



Barriers to recruiting primary care practices for implementation research during COVID-19: A qualitative study of practice coaches from the Stop Unhealthy (STUN) Alcohol Use Now trial

Implementation Research and Practice
Volume 3: Jan-Dec 2022 1–16
© The Author(s) 2022
Article reuse guidelines:
sagepub.com/journals-permissions
DOI: 10.1177/26334895221094297
journals.sagepub.com/home/irp

Casey P. Balio^{1,2} , Sean R. Riley^{2,3}, Debbie Grammer⁴,
Chris Weathington⁴, Colleen Barclay^{2,3} and Daniel E. Jonas^{2,3}

Abstract

Background: The COVID-19 pandemic has brought widespread change to health care practice and research. With heightened stress in the general population, increased unhealthy alcohol use, and added pressures on primary care practices, comes the need to better understand how we can continue practice-based research and address public health priorities amid the ongoing pandemic. The current study considers barriers and facilitators to conducting such research, especially during the COVID-19 pandemic, within the context of recruiting practices for the STUN Alcohol Use Now trial. The STUN trial uses practice facilitation to implement screening and interventions for unhealthy alcohol use in primary care practices across the state of North Carolina. **Methods:** Semistructured interviews were conducted with a purposive sample of 15 practice coaches to discuss their recruitment experiences before and after recruitment was paused due to the pandemic. An inductive thematic analysis was used to identify themes and subthemes. **Results:** Pandemic-related barriers, including challenges in staffing, finances, and new COVID-19-related workflows, were most prominent. Competing priorities, such as quality improvement measures, North Carolina's implementation of Medicaid managed care, and organizational structures hampered recruitment efforts. Coaches also described barriers specific to the project and to the topic of alcohol. Several facilitators were identified, including the rising importance of behavioral health due to the pandemic, as well as existing relationships between practice coaches and practices. **Conclusions:** Difficulty managing competing priorities and obstacles within existing practice infrastructure inhibit the ability to participate in practice-based research and implementation of evidence-based practices. Lessons learned from this trial may inform strategies to recruit practices into research and to gain buy-in from practices in adopting evidence-based practices more generally.

Plain Language Summary: *What is known:* Unhealthy alcohol use is a significant public health issue, which has been exacerbated during the COVID-19 pandemic. Screening and brief intervention for unhealthy alcohol use is an evidence-based practice shown to help reduce drinking-related behaviors, yet it remains rare in practice. *What this study*

¹Center for Rural Health Research, East Tennessee State University, Johnson City, TN, USA

²Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA

³Department of Internal Medicine, The Ohio State University, Columbus, OH, USA

⁴North Carolina Area Health Education Centers, CB 7165, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA

Corresponding author:

Casey P. Balio, Center for Rural Health Research, East Tennessee State University, 1276 Gilbreath Dr., Johnson City, TN 37614, USA.
Email: balioc@etsu.edu



adds: Using a qualitative approach, we identify barriers and facilitators to recruiting primary care practices into a funded trial that uses practice facilitation to address unhealthy alcohol use. We identify general insights as well as those specific to the COVID-19 pandemic. Barriers are primarily related to competing priorities, incentives, and lack of infrastructure. Facilitators are related to framing of the project and the anticipated level and type of resources needed to address unhealthy alcohol use especially as the pandemic wanes. *Implications:* Our findings provide information on barriers and facilitators to recruiting primary care practices for behavioral health projects and to implementing these activities. Using our findings, we provide a discussion of suggestions for conducting these types of projects in the future which may be of interest to researchers, practice managers, and providers.

Keywords

quality improvement, implementation initiative < implementation, stages of implementation, behavioral health < service system, practice context, coaching

Introduction

At least 25% of adults in the United States participate in unhealthy alcohol use (UAU) each month, including binge drinking or exceeding weekly consumption limits (National Institute on Alcohol Abuse and Alcoholism (NIAAA), 2021a). In addition, the COVID-19 pandemic has led to an increase in both alcohol sales and unhealthy drinking (Barbosa et al., 2020; National Institute on Alcohol Abuse and Alcoholism, 2021b; Zipursky et al., 2021). UAU is associated with short- and long-term health impacts as well as societal costs (Centers for Disease Control and Prevention, 2021a; Esser et al., 2020; Stahre, 2014). Recent evidence suggests that excessive drinking has resulted in over 95,000 deaths and approximately \$250 billion annually (Esser et al., 2020; Sacks et al., 2015). As such, practice guidelines and quality measures now encourage primary care providers to address UAU (Bazzi & Saitz, 2018; Centers for Disease Control and Prevention, 2014a; National Committee for Quality Assurance, n.d.; US Preventive Services Task Force et al., 2018; VA, 2013). Despite widespread recognition of UAU as an important public health concern, uptake of evidence-based practices (EBPs) to address UAU has remained relatively low and differs by patient demographics and geography (Centers for Disease Control and Prevention, 2014a; McKnight-Eily et al., 2017, 2020).

In response to the low utilization of such practices, AHRQ funded six grantees to study dissemination and implementation of evidence-based interventions to address UAU in primary care practices (Agency for Healthcare Research and Quality (AHRQ), n.d.; HHS Awards \$16 Million to Help Primary Care Practices Address Patients' Unhealthy Alcohol Use, 2019). The STop UNhealthy Alcohol Use Now (STUN) trial is one of these grantee projects and utilizes practice facilitation to implement Screening and Brief Intervention (SBI) for UAU in primary care practices in North Carolina (EvidenceNOW Managing Unhealthy Alcohol Use: The STUN (STop UNhealthy) Alcohol Use Now Trial, 2020; "Jonas Awarded \$2.2 Million Grant to Address Unhealthy Alcohol Use," 2019, ClinicalTrials.gov number NCT04317989). SBI generally includes a two-part

screening for alcohol use behaviors and then tailored brief interventions such as educational materials, brief counseling, or referral to a specialist depending on the needs of the individual (Centers for Disease Control and Prevention, 2014b, 2021b). Practice facilitation is one mechanism demonstrated to increase uptake of EBPs and entails a trained individual working closely with practice to support care improvement, often through implementation of quality improvement efforts and project management (Practice Facilitation for Primary Care, 2019; Practice Facilitation Handbook, 2018).

STUN is an adaptive, randomized controlled trial that uses practice facilitation to increase uptake of evidence-based screening, counseling, and treatment of UAU in small- to medium-sized primary care practices across North Carolina. The trial design was based on the Chronic Care Model and the Improving Performance in Practice program (Cretin et al., 2016; Wagner et al., 2001; Improving Performance in Practice, 2015; Institute for Healthcare Improvement, n.d.; Margolis et al., 2010). Both of these focus on strategic efforts to improve care processes within primary care and ultimately patient health. The STUN trial is a collaboration between an academic research team and the North Carolina Area Health Education Centers (AHEC). One program of the NC AHEC includes providing practice support coaches who work one-on-one with practices across the state to review current practices, support new initiatives, and implement evidence-based practices. In the STUN trial, practice coaches serve as the primary points of contact for recruiting small- to medium-sized primary care practices into the study as well as delivering the practice facilitation intervention to enrolled practices throughout the trial. Practice coaches work alongside enrolled practices to identify and improve workflows specific to UAU screening, treatment, and referrals; assist with optimizing the use of electronic health records (EHRs) for billing/coding, panel management, and documentation; and provide practices with educational resources. Many of these practice coaches have been with NC AHEC for many years and have worked with potential STUN practices on other projects and efforts in the past. In addition, practice coaches may work with enrolled practices on STUN and other projects simultaneously.

