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Contents lists available at ScienceDirect

Journal of the American Pharmacists Association

journal homepage: www.japha.org

RESEARCH

Using qualitative, community-based input to steer post–coronavirus disease 2019 pharmacy practice in substance use

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ARTICLE INFO

Article history:

Received 14 December 2021

Accepted 16 March 2022

Available online 19 March 2022

ABSTRACT

Background: The coronavirus disease 2019 (COVID-19) pandemic has had a disproportionately negative impact on individuals with a substance use disorder (SUD). A rapidly changing public health and treatment environment has resulted in increased needs for pharmacist engagement in SUD-focused patient care.

Objectives: This study used semistructured interviews of SUD professionals to evaluate where they believe pharmacy practice could better support people at risk of or having SUD in light of challenges posed by the COVID-19 pandemic.

Methods: Professionals dedicated to the care of individuals with SUD were recruited from a large community substance use coalition to participate in a qualitative study examining how pharmacists could take a more active role in SUD prevention, intervention, recovery, and harm reduction (HR). A consensual qualitative research approach was used in data analysis.

Results: Domains identified in analysis included pharmacists as educators of patients and communities, pharmacists as educators of health care providers, pharmacists as advocates for individuals with SUD, the need for increased pharmacist engagement owing to COVID-19 challenges for individuals with SUD, the need for expanded pharmacy practice interventions, and the need for pharmacist self-development.

Conclusion: Increased medication counseling, HR practices, addressing stigma, and community-level education focused on SUD were among the most commonly reported areas for pharmacy practice development. In addition, the urgent need to adjust pharmacy practice in response to the COVID-19 pandemic was also identified by interviewees.

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Background

Pharmacy practice and the role of pharmacists in health care and public health have been continually expanding with recent growth in numerous areas as pharmacists become more prominent members on interprofessional health care teams.^{1–3} Similarly, the pharmacists' role in the care of patients with substance use disorder (SUD) is an area of rapidly expanding practice and potential.^{4,5} The coronavirus disease 2019 (COVID-19) pandemic has had a disproportionate effect on

people at risk of or having SUD,⁶ and the need for pharmacist engagement in the care of these individuals has never been more critical. For those actively using, reduced access to harm reduction (HR), medication treatment, and recovery programs caused by the COVID-19 pandemic will continue to have deleterious outcomes.⁶ It is imperative for the practice of pharmacy to understand the emerging syndemic of COVID-19 and substance use⁶ and be prepared to take action.

Pharmacists are uniquely positioned to play a key role in prevention, treatment, and education on substance use owing to their position as the final health professional patients encounter before using prescriptions.⁷ In addition, traditional roles of pharmacists in prescription drug monitoring programs, promoting safe handling of psychoactive medications, and promoting nonopioid and nonpharmacological alternatives are all opportunities for expanding pharmacy practices in SUD prevention, treatment, and education.^{8,9} To date, some

Disclosure: The authors declare no relevant conflicts of interest or financial relationships.

Previous presentations: Some themes from this paper were presented virtually at the American Public Health Association Annual Meeting in Denver, Colorado, October 25, 2021.

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Key Points**Background:**

- The coronavirus disease 2019 (COVID-19) pandemic has had a disproportionately negative impact on individuals with a substance use disorder (SUD) resulting in increased needs for pharmacist engagement in activities surrounding SUD-focused patient care.
- Pharmacists are uniquely positioned to assist individuals with SUD by managing medications and connecting clients to treatment, prevention, and harm reduction (HR) resources.

Findings:

- Professionals working in SUD-focused careers were interviewed to determine what areas for expansion of pharmacy practice were most critical in light of new COVID-19 disparities.
- Increased medication counseling, HR practices, addressing stigma, and community-level education focused on SUD were among the most commonly reported topics for pharmacy practice development.

pharmacists have begun implementing steps to combat SUD by working with care teams to avoid and monitor drug interactions, prescribing and dispensing naloxone to patients and caregivers, and referring patients to SUD treatment.^{8,10} Others have taken even more active roles in supporting the prescribing of medications for opioid use disorder (MOUDs), whereas some pharmacies remain hesitant to stock MOUDs owing to stigma and opioid dispensing monitoring systems.^{11–13}

Despite the progress made by pharmacists in SUD, multiple studies have found that many pharmacists directly interacting with individuals with SUD hold mixed views toward their role in care. A 2019 survey focused on naloxone dispensing by pharmacists noted that considerable barriers still exist, such as liability concerns, a lack of training, and time constraints.^{14,15} Additional studies found that most pharmacists are apprehensive dispensing opioids and believed their counseling practices to be “policing” opioid prescriptions despite pharmacists being viewed as responsible for medication safety by both patients and pharmacists.^{16,17} To illustrate the need for expanded SUD education, surveyed pharmacists perceived a larger percentage of patients (41%) to be misusing opioid pain relievers compared with prescribers (17%).¹⁸ The increased perception of misuse among pharmacists may show their unique ability to identify patients who are at risk of misusing prescription opioids¹⁷ but may also be an indication of stigma toward individuals with SUD. Several studies have shown that pharmacists feel they lack the time and confidence needed to establish patient discussions on substance use as a form of direct intervention.^{17,18} These studies, conducted before COVID-19, indicate notable pharmacist hesitancy toward HR strategies, education and counseling for patients with or at risk of SUD, and intervention for a patient with SUD.

