Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.
The upheaval associated with COVID-19 has caused significant challenges for individuals struggling with mental illness. Initial evidence on the interdependence of mental illness and substance use disorders through the pandemic suggests that people struggling with social and economic isolation and social and psychological stress may have increased incidence of substance use disorders, including alcohol use disorders (AUDs). This in turn leaves them potentially vulnerable to worse health outcomes, with evidence of AUD as a common risk factor for worsening psychiatric comorbidities. Alcohol treatment relative to treatment for illicit drug use has lagged during the pandemic. Health care services must anticipate a substantial increase in demand for addiction treatment and ensure access through appropriate adaptations and innovations to care delivery. Significant challenges identified during this time include the health inequity of vulnerable populations, poor access to resources for rural populations, and lack of uniform standards across health care insurance plans covering all citizens for basic services. Despite these challenges, it is also a time of great opportunity in digital health solutions, including telehealth-delivered services and new paradigms of treatment, such as harm reduction strategies. Here we explore the potential of the screening, brief intervention, and referral to treatment (SBIRT) model for treating AUD in the COVID-19 era in the context of challenges associated with its use and potential innovations emerging from the pandemic.

As an integrated, comprehensive approach to delivering early identification, intervention, and treatment, SBIRT has demonstrated efficacy for people at risk for AUDs. This approach has 3 main components: screening to assess the severity of substance use and appropriate level of treatment; brief intervention to provide awareness of substance use and to increase motivation to change; and referral to treatment for those needing more extensive treatment, including access to specialty care. There is also growing support for more assertive modification of SBIRT through recovery management checkups (RMCs). This approach augments SBIRT through proactively scheduled routine care checkups for patients with a dedicated focus on patients’ substance use. Principles of SBIRT and RMCs include motivational interviewing techniques and the transtheoretical stages of change model.

Despite the evidence for SBIRT as a method for treating AUD, it is not commonly used in practice. Integrating SBIRT into primary care settings is one way to expand access and has been championed before, especially in federally qualified medical centers. Benefits of the primary care setting include patients’ ease and trust with primary care providers (PCPs) providing brief interventions, reduced stigma in seeking help,
and familiarity with referrals and associated costs; patients therefore tend to prefer this setting to specialty care. Bartels et al found that effective referral to treatment, one of the most difficult steps in the SBIRT process, is more easily achieved when alcohol treatment is embedded in primary care and in closer physical proximity vs an external referral or physically farther away. Thus, especially in the context of reduced access as documented during the pandemic and the promise of harm reduction measures such as pharmacologic management in response to COVID-19, AUD treatment is better facilitated in a primary care setting.

Implementation of SBIRT in primary care is feasible and effective, yet it is not without challenges. Screening is often hampered by a lack of privacy and confidentiality and is not integrated with existing assessment. Point-of-care brief intervention and referral are also not easy in this setting. Primary care providers are often reluctant to deliver treatment because of time constraints within the clinical workflow, belief that the intervention will be ineffective, and lack of experience in delivering brief interventions. Furthermore, insurance barriers, relative value unit incentivized pay structures, and inadequate investment in technology to support SBIRT (eg, electronic health records) hamper implementation. Key features of successful implementation of SBIRT in primary care have been proposed in the Table.

### TABLE. Best Practices for Screening, Behavioral Intervention, and Referral to Treatment (SBIRT) Implementation in Primary Care

- Have a practice champion.
- Use an interprofessional team.
- Define and communicate the details of each SBIRT step.
- Develop relationships with referral partners.
- Institute ongoing SBIRT training.
- Align SBIRT with the primary care office flow.
- Consider using a prescreening instrument.
- Integrate SBIRT into an electronic health record.

Data from Public Health Rev.