Since the STUN project began in the Fall of 2019, the global COVID-19 pandemic has changed the healthcare, public health, and research landscape. Pressure on clinicians, practices, and researchers has made ongoing research challenging to maintain, including difficulty recruiting participants for research. During the pandemic, there has been significant discussion on how to continue implementation and practice-based research in other areas that are vital to public health during this unprecedented time (Clay, 2020; Fleming et al., 2020; Kroenke et al., 2021; McDermott & Newman, 2020). The process of generating evidence from laboratory and clinical trials in biomedical research and translating those findings into practice is protracted (Westfall et al., 2007; Zerhouni, 2006). Additionally, many findings from early studies in the roadmap of biomedical research do not translate into real-world practice. Practice-based research represents a key component in understanding and improving the implementation of evidence into real practice, and interrupting this process is costly both in terms of finances and time. Therefore, researchers and funding agencies alike have drawn attention to the importance of continuing clinical research focused on topics other than COVID-19 (Kroenke et al., 2021; National Institutes of Health (NIH), 2020; Patient-Centered Outcomes Research Institute (PCORI), 2020); however, research that involves practices and providers during the pandemic has encountered a set of novel barriers. In addition to existing challenges and workloads, many practices and providers are struggling with staffing, finances, and new COVID-19-related workflows, including shifting to telehealth and administering COVID-19 vaccines (American Association of Family Physicians (AAFP) News Staff, 2021; American Medical Association (AMA), 2020; Joint Letter to Health and Human Services (HHS) on Medicaid Relief During COVID-19 Pandemic, 2020; Primary Care Collaborative, 2020; Rubin, 2020; Song et al., 2020; Ungar, 2020).

The STUN trial is intended to advance practical dissemination and implementation of knowledge of practice facilitation as a strategy to address UAU in primary care. Low recruitment in implementation science research may bias findings and may therefore hinder the ability to translate findings from evidence-based practices into clinical practice. The purpose of the current study is to characterize the recruitment experiences of a trial focused on efforts to implement an EBP into primary care, both within and beyond the context of the pandemic. Findings from this study will advance the field of implementation science through the identification of barriers not only to recruitment of practices into a trial but also to recruitment of practices to implement an EBP related to UAU.

Methods

Sample and Data Collection

A purposive sample was used to identify practice coaches, including those experienced in working with a variety of

practice types, in all nine AHEC regions across North Carolina. A member of the STUN research team facilitated introductions and invitations to coaches via email to participate in video calls about their experiences with the STUN project.

In addition to initial participant invitations, we followed a snowball sampling approach where interviewees were asked at the end of the interview if they could suggest other practice coaches who might be willing to speak with us. Interviews were conducted via institutional Zoom accounts in January and February 2021. With the consent of the participants, interviews were recorded; the built-in Zoom transcription function was used. Although applying codes to interviews, transcripts were cleaned as needed.

Interviews were conducted according to a semistructured interview guide, beginning with the background of interviewees' general experiences as practice coaches followed by sections about their experiences with the STUN project pre-COVID and during COVID (Appendix A). The interview guide was informed by the trial design, the Chronic Care Model and Improving Performance in Practice model on which the trial was built, and recruiting experiences so far. Questions were related to the general experience of practice coaches included their time as a practice coach, whether they were involved in a previous study on which the STUN trial was based, and if they had training or experience as a healthcare provider. These questions were included to better understand the context for each coach in their experience of recruiting for STUN. Each interview concluded with a discussion about suggestions for improving recruitment for this project. We continued conducting interviews until thematic saturation was reached. Two members of the research team (CB, SR) were present for all interviews. Both researchers have qualitative research training and experience. Neither of the researchers have regular, direct contact with the practice coaches as part of the larger STUN trial. One member of the research team led each interview while the other took notes and filled in with additional questions and probes as needed.

Analysis

We used a thematic analysis to inductively identify themes and subthemes from the interviews. An inductive coding approach allows themes to emerge from the data rather than to begin with a preexisting coding scheme or proposed themes (Thomas, 2016). The two members of the research team who were present for all interviews (herein referred to as "coders") met after each interview to document key insights and to build a list of emerging themes. After every 3–5 interviews, the coders reviewed and revised this list until a preliminary coding guide identifying themes and subthemes within the larger categories of "barriers" and "facilitators/successes" was developed. Next,

both coders independently reviewed the same three interview transcripts and applied codes reflecting this coding guide. Coders met to discuss these transcripts, resolve conflicts, and refine the codebook. All conflicts were resolved through this process resulting in agreement on codes and the codebook from these three interview transcripts. This was considered a consensus among the coders. Next, the remaining interviews were divided among the two coders. Next, each coder reviewed the interviews coded by the other to ensure consistency in coding approaches. Lastly, the two coders reviewed code use and frequencies across all interviews and together decided which codes to combine and remove as needed. Only subthemes that were coded in at least three of the interviews are presented in the results. Analyses were conducted in ATLAS.ti version 9 (Berlin, Germany). This study was approved by the institutional review board at University of North Carolina at Chapel Hill.

Results

Invitations were sent to 16 practice coaches in January 2021. Fifteen practice coaches agreed to participate, and one did not respond after a second invitation was sent, making the final response rate 94%. Interviews were scheduled for one hour but ranged from 17.5 to 42.5 min with a mean time of approximately 31 min. Across the interviews, perspectives from all nine AHEC regions were represented. Participating practice coaches described experiences working with small practices, independent practices, rural and urban areas, large health systems, federally qualified health centers (FQHCs), and other practice types. Participants had a range of experience working as AHEC practice coaches, ranging from a few years to more than a decade. A total of three barrier themes with 12 subthemes and six facilitator themes were identified.

Barriers

Pandemic-Related (COVID-19) Barriers

Shifting Focus to COVID-19 Efforts. Participants highlighted four barriers to recruitment for the STUN project related to the ongoing COVID-19 pandemic (Table 1). A foremost concern was shifting focus away from typical primary care efforts to COVID-19, including introducing new pandemic-related safety measures, testing, and vaccinating into workflows as well as navigating new administrative tasks, such as billing and coding for COVID-19-related care. Coaches described this shift as requiring everyone's full attention because it was uncharted territory. One coach emphasized the difficulty in learning how to manage a new disease: "When was the last time in modern history we had a new disease that they had to learn as fast as they could, when science couldn't even provide a lot of research for them, you know?" (Interview 9). A few coaches also noted examples

of practices that had agreed to participate in STUN before COVID-19 but then decided to withdraw or pause their participation because of the new demands related to the pandemic.

Staffing Issues. Staffing challenges related to the pandemic were another prominent issue, affecting willingness to participate in a new project, as illness, quarantines, and inability to find childcare made it difficult to keep practices fully staffed. One coach summarized these challenges as: "So whether it's people leave or it's short term or someone is sick, it's all of the above, leading to staffing issues still. Now I hear it every day" (Interview 15). Several coaches mentioned practice and provider experiences with severe COVID-19 including hospitalizations and deaths of providers and practice staff.

Financial Concerns. Several coaches highlighted how pandemic-related financial concerns drained practices' ability to concentrate on tasks and even forced some practices to consider closing. One coach said: "I have three independent practices currently that have closed their doors for two weeks because of being short staffed plus having to quarantine." (Interview 14) Although most described the financial constraints brought on by the pandemic, one coach also noted the opposite.

When I say financial burdens, I'm not talking about only losing money. They have also been inundated with financial opportunities and so to navigate those financial opportunities and to keep track of those and to apply for those financial opportunities and then figure out what to do with that new all that new money. That has been overwhelming. (Interview 6)

Coaches Distanced from Practices. Coaches expressed that not being able to interact with practices in-person hampered their ability to establish workflows, provide support, and maintain relationships with practices, which has affected recruitment. In addition, the pandemic and the associated challenges have made it difficult for coaches to find time to communicate with and support practices and providers in general (even through virtual connections), making them feel increasingly distanced and pressed for time to bring up new initiatives like STUN. Compared to when coaches could provide support directly alongside providers, one coach described the challenge in providing support during the pandemic.