In addition, owing to Centers for Disease Control and Prevention (CDC) COVID-19 social distancing and quarantining recommendations, overall accessibility to SUD prevention, treatment, and recovery services has been notably challenging.¹⁹ Initial studies show that marginalized and vulnerable groups, such as indigenous peoples, children and adolescents with SUD,²⁰ pregnant women, and the older, all show increased risk of SUD relapse complicated by the COVID-19 pandemic.^{6,20–23} Patients with SUD during the pandemic are at a greater risk of complications including hospitalization, ventilation, mortality from a COVID-19 infection, and an increased risk of SUD relapse.²⁴ This illustrates the greater need for pharmacists to become more involved in the care of patients with SUD owing to the increased risks for people with SUD during COVID-19.²⁵ According to Jemberie et al.,²⁶ SUD and COVID-19 intersect at 5 unique dimensions. The dimension of greatest concern that compounds the issue of SUD during COVID-19 is accessibility to SUD aid owing to resources and personnel becoming increasingly stretched thin and CDC guidelines around social distancing making face-to-face interactions more difficult.^{19,24,27} Modifications to traditional treatment procedures have shown marked improvement in supporting those with SUD; these changes include a relaxation of federal laws regarding buprenorphine prescriptions and an increase in telehealth and remote clinical support.^{6,26–28}

With these shifts, the role of the pharmacist and contemporary pharmacy practice should be analyzed for coinciding adaptations as well. Community-based input from professionals in the field of SUD who have experienced the pandemic-induced transition in prevention, treatment, and recovery capacities may allow for evidence-based change in the understanding and application of the evolving role of pharmacists. Our study aims to analyze where SUD professionals believe pharmacy practice should be expanded to better serve patients with SUD, with a goal of steering contemporary SUD pharmacy practice during and after the COVID-19 pandemic.

Objective

This study used semistructured interviews of SUD professionals to evaluate how they believe the practice of pharmacy could better support people at risk of or having SUD and the role that COVID-19 has had on these recommendations.

Methods

This project used semistructured interviews of professionals identified and contacted through local coalitions who focused on finding community-based solutions to support patients with SUD. Contact was conducted via e-mail by study researchers for their interest in participating in a semistructured interview; the researchers shared the goals of the project and their affiliation with the faculty lead of the project. For those who were interested in participating, a time was found to conduct the interview between the interviewee and interviewer. Interviewee demographics and areas of service were diverse (Table 1).

Most interviewees had a role in multiple areas of SUD management (e.g., a professional's work may have had

Table 1
Demographics of interviewees

Interviewee practice characteristics	Number of interviewees identified with each professional role
Area of focus in current professional role	Public health (6) SUD recovery (5) SUD treatment (4) Professional in courts and law (4) Harm reduction (2) Pharmacy (1) Youth pastor (1) Public defender (1) Education (1) Medical doctor (1) SUD prevention (1) Community activism (1)
Number of counties served	1 county (19) 2 county (2) ≥ 3 counties (3) Statewide service (1)

Abbreviation used: SUD, substance use disorder.

crossover between prevention and HR) and tended to work primarily in one county.

Interviews were conducted by both male and female team members who had experience in community-based participatory research, and interviews lasted 15–30 minutes with interviewees following a list of prepared questions. The interviews were conducted during a 6-week period of time from December of 2020 to February of 2021. All interviews were recorded and conducted with participant consent via Zoom (Zoom Video Communications, San Jose, California). After completion of the interview, the participants were offered a \$10 Amazon gift card in gratitude for their time. Interviews were recorded via Zoom and the transcript provided by Zoom was saved for transcribing. Trained project researchers then deidentified the Zoom transcripts and compared them with the audio recordings for accuracy. When there were discrepancies between the audio recording and transcript, the researchers added the missing text to the transcript or corrected any inaccurate text. The project had a goal of interviewing a total of 25 participants. In total, 28 participants agreed to be interviewed with 25 interviews being recorded and transcribed. Three interviews were not recorded because of a failure in the recording software, but interviewer notes were typed out within 10–14 days of the interview's completion; these interviews were omitted from the final data analysis. With 28 interviews, the project was able to reach saturation with many participants citing similar themes during their interviews as previous interviewees.