Integrated care and digital health innovations, 2 developments related to population health and the pandemic, respectively, may provide the needed impetus to embed SBIRT more widely in primary care. Integrated care, an evidence-based delivery model tested for efficacy across several diagnoses and populations, is ideal for primary care settings. This delivery model has the potential to increase capacity and access to harm reduction and early treatment at a time of scarce resources and increased need for pandemic-related AUD care. The integrated delivery model is essentially a collaborative effort between PCPs and a specially trained behavioral health care manager to screen and treat patients for mental health under the supervision of a licensed psychiatric physician. The psychiatrist additionally helps with triage, addressing comorbidities, and the use of medications to reduce alcohol use. The psychiatrists and behavioral health care managers meet regularly to review cases and jointly develop patient treatment plans for individual patients. This plan includes treatment, medication, and short-term psychotherapy recommendations for PCPs. The psychiatrist may also see patients on an as-needed basis. This model, used to treat a variety of psychiatric conditions in primary care settings, is financially viable, with billing support from several public and private payers that would also cover targeting alcohol use. The potential value of an integrated SBIRT care model for AUD in primary care would be to increase capacity for treatment while optimizing scarce psychiatric resources. Referrals and monitoring could be augmented through RMCs also integrated into primary care workflows.

Digital innovations such as telemedicine, mobile, and web-based applications have seen accelerated pandemic-related use. These modalities have created scaling, continuity of care, and new methods of patient-centered AUD care that are likely to continue beyond COVID-19. Furthermore, tele-expertise, whereby an addiction specialist can distantly supervise the work of other health professionals, can additionally support and elevate telemedicine and
digital transformation of SBIRT addiction care for AUD. Other digital health interventions, such as programmed therapeutic relational agents and wearable devices, could provide additional personalized treatment support, improve access, and reduce costs. Digitized, mobile modalities could also benefit the screening process for SBIRT with brief screening instruments with strong sensitivity and specificity. Digital interventions for substance use disorders are supported by preliminary evidence in reducing substance use, including alcohol use. Thus, the population-level burden of pandemic-associated alcohol-related harm could be reduced with scalable digital AUD interventions.

Despite the potential value of a digitally driven and integrated SBIRT AUD model, specific care and attention need to be paid to implementation challenges, health equity, and payment considerations. Delivery and implementation of AUD services in primary care need careful thought for potential pitfalls to digital and socioeconomic status–related access and retention of patients. Many clinics have hastily improvised and implemented telemedicine out of necessity during the lockdown, without clinical guideline support or evidence about effectiveness. Despite their expanded use and increasing comfort of clinicians with digital health capabilities, these technologies have been layered on old practice models, without addressing earlier problems related to SBIRT integration in primary care. New digitally integrated SBIRT AUD models should be informed as learning health systems that are responsive to individual patient needs in real time, overcoming access, logistic barriers, and pandemic-related safety issues of patients and clinicians. Use of appropriate implementation frameworks and feedback loops from use and experience should guide the ongoing effort. Outcomes relevant to PCPs, addiction specialists, and patients should be used to test best telemedicine and digital practices (eg, remote, in-person, and hybrid care) of delivering SBIRT AUD care. Quality improvement methods should be used to assess whether and how apps and telemedicine fit in at each stage of SBIRT AUD treatment in simple plan-do-study-act cycles. Other factors that warrant attention include a well-defined workflow following a positive screen, which includes identifying and training a team with the right SBIRT and digital health delivery expertise, with adequate administrative support, PCP champions, and buy-in from leadership. The screening strategy should clarify what personnel will conduct the screening and what instruments will be used (digital or otherwise). Leveraging existing digitally delivered collaborative care models for depression or other behavioral health conditions could be of value. Establishing financial viability is critical in the context of reimbursable and necessary services. Adequate staffing for care coordination through proactive use of a registry based on alcohol use screening results and integrated with the electronic medical record should guide care and outreach. Compliance with confidentiality, including federal regulations concerning patient privacy protection regarding alcohol use and digital delivery tools, is important. Transition to the next steps of SBIRT should establish an adequate digitally integrated process for brief interventions for alcohol use, including personnel, staffing, and training, as well as for medication provision and counseling. Local specialty alcohol addiction treatment sites should be identified and partnered with for concerted referral efforts. Patient self-management should include education and preferred enabling tools (digital and otherwise) based on patient capacity. Finally, performance management is critical, including the use of formal quality improvement processes and tracking and feedback on goal attainment.