So it's also really hard for us to support the practice. To say, let me show you how we can do this easier because I need them to like, show it on their screen and me sit and try to figure it out. (Interview 1).

Practice-Specific Barriers

Practices have Competing Demands. Nearly all coaches affirmed that a primary reason that practices

Table 1. Barriers.

Theme	Subtheme	Subtheme description	Illustrative participant quote
Pandemic-Related (COVID-19) Barriers	Shifting focus to COVID-19 efforts N = 14	Practices have had to adapt to changing workflows resulting from the COVID-19 pandemic including how intake happens, screening patients for COVID-19, who sees the patient, how new COVID-19 billing and diagnoses are used, shifting to telehealth, vaccine administration, etc.	<p>“so COVID hit and they had to learn all about telehealth, they had to learn all new coding, they had to learn how to implement new workflows in their practices. They had still the same patient panel, but it took twice as long to see a patient. Because you’ve got to first figure out are they symptomatic and then you gotta figure out, am I gonna leave them in the car, am I going to have go out and see him in the car, am I going to have a visit, am I gonna walk them in the back door because they’re sick and I do need to see him and like a walk in the front door? I mean it was just several weeks of real crazy trying to trying to help the practices to figure it all out.” Interview 8</p> <p>“When was last time in modern history we had a new disease that they had to learn as fast as they could when science couldn’t even provide a lot of research for them, you know?...Chronic COVID is turning into a new disease. We don’t have the science and they’re scrambling when patients are getting discharged on trying to figure out how to keep them healthy and alive. People may be drinking more, but you know they [providers] have to pick and choose.” Interview 9</p>
	Staffing issues N = 14	Practices are facing new staffing issues related to COVID-19 including turnover of staff, staff needing to quarantine after exposures, changing responsibilities for staff (children at home), and multiple encounters with severe COVID-19.	<p>“Whether it’s burnout and they’re just done, and people quit. Whether it is someone is two weeks on quarantine and so the practice manager is now filling in and sitting at the front desk and working and everyone is just covering for each other. So whether it’s people leave or it’s short term or someone is sick, it’s all of the above, leading to staffing issues still. Now I hear it every day.” Interview 15</p>
	Financial concerns N = 8	Practices are facing financial concerns because of COVID-19 especially because of staffing challenges, changes in workflows, and general response to COVID-19. Several coaches described practices on the brink of closure. Some also described the challenge of navigating new COVID-19 funding.	<p>“I have three independent practices currently that have closed their doors for two weeks because of short staffed being short staffed plus having to quarantine. And then I’ve had the same three tell me that if they don’t if something don’t happen soon they’re going to have to shut their doors, and that is so sad for these patients and for these physicians I mean they’re they’ve built these practices and they’re trying to keep their doors open.” Interview 14</p> <p>“When I say financial burdens I’m not talking about only losing money. They have also been inundated with financial opportunities and so to navigate those financial opportunities and to keep track of those and to apply for those financial opportunities and then figure out what to do with that new all that new money. That has been overwhelming.” Interview 6</p>

(Continued)

Table 1. (Continued)

Theme	Subtheme	Subtheme description	Illustrative participant quote
Practice-specific barriers	Coaches distanced from practices N = 6	Coaches are having fewer interactions with practices and all remotely. This creates challenges in maintaining relationships, providing support, and ability to establish workflows and access the practice's EHRs.	"So it's also really hard for us to support the practice. To say, let me show you how we can do this easier because I need them to like, show it on their screen and me sit and try to figure it out." Interview 1
	Practices have competing demands N = 14	Practices are overwhelmed with general responsibilities and competing initiatives.	"They want to participate in MIPS, they got to keep doing that. They want to participate in Meaningful Use, they gotta keep doing that. We've got a bunch of folks trying to get through Patient-Centered Medical Home designation. It's on top of COVID and their staff, you know, their staff being sick. So I don't even, it's not really a conversation I even have with them. Like they're still just trying to get day to day at this point, which is [what] some of what our practices, just do anyway. You know, like there's very few of our practices that are looking forward, they're just trying to put all the pieces together most days." Interview 1
	Practice infrastructure N = 14	Coaches described the difficulty in recruiting and implementing a project like STUN in practices with little infrastructure including having no or a low-quality EHR, being short staffed, and time constraints. Even for practices with EHRs, coaches described challenges in capturing behavioral health data within EHRs.	"Time is always a barrier. Now that's kind of a double-edged sword, to the small practice, they need the resource [practice coaching] and they want them in there and they always want, but it can be very hard for them to find the time to give to coaching. And so you have to be creative that's for sure, as far as that, because that is the bad side of that, their time is always a barrier to getting them to commit." Interview 10
	Working with practices and health systems N = 13	Gatekeeping through practice managers, working with the bureaucracy or health systems, and coaches not wanting to keep approaching practices were all described. Recruitment into projects differs considerably depending on who is approached and if it is within a health system. Practice managers often serve as gatekeepers to participation and the providers. When working with health systems, approval is often required from upper management within the health system, creating additional obstacles.	"[Practices] have such a hard time with turnover prior [to COVID]. Their staff didn't even get fully trying, you know what I mean because whoever was supposed to be training these people is usually going and then it's just a constant turn." Interview 10 "EHRs are not ready for this. Behavioral health, AUDIT-C, systems are not built for these screenings yet. Some maybe." Interview 9 "You have to talk to them [practice managers] about how they function every day. With office managers, you have to adjust to how that workflow would look for them. With providers, you talk about patient outcomes and quality." Interview 3 "Yeah, I think it's [decreased interest during the pandemic] coming from both sides to be honest. Because we feel, I mean we know what practices are going through and it kind of hurts a little bit to ask them to do something else right now from the practice side. I think they're very like quick to say 'no we're not taking on anything else.'" Interview 4

(Continued)

Table 1. (Continued)

Theme	Subtheme	Subtheme description	Illustrative participant quote
			<p>“When you’re a health system, which comes first, the chicken or the egg? Do you get support and then take it to the upper management and leadership or do you go local leadership and let it be their idea and then take it to the practices? You just never know.” Interview 2</p> <p>“Health systems are very much like a little country in and of themselves. And the politics and the competing to be the president or the vice president or the director is there. It can be very, it’s very eye opening, like Washington DC has nothing on health systems.” Interview 2</p> <p>“I don’t know what kind of incentive could be offered to encourage them to sign up, I just don’t know. I mean I there’s usually not a whole lot of money that can be offered to them and [money] usually works. I mean sometimes it works, but sometimes there’s just not money available to be able to... Because I’ve had practices say to me ‘well what’s in it for me? You know if I sign up for this and we have our staff that you know we assign this additional responsibility you know, what kind of support will I receive?’” Interview 12</p> <p>“the initial rollout for me felt really wonky. We had some ideas, but there was nothing tangible so like I also don’t want to go stick my foot in my mouth to practices. So depending on who I was talking to of how much I would even say to them about a project coming up.” Interview 1</p> <p>“it’s a heavily religious area, but people drink, they just don’t want to publicize that they drink, you know what I mean? So good old boy Doc that’s known him for 10 years, he may have a really hard time saying ‘tell me exactly how much you drink’ and you know or stuff like that, so there is some concern for that that it could be a little taboo” Interview 10</p> <p>“I’m not going to ask the question if I’m not sure I don’t have a place to send my patients for counseling and in rural environments, that’s very real.” Interview 9</p> <p>“You know, the whole idea of screening for alcohol use, it wasn’t on the top of their list like a normal clinical process like cardiovascular disease... cardiovascular disease is something that they worked on every day already... Something that they kind of know it’s a factor and know it’s something they should screen and they sometimes do sometimes don’t. It just wasn’t a high clinical topic on their list so that made some practices pause and not jump right in.” Interview 5</p>
	Insufficient incentives N = 4	Some practices are not motivated to participate depending on their financial situation, other constraints, and the incentives offered by implementing the project.	
Project-specific barriers	Project rollout N = 10	Slow rollout of the project initially created some hesitancy and difficulty for coaches to recruit and understand the full scope of the project.	
	Sensitive topic N = 8	Perceptions that discussing alcohol was culturally taboo or would endanger the physician-patient relationship, especially in small communities.	
	Follow-up on positive screens N = 8	Providers unsure of what to do when patients screen positive for UAU, including where to refer patients for additional specialized services	
	Alcohol not a top priority N = 6	Perceptions that alcohol misuse is rare and providers more focused on other health conditions.	