Data analysis

Analyses of interview transcripts were conducted using the method of consensual qualitative research (CQR).²⁹ Before analysis, all researchers completed a bias self-check, intended as an opportunity for researchers to become aware of any potential biases they may have before they begin conducting data analysis (Appendix 1).²⁹

Data analysis: First cycle

The research team was composed of 3 professional students, 1 undergraduate student, and 1 faculty auditor. Of these students, 1 student had previous experience using CQR

whereas the remaining 3 students had no previous experience. An initial meeting was held with all of the researchers where a brief overview of CQR was given and dates for future meetings were set. Between the first and second meetings, researchers did an initial analysis of the transcripts and made a list of domains and subdomains. During the second meeting, researchers discussed the domains and subdomains they found and conducted a cross-analysis of the domains and subdomains. Subdomains were organized into different domains through discussion among the researchers about which subdomains were closely related. Closely related subdomains were then organized together into a domain. This led to the creation of a common codebook (CC) they would use during the second analysis of the transcripts. The CC was sent to the project auditor for review and their feedback was integrated into the CC.

Data analysis: Second cycle

During the second analysis of the transcripts, the researchers recorded how many times a subdomain appeared. Subdomain appearances were based on upon the transcripts it appeared in and not the number of times it showed up in total (i.e., if a subdomain appeared in a single participants transcript multiple times, then it was still only counted as appearing once). After the second round of analysis, researchers met to discuss which subdomain they found and came to a consensus on which subdomains were present in a transcript. These agreed-upon subdomains were recorded in the CC and subdomains that did not appear were removed from the CC. In addition, any subdomains with a notably low number of appearances were incorporated into another subdomain at the discretion of the research team. After consensus was reached on the CC, researchers gathered 2 quotes that were related to each of the final subdomains.

Data trustworthiness

Interview questions were created with the assistance of community partners working in SUD prevention, treatment, recovery, and HR. Pilot interviews were conducted with students to determine whether question wording was appropriate and to create the interview guide (Appendix 2). Data trustworthiness was accessed via member checking with community partners after completion of the project. In addition, community partners were a part of the initial designing of the project, including the questions asked, and were included in the dissemination of project results. The Consolidated Criteria for Reporting Qualitative Research 32-item checklist was also used as a means to assess the data and methodology.

This project was determined to be a nonhuman research by the University of Minnesota Institutional Review Board because the project entailed interviewing professionals in substance use prevention, treatment, recovery, and HR about their professional lives and observations rather than their personal experiences with their own SUD.

Results

Six domains that focused on ways that pharmacists could adapt their practices to better serve individuals with SUD were discovered; these ranged from how pharmacists could provide education to communities to how pharmacists could self-

Table 2
Domains and subdomains with no. mentions from participants

Domains	Subdomains	Domain explanations
Pharmacists as educators of patients and communities	Patient/medication Counseling: 15 General SUD: 3 Mental health: 6 Stigma: 4 Harm reduction: 8	Areas that interviewees identified as places where more education could be provided by pharmacists with regard to both patient and the community
Pharmacists as educators of health care providers	General SUD: 6 Harm reduction: 4	Areas that interviewees identified as places where more education could be provided to other health care providers by pharmacists
Pharmacists as advocates for individuals with SUD	MAT use: 6 Harm reduction: 9 Decreased cost: 1	Areas that pharmacists could advocate for systemic change as identified by interviewees
The need for increased pharmacist engagement owing to COVID-19 challenges for individuals with SUD	Reduced outreach: 7 Decreased mental health: 5 Increased overdoses: 4 Isolation: 7 Decreased accessibility: 6 Virtual learning curve: 3	Areas that interviewees identified related to the COVID-19 pandemic and its impact on SUD
The need for expanded pharmacy practice interventions	Telehealth services: 6 Harm reduction services: 5 Prevention services: 9 Mental health services: 5 School/Youth intervention (K-12): 5 Collaboration with SUD: 3	Areas where more pharmacy practice intervention and innovation is needed owing to COVID-19 as identified by interviewees
The need for pharmacist self-development	Addressing own stigma: 8 Role acknowledgment in SUD: 5 Consultation availability: 2	Steps that interviewees believe that pharmacists should take to become more actively involved in SUD treatment

Abbreviations used: SUD, substance use disorder; MAT, medication assisted treatment or medications for opioid use disorder; COVID-19, coronavirus disease 2019.

reflect to become more sensitive providers of care for patients with SUD (Table 2).

Pharmacists as educators of patients and communities

Pharmacists were emphasized as an important source of information regarding SUD for patients and communities. Improved patient-medication counseling was most frequently mentioned by participants, calling for more education on prescription drugs' mechanism of action, effects, and possible consequences such as dependence and overdose. One reported that pharmacists should help patients to “understand how the drugs, how the medications work, and then help people to understand kind of those nuances of what they're feeling and experiencing.” Another topic of importance was the need for more pharmacist engagement in HR methods. Participants referred to “providing educational materials for all patients that are prescribed opioids,” “offering naloxone to the same patients,” and a desire for pharmacists to “advocate for naloxone training.” Other topics included stigma against individuals with and recovering from SUD and co-occurring SUD and mental health conditions. Regarding the latter, interviewees wanted to also “see some programming that would teach kids health and address mental health and wraparound services.”

