective in implementation. Both patient groups were generally supportive of SBIRT, especially the educational value of screening questions defining healthy drinking limits; however, English-speaking patients noted privacy concerns and Spanish-speaking patients noted frequently being asked about drug or alcohol use. Organizationally, systems exist to facilitate drug and alcohol use screening, intervention, and referral to treatment. However, physician time, alignment with other priorities, and lack of consistent communication were noted potential barriers to SBIRT implementation. Conclusions: Clinicians expressed concerns about competing priorities and the need for organizational leadership involvement for successful SBIRT implementation. A unique suggestion for successful implementation is to utilize existing primary care clinic-based psychologists to conduct brief intervention and facilitate referral to treatment. Patient stakeholders supported universal screening, but cultural differences in opinions and current experience were noted, indicating the importance of including this perspective when evaluating implementation potential.

Keywords: Alcoholism, implementation science, SBIRT, substance abuse detection

INTRODUCTION

The US Preventive Services Task Force (USPSTF) recommends screening and behavioral counseling interventions in primary care (PC) settings to address unhealthy alcohol use.1 Unhealthy or harmful use is defined as more than 3 drinks per day for women and 4 drinks for men, or more than 7 drinks per week for women and 14 drinks per week for men.2 About 30% of the PC population is reported to have unhealthy drinking behavior,3 but only 8.7% of adult heavy drinkers reported...
being asked or counseled about alcohol use in the previous year on a national survey. Systematic reviews indicate that screening and brief motivational interviewing interventions delivered in PC can reduce alcohol consumption by an average of 17% or 3.6 drinks per week. Multiple cost-benefit analyses from a randomized controlled clinical trial demonstrated cost reduction of $43,000 to over $56,000 for every $10,000 spent on alcohol screening and brief intervention. Physicians and health systems, however, have been slow to implement screening and brief interventions for unhealthy alcohol use for reasons including lack of time, lack of training, provider discomfort, and organizational factors such as lack of administrative support. Consequently, although screening for unhealthy alcohol use with brief intervention ranks as one of the highest prevention priorities for adults, it has one of the lowest delivery rates, with screening or intervention typically completed only when a risk factor is evident.

The screening, brief intervention, and referral to treatment (SBIRT) approach was developed in response to recommendations of the Institute of Medicine and the World Health Organization (WHO) to screen for unhealthy drinking. The Substance Abuse and Mental Health Services Administration (SAMHSA) notes that the purpose of SBIRT is to “identify, reduce, and prevent problematic use, abuse, and dependence on alcohol and illicit drugs” through the identification of individuals exhibiting risky (nondependent) use and intervention prior to the need for more extensive and specialized treatment. Over 25 years of research has produced more than 25 validated screening tests, multiple randomized controlled trials of brief intervention, and numerous studies of attempted integration of S, BI, or the full SBIRT approach into various health care settings (see Babor et al. for a comprehensive review of this evidence).

Kaiser Permanente Colorado (KPCO) is an integrated health care system that provides care for more than 550,000 individuals across multiple insurance products, including managed care, high deductible, and Medicare plans in the Denver and front-range area. Proactive identification of and early intervention for risky alcohol and drug use are becoming increasingly important to KPCO due to the public health significance of alcohol misuse, yet the organization has not implemented protocols to systematically identify at-risk or addicted individuals in PC.

The SBIRT approach has been identified as a method for universal screening and identification of at-risk individuals that fits within current KPCO organizational processes; however, implementing SBIRT within an integrated health system such as KPCO may be different than settings described in prior studies. In KPCO, specialty mental health and addiction medicine providers are easily accessible by PC providers, a shared electronic medical record enables PC providers to assess patient follow-up with treatment, and structured, evidence-based health service delivery protocols are the norm. With this added integration comes added complexity that may hinder implementation. Multiple provider types and staff are each responsible for their specific area of patient care and other organizational priorities, and these multiple competing individual, departmental, and organizational priorities pose difficulty for new approaches such as SBIRT. Therefore, formative evaluation is critical to understand the feasibility of SBIRT from the context of multiple stakeholders in order to improve successful SBIRT implementation at KPCO.