Note. EHR = electronic health record; AUDIT-C = Alcohol Use Disorders Identification Test-Concise (a validated, brief tool for alcohol screening); UAU = unhealthy alcohol use.

were unlikely to enroll in research studies at this time was a proliferation of competing demands, even outside of the pandemic. For example, North Carolina completed Medicaid transformation from fee-for-service to managed care in July 2021, requiring attention from practices as they prepared for the transition. Practices also want to continue participating in various quality and reimbursement initiatives, most notably Meaningful Use, Merit-based Incentive Payment System (MIPS), and patient-centered medical home certification. One coach pointed out that “very few practices are looking forward, they’re just trying to put all the pieces together most days” (Interview 1).

Practice Infrastructure. Participants described practice infrastructure as a barrier to entry, as practices often lack adequate resources including staffing, time, and technology. Even before the pandemic, small primary care practices often struggled to recruit and retain staff, with a resulting lack of adequate training for the staff they do have. According to one coach, time presented a “double-edged sword...they need the resource [practice coaching] and they want them in there and they always want [support], but it can be very hard for them to find the time to give to coaching” (Interview 10). Some practices lack EHRs capable of implementing a project focused on UAU while others lack an EHR altogether. For example, some EHRs have built-in screening tools for UAU that allow for streamlined development of workflows, while others lack appropriate screening tools; the latter practices must build the infrastructure to screen for UAU either within the EHR or by bypassing it.

Working with Practices and Health Systems. Organizational structures and workflows also presented unique barriers. Coaches described practices that are integrated with health systems as more challenging for recruitment and implementation because of the oversight and structures in place. One respondent illustrated the situation as such: “Which comes first, the chicken or the egg? Do you get support and then take it to the upper management and leadership or do you go to local leadership and let it be their idea and then take it to the practices?” (Interview 2). Coaches described internal practice structures as a barrier in both independent practices and those that are a part of a health system. In many situations, practice managers acted as gatekeepers, resulting in differences in how coaches recruited or described the STUN project to practice managers compared to providers. Coaches described focusing the recruitment message on workflows and reimbursement when talking with practice managers. In contrast, coaches took a different approach with providers, focusing on patient health and well-being. Finally, coaches have made repeated efforts to recruit practices. Several participants stated that they did not want to continue to approach practices that they know are not interested or capable of taking on projects like this.

Insufficient Incentives. Several participants also stated that the study’s incentives, financial or otherwise, were insufficient to motivate participation given their current financial situation or staff bandwidth. This was described by one coach as follows:

There’s usually not a whole lot of money that can be offered to them and [money] usually works. I mean sometimes it works, but sometimes there’s just not money available. (Interview 12)

Project-Specific Barriers

Project rollout. Participants mentioned four barriers specific to the project. First, coaches described being adversely affected by the iterative rollout of the project. In order to successfully recruit practices, some coaches wanted additional materials including more workflow diagrams and information related to data extraction. One coach described their perspective:

I think the hesitation once we started learning more began with how we’re going to collect this data. Are we going to be able to pull [it]? (Interview 13)

Sensitive Topic. According to several participants, some physicians are hesitant to broach the topic of alcohol use with patients. One practice coach described a specific regional concern:

It’s a heavily religious area, but people drink, they just don’t want to publicize that they drink, you know what I mean? So good old boy Doc that’s known him for 10 years, he may have a really hard time saying, “tell me exactly how much you drink.” (Interview 10)

Not all participants agreed, with several noting that the subject’s sensitivity would not inhibit a physician from inquiring.

Follow-up on Positive Screens. Participants noted that practices have expressed concerns about how to follow-up on positive screens, and that this in turn bred resistance to participating in the project. Many practices are based in rural settings, where specialized services for UAU are harder to access. One coach described this challenge in the following way: “I’m not going to ask the question if I’m not sure I have a place to send my patients for counseling.” (Interview 9)

Alcohol not a Top Priority. Coaches suggested that alcohol use was viewed as a lower priority than other health and wellbeing concerns by some practices, either due to perceptions that unhealthy use is rare or that other health conditions are more important. One coach described “the whole idea of screening for alcohol use, it wasn’t on the top of their [practices] list like a normal clinical

process like cardiovascular disease...something that they worked on every day already.” (Interview 5)

Facilitators and Successes

Facilitators and examples of successes were also described by participants (Table 2).

Coach-Specific Experiences

Participants emphasized their own enthusiasm and optimism about the project. One coach stated “I was really excited to be able to implement this process into primary care because it tags on to my wanting to be able to get primary care interested in some of these behavioral health interventions that might help their patients” (Interview 7). Another coach noted their optimism about the project’s future:

I’m hopeful that if things slow down with COVID... that we might be a little bit more convincing...this is a very worthy project, and we need to help these patients who might still be struggling after all this. (Interview 12)

Incentives for Participation. Several participants noted that a project focused on increasing alcohol screening fit well within practices’ various quality and reimbursement initiatives. Participants emphasized how important incentives are to motivate practices to participate. One coach described the importance of financial incentives, “What motivates providers, I think, more than anything is getting paid for the work that they do, honestly,” (Interview 7) while another coach highlighted non-monetary incentives as well:

They [practices] are just thrilled to get the hours of a coach to come in and help them, kind of, either understand where they’re at or where they need to start. And that’s with the research study, but these practices also usually have problems in other areas, so they’re just happy to get the free hours of a coach to come in, and you know kind of look at their stuff. (Interview 10)

Of note, STUN provides financial incentives for practice staff and providers who complete surveys and STUN provides training for practices related to billing for screening and counseling services related to UAU, so that practices can learn to receive appropriate compensation for their work.

Relationships with Practices. Many participants identified existing relationships with providers and practice managers as key to their success in persuading practices to enroll in STUN. One coach highlighted their approach: “Regardless of whether it’s STUN or it’s Medicaid transformation... if we got a really good relationship with the practice manager or the physician, they’re more apt to be more trusting to work with us.” (Interview 15)

COVID-19 as a Window of Opportunity. Although the pandemic presented numerous obstacles, coaches highlighted that COVID-19 also presented a window of opportunity to address many systemic issues affecting population health, including UAU. One coach suggested that recognition has increased in response to the uptick in alcohol consumption during the pandemic.