Pharmacists as educators of health care providers

Besides educating patients and the general community, interviewees indicated a need for improved education of health professionals, especially about MOUD implementation. Interviewees indicated that health professionals had

inconsistent views about MOUD; as one summarized, “...so many people even in the professional realm that think it's replacing one drug for another and don't see it like truly as HR.” Another suggested that although some providers were prescribing MOUD, some of them were “not doing a lot of good follow up work to get them weaned off.” Overall, there was a call for greater understanding of the benefits of MOUD and how to use it in treatment. Other interviewees mentioned a need for general education sessions on SUD and its facets.

Pharmacists as advocates for individuals with SUD

Interviewees identified increased advocacy for people with SUD as an area where pharmacists could provide more support. Increased advocacy for HR and naloxone trainings was cited: “advocate for some Naloxone training in your community.” Access to and expansion for MOUD, also referred to as MAT by participants, was also cited: “advocacy and education around MAT.” Another suggested advocating for reduction in medication cost as another area where pharmacists could aid people with SUD: “When somebody has to pay \$125 for a box of nasal, I mean that's quite a bit.”

The need for increased pharmacist engagement owing to COVID-19 challenges for individuals with SUD

Interviewees stressed the unique challenges individuals with SUD faced living through the COVID-19 pandemic. Essential SUD care and recovery services were hampered with different virtual platforms and some being canceled altogether. In the words of one interviewee, “Outreach has gotten incredibly hard and like basically non-existent because I can't

go out to places that I used to be able to go to find people.” Interviewees also reported difficulties adjusting to virtual services. Accessibility was an issue given that some patients did not have access to virtual consultations with treatment providers. Isolation owing to social distancing in response to the virus was another commonly cited issue. One stated, “I’ve seen a lot more cases coming through of people just sitting in their home using substances, as a way to self-medicate the depression or just something to do or to fill the void of being social and doing social activities.” Interviewees called for pharmacists to increase patient engagement in response to these issues, exploring telehealth accessibility and novel outreach methods.

The need for expanded pharmacy practice interventions

Interviewees cited many areas where pharmacy practice could be expanded to aid people with SUD especially with new challenges posed by the pandemic. Increased SUD prevention services, such as counseling, were requested: “I’d like to see a bunch of counselors get trained, like to see more programs open up and other programs grow.” Increased incorporation, accessibility, and utilization of telehealth services were brought up during interviews as another avenue for pharmacists to continue expanding and potentially providing more intervention. Other subdomains noted during our interviews included providing more referral to and resources for mental health services; more access to HR services and/or referrals, including pharmacy-based syringe exchange services; more pharmacist-provided naloxone training; and increased education on SUD. In addition, more school education seminars on SUD and aid for youth at risk of SUD were sought for. Increased pharmacist collaboration with people or entities that provide services to people with SUD was also cited, noting a need for pharmacists to provide medication and SUD information to community entities, given that their presence reportedly lends credibility to organizations providing such services.

The need for pharmacist self-development

Stigma and bias were noted by interviewees as a common barrier for people with SUD reaching out to pharmacists and pharmacies for aid. The need to address stigma was stated by multiple participants: “my experience is that pharmacies are really afraid of people they perceive as this stereotype of a junkie that are going to clean out the cash drawer, and they think that by not embracing them, they are keeping them out of their store, which is misguided, at best.” Another stated, “but they (faculty name) surveyed all the pharmacists and, and the responses were very concerning in terms of stigma related to naloxone.” Another area cited was pharmacists acknowledging and/or educating themselves on the issue of SUD and understanding the neuroscience of addiction rather than viewing it as a moral failure and in so doing becoming more open and eager to consulting on the issue of SUD (Table 3).

Discussion

This study found that professionals in the area of SUD believe pharmacists have the ability and responsibility to be more involved in supporting people with or at risk of SUD.

Many of the topics discussed during the interviews are consistent with past literature focused on areas of opportunity where pharmacists can be more involved in the multiplex issue that is SUD. Areas of focus including increased medication counseling, especially with opioids, HR access (e.g., naloxone education/prescriptions and syringe access), and community-level education were all cited by SUD professionals and are consistent with published literature.¹⁴

Emphasizing pharmacist engagement in patient and community education, specifically in naloxone education, has been shown to destigmatize SUD and decrease fatal overdose events.^{10,30-33} Efficacious strategies of HR include naloxone education and distribution, improved syringe access, provision of safe injection sites, and pharmacist-led discussion on drug interactions.^{34,35} Previous literature has shown a lack of knowledge regarding HR and stigma against individuals with SUD are major barriers to providing HR services.³⁵ Implementation of these strategies requires community-wide support, and through education, pharmacists can change perceptions about HR so that these vital services can be provided in communities. This sentiment was reflected in our study with interviewees calling for expanded education in this realm.

Interviewees also highlighted the need for pharmacists to educate other health care providers in the realms of SUD and HR. Integration of pharmacists into primary care teams allows for a unique opportunity to expand pharmacists’ scope of practice through collaborative care and education given that their medication expertise presents a valuable resource for physicians in treatment plans.³⁶ The need to discuss ongoing HR efforts and medication-assisted treatment was also brought up by interviewees.