The purpose of this study was to conduct a formative evaluation of SBIRT to illuminate provider and patient stakeholder perceptions of the facilitators of and barriers to SBIRT implementation in primary care within KPCO. This will serve to inform and optimize SBIRT implementation as the potential method for universal alcohol and drug use screening in the organization. We asked the following questions:

1. How would clinical stakeholders respond to SBIRT?
2. How would established workflow provide both opportunities and obstacles to SBIRT use in practice?
3. What adaptations to the SBIRT model, and to the clinical context, would optimize subsequent implementation?
4. Would KPCO patients have concerns about SBIRT or universal screening during routine care visits?

METHODS

Study Design

This was a formative evaluation using individual and group interview methods to illuminate stakeholder opinions of and suggestions for SBIRT implementation in primary care. This study was approved by the KPCO Institutional Review Board.

Setting and Sample

This evaluation was conducted at KPCO, an integrated health care system in Denver, Colorado. KPCO provides insurance and medical care for about 10% of the state population, with demographic characteristics concordant with the Denver metropolitan area. Of the more than 550,000 members served, approximately 16% are also Medicare members, over 25% are race/ethnicity other than non-Hispanic white, and 16% are over age 65. KPCO includes over 1100 medical group physicians and over 5500 other health care professionals and staff. Primary care services are provided through 22 outpatient clinics. General behavioral health services are provided at 3 locations and chemical dependency treatment services are provided at 1 location adjacent to a behavioral health office. Additional behavioral health services are provided by clinic-based psychologists co-located in PC clinics.

Our target sample included stakeholder groups likely to be most impacted by PC SBIRT implementation. Identified stakeholder groups (described separately below) included (a) PC physicians, (b) nursing managers and staff, (c) behavioral health department members, (d) chemical dependency department members, (e) PC clinic-based psychologists, and (f) PC patients (English speaking and Spanish speaking).

Data Collection

All individual and group interviews were conducted by an experienced facilitator and 2 note takers and digitally recorded. Immediately after each stakeholder interview, a detailed summary was created by the facilitator and note takers from field notes and recordings. Each summary was then reviewed with the entire study team prior to the next stakeholder group interview. This is a specific team-oriented, time-sensitive qualitative technique of rapid assessment used to quickly gain broad understanding of a
Clinical Stakeholder Assessment

Sampling/recruitment

In order to gain a broad evaluation of multiple stakeholder groups in a short amount of time, purposive sampling and recruitment strategies were tailored to each clinical stakeholder subgroup. At KPCO, a preferred strategy to solicit feedback from members of a medical office or a department is to conduct focus groups during regularly scheduled departmental meetings. This strategy was used for stakeholder groups in the chemical dependency and behavioral health departments, and for the clinic-based psychologists. Department members were not obligated to participate, but the majority did so. The number of participants in Table 1 represents all or nearly all of the members of each of these 3 groups.

In order to solicit feedback from PC physicians, nursing staff, and nursing manager stakeholders from across all 22 primary care clinics, we contacted departmental leaders who e-mailed invitations to all staff from each stakeholder group inviting them to participate in group-specific telephonic focus groups. Telephone-based discussion groups are common in health research for geographically dispersed or difficult to assemble groups.21 Four nurses responded to this recruitment method (2 nurse managers and 2 front line nurses) and subsequently participated in 2 telephone-based group interviews. No physicians responded to this recruitment method; therefore, individual telephone interviews were conducted with one internal medicine leader and one family medicine physician leader. It was determined that a physician leader of each of these PC groups could provide responses that are also reflective of the group of stakeholders for which they are responsible. A $25 gift was provided to all participants.