We’re going to see kind of like a lagging indicator after the pandemic. It would be important to have these processes in place to be able to address these downstream effects that are going to be because of the pandemic. (Interview 7)

“Good” Practices with Infrastructure. Several coaches described having more success recruiting “good” practices and further describing them as those with strong infrastructure. One coach discussed their experiences recruiting practices with established workflows as follows:

I think it is feasible to go to a good practice that has a good workflow. They have their roles very structured so they know who does what and how and they understand quality. I say, “hey, I would appreciate it if you could take a look at this program. And see if it’s something that we could work on together.” And I think that works. (Interview 2)

Providers Interested in Addressing Alcohol Use. Participants also discussed how some providers are interested in UAU specifically. Likewise, several have structures in place that allows easy integration of a project like STUN. One coach described that practices:

Had a lot of interest on the surface and a few [signed agreements], some that were very excited about it, especially ones that also incorporated either [medication-assisted treatment] or behavior health into their practice, and so they really knew about it and wanted to share their findings. So some people just jumped right on board. (Interview 15)

Discussion

The current study describes the experiences of practice coaches in recruiting primary care practices to implement an UAU screening intervention during the COVID-19 pandemic. Barriers to recruiting practices for the STUN project may be relevant to others planning similar projects in the future and are germane to interpreting the findings of the larger AHRQ evaluation of interventions to implement EBPs related to UAU. Barriers generally fit into two categories: competing priorities for practices (including those related to the COVID-19 pandemic) and variation in practice infrastructure.

Many of the barriers identified were related to the priorities of and constraints on practices. With respect to the

Table 2. Facilitators and successes.

Theme	Theme description	Illustrative participant quote
Coach-specific experiences N = 13	Coaches were optimistic about recruitment in the future & like helping practices with these types of projects. Coaches are confident that recruitment will be easier once the pandemic subsides and when the Medicaid Managed Care transition in the state occurs in July. Coaches expressed enthusiasm for the project and were disappointed with the struggles with recruitment.	<p>“But you know I’m hopeful that if things slow down with COVID, which good gracious we hope so, that we might be a little bit more convincing and be able to say ‘okay listen, you know, things have calmed down a little bit.’ ... This is a very worthy project, and we need to help these patients who might still be struggling after all this.” Interview 12</p> <p>“I was really excited to be able to implement this process into primary care because it sort of you know tags on to my wanting to be able to get primary care interested in some of these behavioral health interventions that that might help their patients, particularly along the lines of alcohol misuse and other substance misuse.” Interview 7</p> <p>“What motivates providers, I think, more than anything is getting paid for the work that they do honestly.” Interview 7</p> <p>“You know it would take things like there had to be some type of financial incentive. Whether it was you’re actually going to pay them cash or you can help them code, kind of like STUN, to get some return on investment. Some practices, depending on how many resources they have access to... Financial incentives always makes them feel better, not necessarily frontline staff, but the provider.” Interview 10</p> <p>“I think that they were impressed with the fact that, if they did STUN, it would look better on their quality initiatives, that they would get more out of their MIPS scoring and it would help them in the long run, with more reimbursement from Medicare and Medicaid.” Interview 14</p> <p>“The smaller ones are always the most engaged. Number one because they have the least amount of access to resources. So they really don’t have that access for somebody to come in and help them, who has the knowledge. So they are always engaged, number one, because you know they want to do it there.” Interview 10</p> <p>“Their [practices] trustworthiness with the coach has had an impact. Regardless of whether it’s STUN or it’s Medicaid transformation, ... Whatever we’re working on, if we got a really good relationship with the practice manager or the physician, they’re more apt to be more trusting to work with us. It’s really dependent upon whether they trust us that we know what we’re doing.” Interview 15</p> <p>“I think that it’s [caring for alcohol use] going to be necessary, beyond that, because I think the fallout of the pandemic and with the mental health status of people having to be isolated, you know, at home. Quite honestly, I’ve drank more wine than I normally would drink, not that I have a misuse problem, but you know one glass or two glasses a week is more than I normally drink... So I think we’re going to see kind of like a lagging indicator after the pandemic. It</p>
Incentives for participation N = 12	Coaches described several incentives to participation in the STUN project including financial incentives, screening helping with quality metrics, and participation provides practices with access to coaching support to help with more than just screening for UAU. Practices and providers respond to different incentives, but most are interested in financial incentives.	
Relationships with practices N = 10	Practices that already have an established relationship, rapport, and experience working with coaches are more likely to at least talk about STUN. Some examples of practices saying yes just because of their relationship with the coach.	
COVID-19 as a window of opportunity N = 8	Coach and provider recognition that there has been an increase in alcohol use during the COVID-19 pandemic. Coaches expect that providers are seeing it as an increasingly important issue that they will need to respond to, even long after the pandemic.	

(Continued)

Table 2. (Continued)

Theme	Theme description	Illustrative participant quote
<p>“Good” practice with infrastructure N = 6</p>	<p>Coaches described being more likely to recruit and easily discuss STUN with practices that have strong infrastructure including EHR capabilities, staffing, experience with QI projects, etc. A few coaches referred to discussing with “good” practices.</p>	<p>would be important to have these processes in place to be able to address these downstream effects that are going to be because of the pandemic.” Interview 7 “I think it is feasible to go to a good practice that has a good workflow. They have their roles very structured so they know who does what and how and they understand quality. I say, ‘hey, I would appreciate it if you could take a look at this program. And see if it’s something that we could work on together.’ And I think that works. That works for me at [health system]. When I went to those practices that I had [many] years of experience with through Meaningful Use, through MIPS through PCMH, through quality and said, ‘hey, you’re a great practice, you got everything going, would you be willing to look at this.?’” Interview 2</p>
<p>Providers interested in alcohol N = 6</p>	<p>Providers have acknowledged UAU as a primary care issue and have expressed interest in the project and in improving screening for UAU.</p>	<p>“I had a lot of interest on the surface and a few MOUs, some that were very excited about it, especially ones that also incorporated either MAT or behavior health into their practice, and so they really knew about it and wanted to share their findings. So some people just jumped right on board, ‘Oh yes! I’ll sign right now.’” Interview 15</p>

Note. EHR = electronic health record; MAT = medication-assisted treatment; MIPS = Merit-based Incentive Payment System; MOU = memorandum of understanding; PCMH = patient-centered medical home; QI = quality improvement; STUN = Stop UNhealthy Alcohol Use Now trial; UAU = unhealthy alcohol use.

pandemic, coaches echoed many of the barriers described elsewhere (AAFP News Staff, 2020; AMA, 2020; Joint Letter to HHS on Medicaid Relief During COVID-19 Pandemic, 2020; Primary Care Collaborative, 2020; Rubin, 2020; Song et al., 2020; Ungar, 2020) including the major shift to addressing COVID-19, establishing new procedures and workflows, understanding a new disease, and managing staffing shortages during this time. Importantly, coaches perceived similar COVID-related barriers among all types of practices, including those of varying sizes, demographics, and geographies. Although the barriers related to COVID-19 are similar, the variation in resources may result in differences in the ability to overcome those barriers.

Outside of the pandemic-related barriers, many other challenges exist to both recruitment practices for research or buy-in to implementation of EBPs, and therefore have hindered recruitment. Many of these barriers also echo those identified in other practice-based research and evidence-based medicine such as lack of adequate incentives, practice managers or administrators as gatekeepers, challenges within health systems, infrastructure challenges, and such activities being low priorities (Loskutova et al., 2018; Sadeghi-Bazargani et al., 2014). Small, independent, and rural practices are always resource-constrained and face competing demands unique to their circumstances. First, practices are often spread thin trying to meet requirements of the numerous quality and reimbursement reform efforts being promoted by national or state policy and various payers such as Meaningful Use, MIPS/Medicare Quality Payment Program, FQHC requirements, and many more (AAFP, 2020; CMS: Quality Payment Program, n.d.). Program requirements also change over time, forcing practices to shift focus and relearn reporting requirements year after year. Second, many practices are facing increasing consolidation as health systems acquire smaller practices in the area and the pandemic is expected to continue this trend (Furukawa et al., 2020; Gustafsson & Blumenthal, 2021; Schwartz et al., 2020). This creates changes in market dynamics both within practices that are acquired and those that remain independent. Finally, practices are motivated by financial incentives, which often focus on screening and management for chronic illnesses. Incentives that practices see as insufficient for the effort and anticipated outcomes may impede enrollment.