Expanding pharmacy SUD practice in light of the COVID-19 pandemic was another subdomain mentioned by interviewees. Stress, isolation, lack of structure, limited access to physical and mental health care, and changes in treatment paradigms owing to COVID-19 all increase the risk of return to substance use and pose barriers to recovery for people with SUDs.³⁷ Telemedicine is a possible solution, expanding access to treatment while also being cost-efficient.³⁸ Although our interviewees brought up “zoom community platforms” and virtual provider consultations, other technologies such as smartphone applications and virtual reality have been suggested.³⁸ These tools can offer a variety of asynchronous and synchronous care options for patients, and pharmacists can take advantage of these developments for SUD care. There is evidence that videoconferencing for SUD treatments has similar rates of efficacy as in-person methods,³⁸ and pharmacists have new possibilities to deliver information and interventions for individuals with SUD. However, there will be difficulties adjusting to telemedicine as detailed by our study’s interviewees; pharmacists need to understand the challenges involved as telemedicine evolves for their practice. Besides using telemedicine for treatment, leveraging digital recovery support services (D-RSS) can provide a needed alternative during the pandemic.³⁹ However, some findings show that D-RSS do not provide the same magnitude of benefit as in-person services and patients maintain a concern of reduced quality.^{38,39} In addition, group support is a critical element of recovery that is difficult to replicate in online settings, which is further exacerbated by unequal access to reliable Internet.³⁹

Table 3
Quotes from interviewees

Subdomain	Representative quotes
Patient/medication counseling	<p>"I think that's what we that pharmacists can help to is to really understand how the drugs, how the medications work, and then help people to understand kind of those nuances of what they're feeling and experiencing."</p> <p>"Providing educational materials for all patients that are prescribed an opioid and offering naloxone to those patients as well and educating them about the risk of overdose."</p>
General SUD	<p>"so the pharmacy could just help, Naloxone, MAT, clean needles. And, you know, like, probably help train the community or change social norms around that demographic of people"</p> <p>"I really also like how much, and it could just be the group that I've met, but how much effort has been put in for pharmacists to be presenting at conferences and engaged in community level change."</p>
Mental health	<p>"I would like to see some programming that would teach kids health and address mental health and wraparound services."</p> <p>"I think that when people see that trusted person as somebody going out into the community, and you know, taking on some of these big issues, mental health and substance use. And I think that's a good thing."</p>
Stigma	<p>"I think that looking at the recovery community, so people within the recovery community, there's still a lot of stigma around, you know, oh, you're on suboxone or you're on medically assisted treatments, like that should not be."</p> <p>"And so, again, there's a lot of stigma associated with IV drug users, so like a lot of places don't want to help this individual. And so there's a lot of education and understanding that needs to happen around that aspect, and looking at the problem objectively, and how best to address it using data-driven responses."</p>
Harm reduction	<p>"Ya know, is it, um, as a community pharmacy ya know advocate for some Naloxone training in your community, um, make sure you have a good functioning, working program in your community pharmacy to get NARCAN to your patients."</p> <p>"Educating like the community but also other professionals on like the realities of MAT, because there's still so many people even in the professional realm that think it's replacing one drug for another and don't see it like truly as harm reduction."</p>
General SUD (HP)	<p>"Prevention programs...I just think education. And I think education for the professionals."</p> <p>"Off the top of my head, the only one that I can think of is just, like I was saying, about MAT, to have more education...., for the public around that, and for the providers."</p>
Harm reduction (HP)	<p>"I think one of the areas that pharmacy students or staff could help with is education around medicated, MAT... there's some providers that are prescribing this, these medications and not doing a lot of good follow up work to get them weaned off."</p> <p>"Educating like the community but also other professionals on like the realities of MAT, because there's still so many people even in the professional realm that think it's replacing one drug for another and don't see it like truly as harm reduction."</p>
MAT use	<p>"I think advocacy and education around MAT. And just showing folks that it's effective, getting people more access to it. Educating like the community but also other professionals on like the realities of MAT, because there's still so many people even in the professional realm that think it's replacing one drug for another and don't see it like truly as harm reduction."</p> <p>"I also think with the pharmacy, just meet at a better understanding and education of medication assisted therapies and treatments. It's really important for the community because I think up to probably a year ago, I'm a perfect example of somebody who would walk around, saying you're just substituting one drug for another, like that's not okay. But when I looked at the science behind it and get, you know, get a little more educated around what it is doing and how it can really benefit people and their loved ones."</p>
Harm reduction	<p>"They should be, first, doing no harm, and they should be providing syringes to people, no questions asked.... And pharmacies, you know, what a wonderful opportunity to engage with people on other health-related issues, to dispense Narcan, to talk about drug interactions, there's so much that could happen"</p> <p>"There's not a whole lot of access to harm reduction services like Naloxone, and clean needles, condoms, you know. And so, I guess I'm to make creating easier access to MAT, creating easier access to clean needles, creating easier access to Suboxone, Methadone or whatever I'm at, but also access to Naloxone, and training people and community members on Naloxone, how to recognize overdose, how to prevent it, how to administer Narcan"</p>
Decreased cost	<p>"When somebody has to pay \$125 for a box a nasal I mean that's quite a bit but...and you know, most people, you know they don't have that kind of money but...you know, then you think about trying to save your loved one. I mean, what are you going to do?"</p> <p>"I do feel like things are high price."</p>
Reduced outreach	<p>"the lack of services that are out there readily available for people, so like support groups shut down, training shut down, all of these different in person things that help combat the opiate epidemic stopped, and services were limited and everything was switched to zoom, and that's not a good way for people to connect and learn and grow."</p> <p>"Extended outreach if at all possible just because of the isolation that our, our citizens or community members are dealing with. It's, you know, it's so imperative that information and or some type of contact, support contact be available."</p>
Decreased mental health	<p>"I've seen a lot more cases coming through of people just sitting in their home using substances, as a way to self medicate the depression or just something to do or the fill the void of being social and doing social activities."</p> <p>"I hear about mental health problems, especially around Christmas. So that's not helpful in 2021, but people staying at home, and having to deal with whatever they're thinking in their head it's hard to reach out and show compassion and show people that they matter in that time."</p>
Increased overdoses	<p>"I think that there's changing dynamics for pharmacies right now and wonderful opportunities to take advantage of them, generate goodwill and a healthier community, right, not only COVID but all the overdose deaths that are just piling up and deaths of despair in Duluth."</p>