Discussion guide

A structured discussion guide was created for use across all clinical stakeholder groups. The discussion guide was developed by the research team with experience in implementation science and qualitative research in order assess the key areas pertinent to optimizing successful PC SBIRT implementation at KPCO. The discussion guide began by ascertaining the stakeholders’ current processes for screening, brief intervention, and referral to treatment for drug and alcohol use and familiarity with SBIRT. After current practice was determined, the SBIRT approach as currently outlined by SAMHSA was described to the group by the facilitator and SBIRT program manager. The discussion guide then assessed additional key areas related to PC SBIRT implementation: (a) existing structures to support quality improvement and change; (b) clinical staff motivation to integrate SBIRT into PC as standard practice, including perceived utility of SBIRT; (c) logistics for successful PC SBIRT implementation in the system; (d) possible barriers to PC SBIRT implementation and suggested solutions; (e) alignment of SBIRT with other health screening priorities; and (f) strategies to build leadership support for organizational dissemination.

Analysis

Content analysis of clinician stakeholder summaries was conducted using an evaluation coding technique, where summary

<table>
<thead>
<tr>
<th>Participant group</th>
<th>Type</th>
<th>Total no. Participants</th>
<th>No. groups or interviews</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physicians</td>
<td>Individual telephone interviews</td>
<td>2</td>
<td>2</td>
<td>Department chiefs—internal medicine, family medicine</td>
</tr>
<tr>
<td>Nurses</td>
<td>Telephonic group interviews</td>
<td>4</td>
<td>2</td>
<td>Nurse managers, front-line nurses</td>
</tr>
<tr>
<td>Behavioral health department*</td>
<td>Departmental focus group</td>
<td>11</td>
<td>1</td>
<td>Managers (LCSW, psychologist), licensed clinical psychologists, physicians</td>
</tr>
<tr>
<td>Chemical dependency department*</td>
<td>Departmental focus group</td>
<td>12</td>
<td>1</td>
<td>Director, supervisor, MD/RN addiction medicine/ addiction recovery, chemical dependence treatment counselors, therapists</td>
</tr>
<tr>
<td>Behavioral medicine specialists (BMS) (clinic-based psychologists group)*</td>
<td>Departmental focus group</td>
<td>9**</td>
<td>1</td>
<td>Nurse manager, licensed clinical psychologists</td>
</tr>
<tr>
<td>Patients—English speaking***</td>
<td>Focus group</td>
<td>6</td>
<td>1</td>
<td>21 years or older with a health maintenance visit in the past 3 months from a single clinic, Language preference = English</td>
</tr>
<tr>
<td>Patients—Spanish speaking***</td>
<td>Focus group</td>
<td>4</td>
<td>1</td>
<td>21 years or older with a health maintenance visit in the past 3 months from a single clinic, Language preference = Spanish</td>
</tr>
</tbody>
</table>

*The number of participants in each of these stakeholder groups represents nearly all members of the department or group.

**KPCO has 22 clinic locations, 3 have behavioral health and or chemical dependency departments on site and therefore do not have a clinic-based psychologist in primary care. Each clinic-based psychologist is assigned to the primary care department of 2–3 different clinics.

***One-time focus groups were meant to provide general opinions from this stakeholder group to guide implementation, not to be an exhaustive study of patient knowledge, attitudes, and beliefs about SBIRT in primary care; therefore, patient demographics are generalized to recruitment criteria.
answers to specific questions from the discussion guide related to current practice and PC SBIRT implementation were categorized for comparison across stakeholder groups.\textsuperscript{22} Evaluation categories included (a) current substance abuse screening, intervention, and referral practice, and SBIRT knowledge; (b) current quality improvement change processes; (c) factors motivating drug and alcohol screening as standard practice and perceived utility of SBIRT; (d) workflow implications and solutions for successful PC SBIRT implementation; (e) barriers to and solutions for PC SBIRT implementation; (f) other health screening priorities and alignment of SBIRT; and (g) strategies/solutions for building leadership support to promote SBIRT implementation.