Infrastructure of practices is also a critical component for participation in the STUN trial and findings from this study echo previous work on the adoption of EBPs more generally (McNeely et al., 2018; Pagoto et al., 2007; Sadeghi-Bazargani et al., 2014; Tacia et al., 2015). For example, a qualitative study of barriers and facilitators to screening for substance use in primary care also identified lack of time and provider training as barriers (Loskutova et al., 2018) while a systematic review of barriers to evidence-based medicine practices found that a general

lack of resources and time, as well as logistical barriers, were commonly identified across included studies (Sadeghi-Bazargani et al., 2014). Practice resources, staffing, and experience with behavioral health, EHRs and quality measures may all affect willingness to participate, as they affect practices' ability to implement such projects and services. Additionally, coaches recognized that the practices that most needed the support and are most likely to benefit from the STUN project are those with the least infrastructure, who face the greatest obstacles to participation and implementation. Overcoming these more general infrastructure obstacles will require targeted funding and system-level reforms.

Limitations

Although this project provides valuable insight into the experience of recruiting practices for a behavioral health intervention during unprecedented conditions, it is not without limitations. First, there are aspects of this project that may limit the generalizability of the findings. For example, the STUN project may have a structure that is unusual in that practice coaches are heavily involved in recruitment, and it is focused on an alcohol-specific intervention. In the current study, many of the practice coaches already had established relationships with the potential practices which may aid in recruitment. Additionally, both the pandemic and the project have progressed through many different phases. Interviews for this study took place in January and February 2021 when the pandemic was near its peak nationally and locally (CDC, 2021c; NCDHHS, 2021-a) and before vaccinations were widely available to the general public (U.S. Food & Drug Administration, 2020). During this time, a modified stay-at-home order was in place, many people were working from home and schools were encouraged to be virtual, leading to many logistical burdens (NCDHHS, 2021b; Wagner, 2021). Recruitment for the STUN project was largely on hold during this time because of the pandemic. Results of this study should be interpreted with respect to this timing and not all may be generalizable to other contexts. Second, practice coaches gave assessments of what the practices were experiencing, which is an indirect assessment of practice perspectives. Third, while we do provide counts of the number of coaches that described a given theme, the interviews followed a semistructured format and followed the natural flow of the conversation. Not mentioning a specific theme does not mean that a coach did not perceive it. Therefore, these counts are likely underestimates.

Clinical and Research Implications

The COVID-19 pandemic has shed light on many of the challenges that primary care practices face as well as the vital role they play in supporting the health of our

population. This study not only contributes to evidence on recruiting practices for practice-based research but also provides insights on hesitation regarding the implementation of EBPs related to UAU. The findings and recommendations described here may be valuable for researchers, health systems, practice managers, or others planning for various primary care-based interventions or promoting the adoption of EBPs in the future. For an audience of either individuals recruiting for research or approaching practices to implement EBPs, building on existing relationships and tailoring outreach may help improve recruitment or uptake. For example, we found different messaging was used by coaches when targeting practice managers compared to providers. Coaches perceived that practice managers seemed more motivated by workflows and reimbursement, and that clinicians seemed more receptive to messages about patient health and well-being. Our study also suggests that specific materials may be needed for coaches to feel more confident in their ability to recruit, including data collection tools and EHR process support. Finally, barriers to participation often reflect the competing priorities and infrastructure obstacles that many primary care practices face. Whatever researchers, practice coaches, or others can do to reduce barriers to implementing EBPs may increase the chances of successful implementation. Financial incentives and providing practical support may be especially useful.

System-level interventions may also be effective in promoting EBPs. Different payment models that support infrastructure such as Centers for Medicare & Medicaid's Comprehensive Primary Care Plus (CPC+) model (Centers for Medicare & Medicaid Services, n.d.; Comprehensive Primary Care Plus, n.d.; Deborah Peikes et al., 2019; Primary Care First CMS, n.d.) are examples of the type of efforts that could help practices overcome these barriers. CPC+ in particular provides financial support up front for investment in needed infrastructure to improve care quality. Challenges with EHRs may be addressed by EHR vendors through making validated screening tools more easily accessible (e.g., AUDIT-C, AUDIT). Collectively, these types of models or changes could allow practices to overcome these obstacles to being able to implement EBPs with fidelity. More research in this area is needed to further explore best practices for recruitment in practice-based research.

In response to the barriers and facilitators identified in the current study, we provide several recommendations that may be useful for researchers or practitioners designing and implementing similar projects in the future. First, it is important to consider how to tailor interventions, workflows, and supports to best support practices of different types and with differing infrastructure. Different strategies may be useful as well when trying to recruit different types of practices (e.g., part of a health system, in an ACO, FQHC, rural, etc.) or engaging with different stakeholders such as providers or practice managers. In our study, coaches with already established relationships

with practices felt well-suited to adapt their strategies based on their knowledge of the practice and staff. Second, interventions for different conditions have their own unique requirements. Considering the anticipated challenges specific to the intervention and/or condition may help to better prepare for those differences. Finally, those who are doing the recruiting are instrumental to the success of the project. In the STUN study, recruitment was done by practice coaches who were employed by an organization separate from that of the research team. Often, coaches already had established relationships with these practices. Learning from them and soliciting their feedback may ease the recruitment process.

From the practice perspective, our study suggests that there may be several strategies to facilitate practice uptake of EBPs. First, develop training support for providers that covers topics related to documentation and billing, how to address positive screens, and what treatment resources are available in the community. Having the necessary training and knowledge of resources may increase provider confidence in addressing sensitive topics such as UAU. Second, both leadership and provider support are important but may present different challenges. Providing clear messaging and value added to the organization, providers, and patient outcomes may help garner interest and buy-in from all practice staff and leadership. The potential for increased reimbursement, meeting quality metrics, and improved patient outcomes are all examples of potential benefits practices may experience from implementing this particular EBP.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This work was supported by the Agency for Healthcare Research and Quality (grant number 1R18HS027078-01).

ORCID iD

Casey P. Balio  <https://orcid.org/0000-0002-2987-4268>

Supplemental Material

Supplemental material for this article is available online.

References

- American Association of Family Physicians News Staff. (2020 May, 22) *AAFP, Others Warn Azar of Imminent Primary Care Closures*. AAFP. <https://www.aafp.org/news/government-medicine/20200522closurewarning.html>
- Agency for Healthcare Research and Quality. (n.d.). *RFA-HS-18-002: Screening and Management of Unhealthy*