Table 3 (continued)

Subdomain	Representative quotes
	"But the amount of people and deaths that has happened from heroin overdoses are all preventable, and there's a significant need to reach the population of people that are dying."
Isolation	"whats really important in this interesting time of COVID, where there's more isolation and more distance is knowing that addiction can often become more troublesome in isolation whenever there's less opportunity for connection" "Because of just unforeseen isolation, Im seeing the same two or three people every day for 10 months working at home. Theres a lot of people in the same boat, and prior to COVID, I was in a large room with 40 people around me working in cubicles. It was social. It was bright. It was kind of that we were a part of workforce and talked to each other a bit and worked with each other, and now thats gone."
Decreased accessibility	"One of the biggest problems is that, you know, with telemedicine, and you guys do that right. I mean, I'm not everybody has access. And so a lot of our patients especially here, you know at our clinic, we have, like the highest no show rate in town and probably the least connected group of patients in town. And yet, we have to try to get them connected and we can't. So our visit rate and our no show rate has gone up." "I think we need...I think the need that has brought has been brought to my attention is the lack of awareness for access to, whether its connectivity, or more data, or a plan that allows people to connect virtually, and some of the platforms require a bit of usage and so we find when people are living within their means."
Virtual learning curve	"i think the role of the pharmacist has gotten much harder too, just in that there is more virtual work, and all the logistics that go into pulling off a virtual meeting or consult with the patient is a lot harder to do" "so like support groups shut down, training shut down, all of these different in person things that help combat the opiate epidemic stopped, and services were limited and everything was switched to zoom, and that's not a good way for people to connect and learn and grow"
Telehealth services	"So a happy medium would be to have zoom community platforms or something where people can come on and talk about things like a town hall situation where education or prevention information could get out" "the role of the pharmacist becomes even more important in terms of - when we're looking at access and knowing that there's more opportunity via telehealth for providers to prescribe"
Harm reduction services	"Pharmacists need to start taking the tools and the opportunities that they have been afforded and put in the work: opportunities for harm reduction work" "And these are all just so valuable because it's empowering people, giving people access to Narcan and the ability to use it should a family member misuse accidentally or, you know, or intentionally overdose on an opioid and yet the number of lives that you know have been saved"
Prevention services	"I mean, I'd like to see more programs open up and that takes more counselors. So I'd like to see a bunch of counselors get trained, like to see more programs open up and other programs grow" "so getting back into the schools, I think, is a priority I have for prevention"
Mental health services	"some anxiety is normal. And what we need to normalize is how you address it, and how you work through it, which is harder to do than just using recreational drugs or alcohol." "and services were limited and everything was switched to zoom, and that's not a good way for people to connect and learn and grow. So like the recovery community has been hit super hard since COVID"
School/youth intervention (K-12)	"I think if it's (education) coming from law enforcement, it may be looked at more of a criminalized side where if it's coming from an education institution or medical institution then it would be more medicalized than moralized." "So getting back into the schools, I think, is a priority I have for prevention and in early intervention."
Collaboration with SUD	"when we bring professionals with that level of understanding that also understand recovery and substance use disorder in a way that's non judgmental, we can lend credibility to the conversations and the awareness that we're providing out in the community." "I've seen a lot of really positive changes happen in the last few years when we've had pharmacists that are very well versed and educated in addiction being a disease, and able to shape protocols and policies within pharmacies"
Addressing own stigma	"And traditionally, my experience is that pharmacies are really afraid of people they perceive as this stereotype of a junkie that are going to clean out the cash drawer, and they think that by not embracing them, they are keeping them out of their store, which is misguided, at best" "but they (faculty name) surveyed all the pharmacists and, and the responses were very concerning in terms of stigma related to naloxone."
Role acknowledgment in SUD	"The biggest role is they need to start taking the tools and the opportunities that they have been afforded and putting in the work. Plain and simple." "But I think pharmacists and pharmacies have a position to call out abuse of prescriptions. I think as part of their code of ethics they would and could, but I think a lot of pharmacies lost track of that."
Consultation availability	"So, since they're administering the drugs, maybe they feel like a middleman, which could be utilized more to do education." "so you know taking that little extra effort for those people you know might be struggling or identified as higher needs that someone takes that little bit of time to reach out and connect or, or even just offers that when you come to pick up your prescription, 'hey do you need a consult, we can connect you via phone.'"