Patient Stakeholder Assessment

\textit{Sampling/recruitment}

The study time period allowed for only 2 focus groups to elicit patient stakeholder feedback on PC SBIRT implementation. Recruitment methods were therefore designed to maximize the diversity of participants. Electronic health record (EHR) data were used to identify and recruit random samples of 100 Spanish-speaking and 100 English-speaking patients older than 21 years with a health maintenance visit in the previous 3 months at 2 clinics known for high ethnic and racial diversity. Patients were sent an invitation letter with a post-age-paid opt-out postcard. After 10 days, patients without a returned opt-out card were contacted by phone and invited to participate in a focus group. Local experience indicates that the no-show rates for adult English-speaking and Spanish-speaking patients range from 30\% to 60\%. Our goal was to reach a final group size of 6–10 participants each; therefore, recruitment continued until 12–15 patients agreed to attend each focus group.\textsuperscript{23} Six patients attended the English group and 4 attended the Spanish group (Table 1). Both focus groups were conducted by the same facilitator, who is bilingual in English and Spanish. The facilitator’s Spanish verbal and written language skills were evaluated by a third party and assessed at the advanced level. An advanced rating indicates that, although a native English speaker, her English and Spanish language skills are equally proficient enabling consistent facilitation of the focus group in each language. Upon completion of the group, patients received a $25 gift card.

\textit{Discussion guide}

The purpose of the discussion guide was to gather patient stakeholder opinions related to PC SBIRT implementation and to determine if patients would find systematic screening too obtrusive. The structured discussion guide was developed as described for the clinical stakeholders and included (a) current patient experiences with screening for drug or alcohol use at primary care visits; (b) a description of the basic concepts of the SAMHSA SBIRT approach and a description of how it could happen during an actual visit, including distribution of the questionnaires they would be asked to complete should they drink more than recommended limits or mention illicit drug use; (c) potential patient and family member reaction to universal screening for alcohol and drug use during routine PC visits; (d) patient attitudes towards brief intervention and referral to treatment after screening; (e) potential unanticipated consequences of universal screening; and (f) other facilitators or barriers to SBIRT implementation from the patient perspective.

\textbf{Analysis}

Similar to the clinical stakeholder discussions, evaluation categories were created based on the discussion guide and topics raised in the focus groups and then compared across the 2 patient groups interviewed. Final patient stakeholder categories related to PC SBIRT implementation included (a) reactions to current substance use screening experiences, (b) beliefs about substance use screening in PC, (c) general feelings about KPCO, (d) honesty of answers, (e) cultural issues, (f) barriers to SBIRT implementation, and (g) benefits of SBIRT implementation from the patient perspective.

\textbf{RESULTS}

Nine individual or group interviews were conducted with a total of 48 stakeholders over a 3-month period. Table 1 shows the stakeholders sampled between July and September of 2011 by stakeholder group, the total number of participants representing that stakeholder group, the overall demographic of the group (provider types, degrees, or eligibility criteria in the case of patients), and how feedback was solicited from that group. Specifically, Table 1 indicates that for the PC physician stakeholder group, individual telephone interviews were conducted with the Internal Medicine Chief and the Family Practice Chief, 2 nursing managers provided feedback via telephonic group interview, and 2 PC nurse stakeholders participated in a telephonic group interview. Therefore, the results of these stakeholder groups represent only the opinions of these individuals. Additional demographic data were not collected on stakeholders.