- Alcohol Use in Primary Care: Dissemination and Implementation of PCOR Evidence (R18)*. Retrieved from October 6, 2021, <https://grants.nih.gov/grants/guide/rfa-files/RFA-HS-18-002.html>
- American Association of Family Physicians. (2021). *MACRA Basics: Merit-based incentive payment system (MIPS)*. <https://www.aafp.org/family-physician/practice-and-career/getting-paid/mips.html>
- Barbosa, C., Cowell, A. J., & Dowd, W. N. (2020). Alcohol consumption in response to the COVID-19 pandemic in the United States. *Journal of Addiction Medicine, 15*(4), 341–344. <https://doi.org/10.1097/adm.0000000000000767>
- Bazzi, A., & Saitz, R. (2018). Screening for unhealthy alcohol use. *JAMA, 320*, 1869–1871. <https://doi.org/10.1001/JAMA.2018.16069>
- Centers for Disease Control and Prevention. (2014a). *Alcohol Screening and Counseling*. CDC Vital Signs. <https://www.cdc.gov/vitalsigns/alcohol-screening-counseling/index.html>
- Centers for Disease Control and Prevention. (2014b). Planning and implementing screening and brief intervention for risky alcohol use A step-by-step guide for primary care practices suggested citation centers for disease control and prevention. Planning and implementing screening and brief intervention for risky alcohol use: A step-by-step guide for primary care practices. In *National Center on Birth Defects and Developmental Disabilities. Centers for Disease Control and Prevention*. <https://www.cdc.gov/ncbddd/fasd/documents/AlcoholSBIImplementationGuide-P.pdf>
- Centers for Disease Control and Prevention. (2021a). *Alcohol Use and Your Health*. <https://www.cdc.gov/alcohol/fact-sheets/alcohol-use.htm>
- Centers for Disease Control and Prevention. (2021b). *CDC's Alcohol Screening and Brief Intervention Efforts*. <https://www.cdc.gov/ncbddd/fasd/alcohol-screening.html>
- Centers for Disease Control and Prevention. (2021c). *CDC COVID Data Tracker: Trends in Number of COVID-19 Cases and Deaths in the US Reported to CDC, by State/Territory*. https://covid.cdc.gov/covid-data-tracker/#trends_dailytrendscases
- Centers for Medicare & Medicaid Services. (n.d.). *Primary Care First Model Options*. Retrieved from October 6, 2021, <https://innovation.cms.gov/innovation-models/primary-care-first-model-options>
- Centers for Medicare and Medicaid Services: Quality Payment Program. (n.d.). *Small, Underserved, and Rural Practices*. Retrieved from June 22, 2021, <https://qpp.cms.gov/resources/small-underserved-rural-practices>
- Clay, R. A. (2020, March 19). *Conducting research during the COVID-19 pandemic*. *APA News*. <https://www.apa.org/news/apa/2020/03/conducting-research-covid-19>
- Comprehensive Primary Care Plus. (n.d.). Centers for Medicare & Medicaid Services. Retrieved from October 6, 2021, <https://innovation.cms.gov/innovation-models/comprehensive-primary-care-plus>
- COVID-19: A physician guide to keeping your practice open American Medical Association. (2020, December 16). *AMA*. <https://www.ama-assn.org/delivering-care/public-health/covid-19-physician-guide-keeping-your-practice-open>
- Cretin, S., Shortell, S. M., & Keeler, E. B. (2016). An evaluation of collaborative interventions to improve chronic illness care: framework and study design. *Evaluation Review, 28*, 28–51. <https://doi.org/10.1177/0193841X03256298>
- Esser, M. B., Sherk, A., Liu, Y., Naimi, T. S., Stockwell, T., Stahre, M., Kanny, D., Landen, M., Saitz, R., & Brewer, R. D. (2020). Deaths and years of potential life lost from excessive alcohol use—United States, 2011–2015. *MMWR Morbidity and Mortality Weekly Report, 69*, 981–987. <https://doi.org/10.15585/MMWR.MM6930A1>
- EvidenceNOW Managing Unhealthy Alcohol Use: The STUN (STop UNhealthy) Alcohol Use Now Trial. (2020). <https://integrationacademy.ahrq.gov/sites/default/files/2020-12/GranteeProfileNorthCarolina.pdf>
- Fleming, T. R., Labriola, D., & Wittes, J. (2020). Conducting clinical research during the COVID-19 pandemic: protecting scientific integrity. *JAMA, 324*, 33–34. <https://doi.org/10.1001/jama.2020.9286>
- Furukawa, M. F., Kimmey, L., Jones, D. J., Machta, R. M., Guo, J., & Rich, E. C. (2020). Consolidation of providers into health systems increased substantially, 2016–18. *Health Aff (Millwood), 39*, 1321–1325. <https://doi.org/10.1377/HLTHAFF.2020.00017>
- Gustafsson, L., & Blumenthal, D. (2021, March 9). The pandemic will fuel consolidation in U.S. health care. *Harvard Business Review*. <https://hbr.org/2021/03/the-pandemic-will-fuel-consolidation-in-u-s-health-care>
- HHS Awards \$16 Million to Help Primary Care Practices Address Patients' Unhealthy Alcohol Use. (2019). Agency for Healthcare Research and Quality. <https://www.ahrq.gov/news/newsroom/press-releases/address-unhealthy-alcohol-use.html>
- Improving Performance in Practice. (2015). Aligning Forces for Quality. <http://forces4quality.org/node/11934.html>
- Institute for Healthcare Improvement. (n.d.). *Changes to Improve Chronic Care*. Retrieved from October 6, 2021, <http://www.ihc.org/resources/Pages/Changes/ChangestoImproveChronicCare.aspx>
- Joint Letter to HHS on Medicaid Relief During COVID-19 Pandemic. (2020). <https://www.aafp.org/dam/AAFP/documents/advocacy/payment/medicaid/LT-HHS-PrimaryCareFundingPriority-051920.pdf>
- Jonas awarded \$2.2 million grant to address unhealthy alcohol use. (2019, November 5). *UNC School of Medicine*. <https://www.med.unc.edu/medicine/jonas-awarded-2-2-million-grant-to-address-unhealthy-alcohol-use/>
- Kroenke, K., Bair, M. J., & Sachs, G. A. (2021). Continuing research during a crisis. In *Journal of general internal medicine* (Vol. 36, Issue 4, pp. 1086–1088). Springer. <https://doi.org/10.1007/s11606-021-06636-5>
- Loskutova, N. Y., Smail, C., Ajayi, K., Pace, W. D., & Fox, C. H. (2018). Recruiting primary care practices for practice-based research: A case study of a group-randomized study (TRANSLATE CKD) recruitment process. *Family Practice, 35*, 111–116. <https://doi.org/10.1093/fampra/cmz064>
- Margolis, P. A., DeWalt, D. A., Simon, J. E., Horowitz, S., Scoville, R., Kahn, N., Perelman, R., Bagley, B., & Miles, P. (2010). Designing a large-scale multilevel improvement initiative: the improving performance in practice program. *Journal of Continuing Education in the Health Professions, 30*, 187–196. <https://doi.org/10.1002/CHP.20080>
- McDermott, M. M., & Newman, A. B. (2020). Preserving clinical trial integrity during the coronavirus pandemic. *Journal of the American Medical Association, 323*, 2135–2136. <https://doi.org/10.1001/jama.2020.4689>