Health equity was highlighted during the pandemic because of the disproportionately larger toll on ethnic minority, rural, and lower income communities. Integration of SBIRT into primary care should pay special attention to the potential for disparities through appropriate implementation strategies. As noted, digital interventions offer the promise of breaking down some barriers related to access, but they can also leave patients behind because of lack of
access to smartphones, computers, or the Internet. Poor and racial/ethnic minorities in rural communities lack either computers or smartphones with Internet connections. Digital health equity also extends beyond those with lower socioeconomic means to patients with poor area-based digital connectivity, limited digital literacy, and age-related cognitive declines, leaving them at risk of social exclusion. Solutions to this problem, by way of new and effective implementation strategies, present an inclusive approach to designing and evaluating digital platforms and solutions with a broad range of end-users in mind, including those requiring safety-net and digital health literacy support. For example, clinics have begun purchasing Internet-connected tablets for patients to use to answer digitalized questionnaires. These same tablets could be loaned to the patients for a digital visit at the clinic or checked out to be used at home as a library book. Similar solutions are being implemented in the Veterans Affairs health care system, early adopters of such technology to extend care access to veterans. In 2016, the Department of Veterans Affairs Office of Rural Health and Connected Care expanded video teleconferencing access through an initiative in which video-enabled tablets were distributed to veterans with access barriers. Early evaluations of this initiative have found promising results of improved access, specifically for mental health treatment.

Amendments to existing payment policy by state and government agencies concerning eligible AUD services and the extent to which they are reimbursed to providers and covered by insurance for patients are needed. Insurance variation and coverage ineligibility, often retroactively learned by patients in this new landscape of digital medicine, may be a further source of disparities in access until appropriate payments are in place. For example, to ensure that telemedicine can be paid for, a new model must require that clinics be in Medicaid expansion states or accept Medicaid. Patients’ lack of appropriate devices, digital skills, and Internet connectivity is still a problem not addressed by existing insurance policies, although provider reimbursement and clinicians’ capacity to deliver care remotely have benefitted from federal telemedicine policy. Payment reform could include the right incentives to clinics and providers to find ways to decrease the digital divide by providing digitally challenged patients the needed skills (eg, digital access training), resources (e.g., iPads), and support (eg, digital navigators). This, in turn, would help minimize the digital gap in access to these new technologies to minimize disruptions to care and potential disparities that may emerge from these new digital models of AUD care.

CONCLUSION
There is an urgent need for action to prevent or to mitigate alcohol-related current and future health care burdens. The time is ripe to leverage and adapt current evidence-based models of care and at the same time adapt, scale, and leverage the opportunities provided by digital health to address the increasing demand for addiction-related services that existed before the current pandemic and is now accelerating at an alarming rate. As a new period of normalcy emerges, AUD treatment providers are preparing for the inevitable pandemic-related impact of uncontrolled alcohol use by some patients. SBIRT is helpful in early identification of and interventions for AUDs in normal times, but adoption has been poor. With the crisis also comes opportunity. The pandemic-associated increase in the use of electronic resources and heightened attention on the need for equity may allow an enhanced model of SBIRT that overcomes some of the barriers to implementation for better adoption and outcomes. We believe the future lies in a digitally driven integrated SBIRT model for AUD, located in primary care settings as described here, carefully designed, implemented, and sustained through the challenges of health equity, payment reform, and ongoing implementation hurdles.

POTENTIAL COMPETING INTERESTS
The authors report no competing interests.
individuals with substance use disorder during COVID-19 and beyond. J Subst Abuse Treat. 2021;120:108152.

38. Lord SE, Campbell ANC, Brunette MF, et al. Workshop on implementation science and digital therapeutics for behavioral health. JMIR Ment Health. 2021;8(1):e17662.

39. Jacobs JC, Blonigen DM, Kimerling R, et al. Increasing mental health care access, continuity, and efficiency for veterans through telehealth with video tablets. Psychiatr Serv. 2019;70(11):976-982.

40. Zulman DM, Wong EP, Slightam C, et al. Making connections: nationwide implementation of video telehealth tablets to address access barriers in veterans. JAMIA Open. 2019;2(3):323-329.

41. Hser YI, Ober AJ, Dopp AR, et al. Is telemedicine the answer to rural expansion of medication treatment for opioid use disorder? Early experiences in the feasibility study phase of a National Drug Abuse Treatment Clinical Trials Network Trial. Addict Sci Clin Pract. 2021;16(1):24.