\textbf{Clinical Stakeholders}

\textit{Current primary care processes}

Systematic population-based screening, brief intervention, or referral to treatment for drug and alcohol use does not currently exist in KPCO per all clinical stakeholders interviewed. Screening was noted to occur during pregnancy and by PC physicians in the presence of risk factors such as accident proneness, history of driving under the influence, related medical problem (e.g., cirrhosis), intoxication, or if a patient spontaneously divulges substance abuse. Fields for documenting substance use (number of drinks, types of drugs used) and multiple substance use assessment tools do exist in the EHR, yet no consistent use of these tools was reported by any clinical stakeholders. PC leaders were familiar with one assessment tool, CAGE,\textsuperscript{24} but reported inconsistent use, and only the clinic-based psychologists expressed knowledge of the SBIRT approach as defined by SAMHSA. Only patients assessed as “heavy” users (in the perception of each individual provider) were noted to receive any PC intervention or referral to treatment.
Strategies to build leadership support for organizational dissemination

Multiple clinical stakeholders reported that support from PC leadership, health plan leadership, and the nursing union would be critical for successful PC SBIRT implementation. Furthermore, they stated that successful implementation would also require the up-front and longitudinal demonstration of SBIRT as a cost-effective, quality improvement change aligned with organizational priorities and must address the concerns specific to each clinical stakeholder group (physicians, nurses, mental health). For example, nurse manager stakeholders were concerned about evidence supporting the value added for the health plan, whereas PC physician leaders were concerned about evidence supporting the effectiveness of SBIRT components when delivered in the PC setting.

Existing organizational structures discussed by clinical stakeholders that could be mobilized by leadership to facilitate PC SBIRT implementation included (1) well-defined quality improvement structures in the form of unit-based teams (UBTs), whose mission is to implement practice change; and (2) PC clinic-based psychologists who are trained and already trusted by PC physicians and staff to assist with behavioral issues, including drug and alcohol use, when identified currently.

Perceived utility of PC SBIRT

Potential utility of PC SBIRT implementation identified by clinical stakeholders included increased comfort and reduced stigma around alcohol and drug use by PC staff, and promotion of evidence-based preventive medicine. Other potential positive implications expressed by clinical stakeholders included utilizing the SBIRT approach for drug use in addition to alcohol use, particularly for marijuana and prescription drug use.

Barriers to and facilitators of PC SBIRT implementation

Although KPCO is a system with integrated mental health services, we found communication patterns between PC physicians, nurses, clinic-based psychologists, the chemical dependency department, and the behavioral health department to be inconsistent, particularly regarding BI, RT, and patient follow-up for drug and alcohol use. Based on the reports of all clinical stakeholder groups, a patient can currently be referred to either a clinic-based psychologist, to the chemical dependency department, or to the behavioral health department after identification of drug or alcohol abuse by a PC physician. For a patient currently referred to a clinic-based psychologist, the clinic-based psychologist evaluates the patient, conducts BI, and/or refers the patient to the behavioral health department or chemical dependency department as appropriate.

Clinical stakeholders felt that the care pathway to refer patients to the chemical dependency department was clear for substance users who were ready to begin treatment. However, the assessment of change readiness and treatment willingness was neither clear nor consistent between departments, leading to subsequent confusion in the RT process. For example, providers in one department discussed referring patients whom they assessed as ready and willing to begin treatment, yet the destination department would assess the patient as not ready or willing, thus ending the treatment process for that patient. Behavioral health department stakeholders also indicated that many PC referrals to behavioral health were more appropriate for the chemical dependency department. However, both behavioral health and chemical dependency department stakeholders felt that PC staff may be reluctant to refer patients directly to the chemical dependency department due to stigma attached to this referral, patient resistance, or provider discomfort with substance use.

All clinical stakeholders expressed willingness to revise and clarify care pathways to and from the chemical dependency department as part of PC SBIRT implementation. However, the chemical dependency department also felt strongly that nondependent patients (those requiring only BI) should be managed in primary care with the assistance of clinic-based psychologists, and only patients who were substance dependent should be seen by the chemical dependency department.