Abbreviations used: SUD, substance use disorder; MAT, medication assisted treatment; COVID, coronavirus disease; IV, intravenous; NARCAN, naloxone.

Participants in our study cited SUD intervention and prevention as an area where pharmacy practice expansion was needed. An important first step in preparing pharmacists to take on increased responsibility for patients with SUD will be to address pharmacist stigma—a problematic issue cited during our study and one that has been mentioned in previous

literature.^{14,31,33,40} Previous literature has detailed prejudiced attitudes clinicians may have toward individuals with SUD such as viewing them as more violent and manipulative than other patient subgroups.⁴¹ Experience of stigma and discrimination may deter those with SUD from seeking recovery and HR services during the pandemic, which emphasizes the

necessity for pharmacists and other health care providers to be aware of this vulnerability.²⁶ Stigmatization from community pharmacists can lead to reduced quality of care and poor treatment outcomes.^{41–44} As the role of the pharmacist evolves with the implications of COVID-19 and concomitantly increasing levels of substance use and overdose,⁴⁵ research points toward destigmatization efforts from pharmacists being key in SUD intervention and prevention.^{14,31,33,40} Ongoing research in interprofessional SUD education courses for student pharmacists and practicing pharmacists points toward improved outcomes in destigmatizing pharmacist perspectives on patients with SUD.^{8,46} Thorough education of pharmacists on SUD allows for education of patients, communities, and other health care providers, which were domains noted in this project.

Specific areas of SUD intervention mentioned by interviewees include mental health considerations and youth interventions. The COVID-19 pandemic has been associated with mental health challenges.⁴⁷ In a 2020 CDC-issued Morbidity and Mortality Weekly Report that surveyed adults in the United States, 40.9% of respondents reported at least one adverse mental or behavioral health condition, including having started or increased substance use to cope with stress related to COVID-19 (13.3%).⁴⁷ The widespread comorbidities of adverse mental health and substance use illustrate the need for a holistic consideration of how to address these conditions.^{48–50} Youth intervention is another area cited by our participants and is also backed by previous literature owing to an increased exposure to substance use and a unique relationship dynamic where some younger users may feel unsafe sharing about their substance use with parents present.²⁰ Pharmacist education within K-12 schools is mentioned along with altering the narrative of youth intervention from enforcement to education. Research on the role that a pharmacist can play in youth intervention is lacking, but increased advocacy and community education (both common areas mentioned among interviewees) may have an indirect influence on the overall perspective of SUD among youth.⁵¹

Recommendations

A multidisciplinary approach to substance use prevention, treatment, recovery, and HR is needed to effectively reduce substance use and overdose; this is especially urgent given the challenges facing individuals with SUD posed by COVID-19 and its corresponding restrictions. Community members interviewed in this study saw enormous potential in the roles pharmacists can play in public health and individual patient care. Because each community has unique needs, pharmacists must make efforts to determine what the individual needs of their community are; this can be done by joining coalitions comprehensively addressing substance use; partnering with local public health and treatment, recovery, and HR agencies; and supporting community efforts that provide chemical-free programming and social events. Pharmacists are uniquely poised to change the conversation for both patients and communities, combating both individual and community-wide stigma that serves as a barrier to individuals accessing substance use treatment, recovery, and HR services. Pharmacists must take on a greater role in patient advocacy and

clinical practice that expands patient access to MOUD, potentially expanding pharmacy practice while improving patient care.

Limitations

One limitation of this study is the omission of 3 interview transcripts owing to no audio or transcript being recorded, decreasing our sample size from 28 interviews to 25 interviews.

Conclusion

Professionals from the community provided valuable input to steer pharmacy practice expansion to better serve patients vulnerable to or having SUD in light of the COVID-19 pandemic. Increased medication counseling, increased engagement in HR practices, and community-level education focused on SUD were among the most commonly cited areas for pharmacy practice intervention, but the need for pharmacist antistigma education and practice was also notable and worthy of immediate attention.

Acknowledgments

The authors acknowledge the contributions of student pharmacists Reid Larson and Sarah Christiansen and AmeriCorps VISTA Anna Van Deelen for their work in conducting interviews and Kaitlyn Erola for her work in transcribing interviews and data analysis.