- McKnight-Eily, L. R., Okoro, C. A., Mejia, R., Denny, C. H., Higgins-Biddle, J., Hungerford, D., Kanny, D., & Snieszek, J. E. (2017). Screening for excessive alcohol use and brief counseling of adults—17 states and the district of Columbia, 2014. *MMWR Morbidity and Mortality Weekly Report*, *66*, 313–319. <https://doi.org/10.15585/MMWR.MM6612A1>
- McKnight-Eily, L. R., Okoro, C. A., Turay, K., Acero, C., & Hungerford, D. (2020). Screening for alcohol use and brief counseling of adults—13 states and the district of Columbia, 2017. *MMWR Morbidity and Mortality Weekly Report*, *69*, 265–270. <https://doi.org/10.15585/MMWR.MM6910A3>
- McNeely, J., Kumar, P. C., Rieckmann, T., Sedlander, E., Farkas, S., Chollak, C., Kannry, J. L., Vega, A., Waite, E. A., Peccoralo, L. A., Rosenthal, R. N., McCarty, D., & Rotrosen, J. (2018). Barriers and facilitators affecting the implementation of substance use screening in primary care clinics: A qualitative study of patients, providers, and staff. *Addiction Science & Clinical Practice*, *13*, 1–15. <https://doi.org/10.1186/S13722-018-0110-8>
- National Committee for Quality Assurance. (n.d.). *HEDIS Measure: Unhealthy Alcohol Use Screening and Follow-Up*. Retrieved from October 6, 2021, <https://www.ncqa.org/hedis/reports-and-research/hedis-measure-unhealthy-alcohol-use-screening-and-follow-up/>
- National Institute on Alcohol Abuse and Alcoholism. (2021a). *Alcohol Facts and Statistics: Alcohol Use in the United States*. <https://www.niaaa.nih.gov/publications/brochures-and-fact-sheets/alcohol-facts-and-statistics>
- National Institute on Alcohol Abuse and Alcoholism, D. of E. and P. R. (2021b). *Alcohol Sales During the COVID-19 Pandemic*. <https://pubs.niaaa.nih.gov/publications/surveillance-covid-19/COVSALES.htm>
- NC Department of Health and Human Services. (2021, June 22). *COVID-19 North Carolina Dashboard*. <https://covid19.ncdhhs.gov/dashboard>
- NC Department of Health and Human Services. (2021). *NC COVID-19: Latest Updates (January 2021)*. <https://covid19.ncdhhs.gov/about-covid-19/latest-updates#january-2021>
- NIH. (2020, March 16). *NOT-OD-20-087: Guidance for NIH-funded Clinical Trials and Human Subjects Studies Affected by COVID-19*. <https://grants.nih.gov/grants/guide/notice-files/NOT-OD-20-087.html>
- Pagoto, S. L., Spring, B., Coups, E. J., Mulvaney, S., Coutu, M. F., & Ozakinci, G. (2007). Barriers and facilitators of evidence-based practice perceived by behavioral science health professionals. *Journal of Clinical Psychology*, *63*, 695–705. <https://doi.org/10.1002/JCLP.20376>
- Peikes, D., Anglin, G., Harrington, M., Ghosh, A., Geonnotti, K., O'Malley, A., Dale, S., Hoag, S., Petersen, D., Singh, P., Tu, H., Blue, L., Orzol, S., Keith, R., Mutti, A., Cohen, G., Higgins, T., Felland, L., & Barterian, L., ... Brown, R. (2019). Independent Evaluation of Comprehensive Primary Care Plus (CPC+): First Annual Report. <https://www.mathematica.org/publications/independent-evaluation-of-comprehensive-primary-care-plus-cpc-first-annual-report>
- PCORI. (2020). *Applicant and Awardee FAQs Related to COVID-19*. <https://www.pcori.org/funding-opportunities/applicant-and-awardee-faqs-related-covid-19>
- Practice facilitation for primary care. (2019, March 22). County Health Rankings & Roadmaps. <https://www.countyhealthrankings.org/take-action-to-improve-health/what-works-for-health/strategies/practice-facilitation-for-primary-care>
- Practice Facilitation Handbook. (2018). <https://www.ahrq.gov/ncepcr/tools/pf-handbook/index.html>
- Primary Care Collaborative. (2020, April 1). *Primary Care & COVID-19: Week 3 Survey*. Primary Care Collaborative. <https://www.pcpcc.org/2020/04/01/primary-care-covid-19-week-3-survey>
- Rubin, R. (2020). COVID-19's Crushing effects on medical practices, some of which might not survive. In *JAMA - Journal of the American medical association* (Vol. 324, Issue 4, pp. 321–323). American Medical Association. <https://doi.org/10.1001/jama.2020.11254>
- Sacks, J. J., Gonzales, K. R., Bouchery, E. E., Tomedi, L. E., & Brewer, R. D. (2015). 2010 National and state costs of excessive alcohol consumption. *American Journal of Preventive Medicine*, *49*, e73–e79. <https://doi.org/10.1016/J.AMEPRE.2015.05.031>
- Sadeghi-Bazargani, H., Tabrizi, J. S., & Azami-Aghdash, S. (2014). Barriers to evidence-based medicine: A systematic review. *Journal of Evaluation in Clinical Practice*, *20*, 793–802. <https://doi.org/10.1111/JEP.12222>
- Schwartz, K., Lopez, E., Rae, M., & Neuman, T. (2020). *What We Know About Provider Consolidation*. <https://www.kff.org/health-costs/issue-brief/what-we-know-about-provider-consolidation/>
- Song, Z., Giuriato, M., Lillehaugen, T., Altman, W., Horn, D. M., Phillips, R. S., Gergen Barnett, K., Bitton, A., Edgman-Levitan, S., Choi, E., Hattis, P., Diane McKee, M., & Auerbach, D. (2020). *Economic and Clinical Impact of Covid-19 on Provider Practices in Massachusetts*. <https://doi.org/10.1056/CAT.20.0441>
- Stahre, M. (2014). Contribution of excessive alcohol consumption to deaths and years of potential life lost in the United States. *Preventing Chronic Disease*, *11*. <https://doi.org/10.5888/pcd11.130293>
- Tacia, L., Biskupski, K., Pheley, A., & Lehto, R. H. (2015). Identifying barriers to evidence-based practice adoption: A focus group study. *Clinical Nursing Studies*, *3*, 90–96. <https://doi.org/10.5430/cns.v3n2p90>
- Thomas, D. R. (2016). A general inductive approach for analyzing qualitative evaluation data. *American Journal of Evaluation*, *27*, 237–246. <https://doi.org/10.1177/1098214005283748>
- U.S. Food & Drug Administration. (2020, December 11). *FDA Takes Key Action in Fight Against COVID-19 By Issuing Emergency Use Authorization for First COVID-19 Vaccine*. FDA News Release. <https://www.fda.gov/news-events/press-announcements/fda-takes-key-action-fight-against-covid-19-issuing-emergency-use-authorization-first-covid-19>
- Ungar, L. (2020, November 30). *Thousands of Doctors' Offices Buckle Under Financial Stress of COVID*. Kaiser Health News. <https://khn.org/news/thousands-of-primary-care-practices-close-financial-stress-of-covid/>
- US Preventive Services Task Force, Curry, S. J., Krist, A. H., Owens, D. K., Barry, M. J., Caughey, A. B., Davidson, K. W., Doubeni, C. A., Epling, J. W., Kemper, A. R., Kubik, M., Landefeld, C. S., Mangione, C. M., Silverstein, M., Simon, M. A., Tseng, C.-W., & Wong, J. B. (2018). Screening and behavioral counseling interventions to reduce unhealthy alcohol use in adolescents and adults: US

- preventive services task force recommendation statement. *JAMA*, 320, 1899–1909. <https://doi.org/10.1001/JAMA.2018.16789>
- Va, M. (2013). Screening and behavioral counseling interventions in primary care to reduce alcohol misuse: U.S. preventive services task force recommendation statement. *Annals of Internal Medicine*, 159, 210–218. <https://doi.org/10.7326/0003-4819-159-3-201308060-00652>
- Wagner, A. (2021, January 10). Triangle counties entering phase 1b of COVID-19 vaccine rollout as case numbers rise. *The News & Observer*. <https://www.newsobserver.com/news/coronavirus/article248406775.html>
- Wagner, E. H., & Glasgow, R. E., Davis, C., & Bonomi, A. E. (2001). Quality improvement in chronic illness care: A collaborative approach. *The Joint Commission Journal on Quality Improvement*, 27, 63–80. [https://doi.org/10.1016/S1070-3241\(01\)27007-2](https://doi.org/10.1016/S1070-3241(01)27007-2)
- Westfall, J. M., Mold, J., & Fagnan, L. (2007). Practice-based research—“blue highways” on the NIH roadmap. *JAMA*, 297, 403–406. <https://doi.org/10.1001/JAMA.297.4.403>
- Zerhouni, E. A. (2006). Clinical research at a crossroads: the NIH roadmap. *Journal of Investigative Medicine*, 54, 171–173. <https://doi.org/10.2310/6650.2006.X0016>
- Zipursky, J. S., Stall, N. M., Silverstein, W. K., Huang, Q., Chau, J., Hillmer, M. P., & Redelmeier, D. A. (2021). Alcohol sales and alcohol-related emergencies during the COVID-19 pandemic. *Annals of Internal Medicine*, 174(7), 1029–1032. <https://doi.org/10.7326/M20-7466>