Alignment with other priorities and logistics for successful implementation

All clinical stakeholder groups suggested that the SBIRT screening protocol fits well with current visit intake processes, which already include universal screening for tobacco use and readiness to quit assessment by the nursing staff. Despite this fit, PC physician and nurse stakeholders expressed concerns around added time, workflows, and scope of practice. Nursing stakeholders were mainly concerned that adding questions to the intake process, which uses 6–8 minutes of the 20-minute visit, could take time away from the PC physician.

Nurse managers wondered whether S and/or BI were within the scope of practice for nurses and expressed liability concerns around conducting the BI. These stakeholders felt that any BI should only be delivered by the PC provider, clinic-based psychologist, or chemical dependency specialist. Overall, most clinical stakeholders suggested that BI should be conducted by the clinic-based psychologists, who also agreed that they should be responsible for this aspect of SBIRT. The clinic-based psychologists also noted their expertise in motivational interviewing, a key component of BI to support this solution.

Patient Stakeholders

Patients from both groups suggested that any concerns about SBIRT could be eased if clinical staff emphasized that screening and intervention are part of routine clinical care for everyone. Individual patients in each group also remarked that the screening questions themselves were educational, as most were unaware of the current healthy drinking limits of 3 drinks per day for women and 4 drinks for men or 7 drinks per week for women and 14 drinks per week for men. These individuals felt the screening questions “would help me realize what ‘too much’ is.” Individual participants from both patient stakeholder groups also mentioned that they could have benefited from SBIRT during times when they or family members were abusing substances. Therefore, they also noted that systematic screening and intervention could be a necessary step to begin important conversations with at-risk individuals about the effects of substance use on health.

English-speaking participants liked that the SBIRT screening was short and could be administered with other screening questions such as tobacco use because “the questions are just...
Some English-speaking patients expressed concern that drug and alcohol use information in the EHR could negatively affect their families, careers, retirement benefits, and eligibility for life insurance coverage. Two participants in this group justified this concern by providing examples where their medical records were mistakenly released to employers. Spanish-speaking patients reacted positively to SBIRT overall, and none of the individuals expressed concerns about confidentiality, stigma, or adverse impact of documentation in the EHR. Spanish-speaking participants did note, however, that they were routinely asked about substance use during office visits and associated such screening with receiving high-quality care from KPCO, for which they were “grateful.” These patients also expressed confidence in their KPCO physicians and felt that the PC physician would know the best resources and treatment options for substance use and was therefore an appropriate person to address this issue.

DISCUSSION

The purpose of our study was to systematically elicit clinical provider and patient stakeholder feedback at KPCO to determine the primary facilitators of and barriers to PC SBIRT implementation in order to create an informed and optimized implementation plan. Results from KPCO stakeholders suggest that SBIRT is a useful approach that aligns with the organizational focus on prevention and is consistent with existing PC workflows. A unique finding of this effort was the unanimous suggestion by all clinical stakeholders that BI and RT be delivered by clinic-based psychologists instead of nurses or PC physicians due to time, scope of practice, and liability issues. Although these doctoral-level psychologists are more highly trained than nurses, health educators, or master’s-level therapists delivering brief interventions in prior studies, utilizing clinic-based psychologists at KPCO for BI and to facilitate RT may overcome a significant barrier to sustaining SBIRT that has been reported in previous literature related to the waning engagement of physicians and nurses. Clinic-based psychologists could also provide ongoing education to PC staff about the differences between unhealthy substance use and substance dependence, which may decrease stigma and increase comfort with the subject of substance use for clinical staff. The barrier of time is also alleviated by removing BI from the 20-minute PC visit. Clinic-based psychologists can also work with the chemical dependency and the behavioral health departments to define and refine RT processes to alleviate the confusion in readiness to change assessments that result in dependent patients not receiving treatment.

Based on our results, other integrated health care systems could also consider implementing and utilizing clinic-based psychologists as part of an SBIRT implementation. This model also fits with the “in-house specialist” model option for implementation suggested by SAMHSA and embedding behavioral specialists in PC clinics as part of PC mental health integration is consistent with the medical home model efforts being adopted by many organizations.