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Appendix

Appendix 1: Bias self-check form

Thank you for your interest in working on Substance Use Disorder (SUD) research. Please thoughtfully complete the following form, and e-mail your completed form to Dr. Palombi. Your form will be kept private and will not be shared with anyone. Note that there are no right or wrong answers for this form, this is simply meant to be a reflection so you are aware of any biases you may have going into this project and are aware of how your past experiences may shape your views on SUD. If you would like to discuss any of your answers to these questions please feel free to contact Dr. Palombi.

Name:

What has your past experience been with substance use disorder (SUD), professionally and personally?

Describe your thoughts with regards to SUD and people suffering from SUD:

How big of an issue do you think SUD is in [region]?

What do you think the role of the U of M and the profession of pharmacy should be with regards to supporting people with SUD or at risk for SUD?

What has been your experience with people who serve or work with those suffering from SUD?

Describe your thoughts with regards to people who serve those with SUD:

What has your past experience been with qualitative research?

Describe your thoughts with regards to qualitative research:

What do you expect the results to be from this study?

Appendix 2: Interview guide: Using qualitative, community-based input to steer post-COVID-19 pharmacy practice in substance use

Overview of Process

1. Send email to local coalitions combating SUD (Pine County Chemical Health Coalition, CSSUR (Duluth), CAPE (Virginia), Carlton County Drug Prevention Coalition) to determine if they will allow an email invitation to be sent to their members. Interested potential interviewees will respond to the email through Dr. Palombi.

2. Research team member (*must have completed all necessary training per Dr. Palombi) to contact interested potential interviewees utilizing email template
3. Research team member to set up Zoom meeting at mutually agreed time
4. **Research team member to record the interview with Zoom after obtaining participant consent**
5. Research team member to obtain transcription of interview with Zoom, and correct transcript to reflect actual conversation, correcting any errors in the transcript.
6. Research team member to upload recording and transcription to google drive.
7. Research team member to document all of the above steps, with dates, on research project spreadsheet

Interview Protocol

1. Introduction of yourself and the study:

Express appreciation for their time and introduce self:

“Thank you very much for your time, we realize you are very busy during this time and we appreciate your willingness to work with us.”

[Introduction of self and connection to Laura Palombi]

Explain meeting logistics and obtain consent for recording:

“I have allotted 30 minutes for this meeting to go through a series of survey questions, and this meeting is being recorded. I anticipate this process will only take about 15 minutes. Do you mind if we record this interview? It will be used to create a written record of our conversation, but your name will not be associated with the written record.”

“The purpose of this study is to assess how the University of Minnesota, as well as the practice of pharmacy in general, can better serve the needs of the community by supporting people with substance use disorder, especially during the COVID-19 pandemic.”

Let them know they can opt out of questions, and withdraw consent altogether:

“Before we begin, you should know that you are not required to answer all the questions, and can choose to remove your consent to this study at any point, withdrawing yourself from this meeting. However, if you do choose to complete all the questions, your email address will be given to Dr. Laura Palombi and you will receive a \$10 Amazon gift card via email in appreciation for your participation.”

2. Interview Questions:

Questions	Probes
How are you currently connected with individuals experiencing Substance Use Disorder? What is your specific role/title?	a) SUD prevention b) SUD treatment c) SUD recovery d) Harm reduction e) Concerned community member (includes family members of individuals with SUD)
What county in Minnesota do you identify with most closely?	County of residence/association, note that this may be multiple counties based on their role
On a scale of 0-5, how involved have you been with individuals from universities and/or higher education in the past 5 years, with 0 being not involved at all, and 5 being very involved? If yes: what has your involvement been?	Very involved = 5 Somewhat involved = 4 Occasionally involved = 3 Slightly involved = 2 Not involved = 1 This is the extent of their collaboration with individuals working as a part of universities/higher education
What do you think that the University and/or higher education should be doing to support individuals with Substance Use Disorder (or at risk of SUD?) Do you think that this role has changed because of the COVID19 pandemic? And there are new needs? If so, what are they?	If asked, options could include: Technical assistance with community education/trainings, harm reduction trainings, support with patient care for individuals with SUD
What do you think the profession of pharmacy's role in supporting individuals with SUD (or at risk of SUD) should be? Do you think that this role has changed because of the COVID19 pandemic? Are there new needs? If so, how?	Pharmacy care/treatment Community Outreach Advocacy across various sectors How pharmacy support has changed during COVID-19 How pharmacists have and needed to adapt and why
Due to the COVID-19 pandemic, what Drug Prevention activities or program areas would you like to see prioritized in 2021?	SUD prevention activity/program focus areas
What is your preferred email address to receive your Amazon gift card?	May need to be personal email address rather than work address, note this on spreadsheet
Are there any other persons you know that you feel would be good to reach out to for this research project?	Other individuals to interview should be added to spreadsheet

3. Thank them for their time and let them know that results of the study will be shared with them and their local coalition at the end of the project.