Overall, we found that all KPCO clinical stakeholders were supportive of SBIRT for substance use (alcohol and drug use) in general. These stakeholders also agreed that receptionists or medical assistants could perform the screening (S) portion of SBIRT, BI should be performed by existing PC clinic–based psychologists, and RT processes to the chemical dependency or the behavioral health departments should be clarified. Lack of PC physician time was a main barrier, as was concern over scope of practice for staff other than the physician or clinic-based psychologist to conduct BI. Potential facilitators included unit-based teams (UBTs) within primary care clinics to organize and evaluate PC SBIRT implementation. Patient stakeholders were also supportive overall.

To our knowledge, this is also one of the first studies to elicit patient stakeholder feedback to inform SBIRT implementation in an organization. This feedback was important to the organization and the clinical providers in maintaining a patient-centered approach to care, especially around the sensitive subject of drug and alcohol use. Adoption of the SBIRT approach in other PC practices has been variable, and to our knowledge, no other large integrated health system has been successful in achieving or sustaining PC integration of the SBIRT approach as defined by SAMHSA. The Veterans Health Administration (VHA) has instituted screening (S) and brief intervention (BI) through performance measures and EHR reminders to conduct BI after patients screen positive for alcohol misuse, which has resulted in BI increase from 5.5% to 29% of identified patients. Kaiser Permanente Northern California has recently completed a cluster randomized trial of PC physician-led versus nonphysician delivery of SBIRT and is currently studying SBIRT for adolescents in mental health and PC, but has not disseminated SBIRT beyond study clinics.

Overall, patient stakeholders were also supportive of PC SBIRT implementation and suggested normalizing screening as a standard of care for everyone. English-speaking patients discussed concerns around confidentiality of SBIRT results in the EHR or upon release of records to employers or life insurance companies, whereas Spanish-speaking patients did not express this concern. Patients from both groups also noted the educational value of the screening questions alone, indicating to us that asking about number of drinks per day may serve as education about healthy drinking limits that alone may help reduce alcohol use in KPCO patients. This effect of screening assessment on behavioral outcomes for brief intervention to reduce alcohol use has been shown in a randomized controlled trial of AUDIT score and a meta-analysis of brief alcohol intervention trials. Although this “assessment reactivity” may reduce the actual effect of an intervention in a research study, the clinical and public health implication of universal assessment to reduce overall alcohol consumption may be substantial.

Additionally, our Spanish-speaking participants noted being asked consistently about alcohol use, whereas our English-speaking patients reported not being asked. Blair et al. found that primary care physicians in the Denver metropolitan area tend to have implicit bias towards Latinos. Blair et al. also found that although Latino patients rated the patient-centeredness of their care lower than white patients, these ratings did not correlate with the implicit biases of their physician. Interestingly, in our study, Spanish-speaking patients did not feel singled out; in fact, they stated that SBIRT screening was appropriate and a demonstration that providers were genuinely interested in their health. This result suggests to us that PC treatment...
SBIRT implementation at KPCO could help improve the perception of the patient-centeredness of care among Spanish-speaking patients and their overall satisfaction with care.

Although this study was a formative evaluation of facilitators and barriers to PC SBIRT implementation specific to one organization, our results are consistent with other studies of PC SBIRT implementation, suggesting the universality of some issues. Our study also has several limitations to address. This study was intended to provide a broad sampling of stakeholder opinions related to PC SBIRT implementation within one KP region, and our specific results may not be generalizable to all KP regions or other organizations; however, the process of systematically eliciting provider and patient stakeholder opinions about SBIRT implementation could be used elsewhere. Within departmental stakeholder group interviews, it is our experience that staff members are not hesitant to present alternate views, and the discussion facilitators for this study are accomplished at leading groups to elicit dissenting opinions so all opinions are captured; however, because only 2 nurses, 2 nurse managers, and 2 PC physician leaders were interviewed, the data from these clinical stakeholder groups are limited to the individuals interviewed.

SBIRT was also presented to clinical stakeholders during the interviews by the study staff using the SAMHSA definition of an approach to universal assessment of drug and alcohol use, which could have biased the discussions to include drug use despite the limited evidence supporting use for this purpose. Although evidence supports S and BI for alcohol use, evidence is less clear for drug use.5 Although this lack of evidence could be a barrier to implementation, some KPCO clinical stakeholders suggested including drug assessment in the SBIRT implementation, potentially due to the recent legalization of marijuana in Colorado and the existing organizational focus on drug contracts for chronic pain patients at KPCO.

As a formative evaluation of patient stakeholder attitudes about PC SBIRT implementation at KPCO, this study was limited to one English-speaking and one Spanish-speaking focus group. Therefore, these views are not generalizable to all English- and Spanish-speaking patients, nor are they generalizable to other patient groups. However, these patient discussion groups highlight the need for assessment of patient stakeholder opinions as part of the formative evaluation process, as the cultural differences in reactions to PC SBIRT implementation highlight the need for KPCO to consider the different reactions of other racial and ethnic groups to PC SBIRT implementation.

Lastly, despite evidence supporting the effectiveness of portions of SBIRT for alcohol use, there is still debate regarding the efficacy and effectiveness of components of SBIRT for different populations and whether the SBIRT approach is effective for reducing drug use. KPCO currently maintains a workflow consistent with the SBIRT approach for universal screening and intervention for tobacco use and is adding other behavioral screenings such as depression, which is recommended by SAMHSA, for use with the SBIRT approach. This ability to implement a common approach that can be adapted to multiple screening priorities is helpful to complex organizations because it reduces the implementation time and effort required.

Even though our findings suggest solutions for PC SBIRT implementation at KPCO, our results also bring up more questions to be answered with future research. Implications for KPCO of widespread implementation of PC SBIRT could have impact on performance measures across the region, as proactive identification and intervention for risky drug and alcohol use specifically are becoming an organizational priority due to 2014 changes to the Center for Medicare and Medicaid 5-star ratings, which now include the HEDIS Alcohol and Other Drug—Initiation and Engagement measures.40 PC SBIRT provides a tested approach for screening, identification, and treatment process to help improve performance on this HEDIS measure. Additional studies could determine the effectiveness of the clinic-based psychologist compared to the current SAMHSA model of training physicians and office staff.

In conclusion, we found that screening, brief intervention, and referral to treatment for unhealthy substance use is important to PC clinical staff, appreciated by patients, and that the SBIRT approach could fit well with current KPCO clinical workflows. We also determined that successful PC SBIRT implementation in KPCO could be optimized by utilizing the clinic-based psychologist to conduct BI and RT where indicated. The evaluation process we utilized to systematically assess multiple clinical and patient stakeholders appears to be a viable procedure for illuminating institution-specific information necessary for successful PC SBIRT implementation planning in large, complex organizations. Further evaluation is needed to determine how well these suggestions work to improve PC SBIRT implementation success. Therefore, we are utilizing this information to guide a pilot implementation of SBIRT in one KPCO PC clinic and to explore feasibility of PC SBIRT implementation through stakeholder identification of facilitators and barriers in other non-KP integrated health care systems.

**FUNDING**

Data collection and analysis of the work reported in this article was supported by the Substance Abuse and Mental Health Administration, through a subcontract with Abt Associates (subcontract no. 28944). The authors report no conflicts of interest.

**AUTHOR CONTRIBUTIONS**

A. K. R. had primary responsibility for writing and revision of the manuscript. A. K. R., J. M. B., and C. M. conducted the focus groups and interviews, analyzed the data, and summarized results for the manuscript. D. W. P., A. B., T. B., and J. W. D. provided input into study design, assisted in identification of clinic leaders and recruitment, and participated in the writing and revision of the manuscript.

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