

DRAFT ASHP Statement on the Pharmacist’s Role in Substance Use Disorder Prevention and Recovery

1 Position

2 The American Society of Health-System Pharmacists (ASHP) believes that pharmacists play vital
3 roles in preventing and treating substance use disorders (SUD). Their responsibilities include
4 delivering clinical care to patients, supporting those in recovery, engaging in research and
5 education, and advocating for necessary resources to combat this public health crisis.

6 Pharmacists are encouraged to promote workplace practices that reduce stigma around
7 substance misuse and SUD. To effectively fulfill these responsibilities, pharmacists should
8 continuously develop and maintain their competencies in providing comprehensive and
9 collaborative SUD care.

10 Background

11 Unhealthy substance use and SUDs are major public health concerns in the United States.

12 Based on SUD criteria specified in the Diagnostic and Statistical Manual of Mental Disorders,
13 5th edition, 48.7 million people aged 12 or older (17.3% of the population) had an SUD in the
14 past year in 2022. Among those, only about one in four (21.4% or 13.1 million people) received
15 substance use treatment. In both adolescents and adults with SUD, approximately 95% did not
16 perceive a need for treatment.¹ Although drug-related overdose deaths are declining, over
17 98,000 American deaths occurred in 2024.² The vast majority of drug overdose deaths involve
18 unregulated opioids. Costs related to the consequences of substance use the United States
19 were nearly \$1.5 trillion in 2020, up 37% from \$1.07 trillion in 2017.³⁻⁴ Unhealthy substance use
20 and untreated SUD may increase the risk of significant comorbid chronic health conditions,
21 death from overdose, or suicide. SUD may coexist with and complicate other mental health
22 disorders. People who inject drugs have a higher prevalence of skin and soft tissue infections,
23 hepatitis C, and human immunodeficiency virus.⁵ Long-term excessive alcohol use can lead to
24 heart disease, stroke, cancer, dementia, depression, anxiety, and cirrhosis. In addition to the
25 impact on health, substance use has a profound impact on society, with reduced workplace
26 productivity, financial hardships, environmental risks, vehicular accidents, difficulty with
27 relationships, intimate partner violence, and high crime rates.⁶ The COVID-19 pandemic led to
28 increased alcohol consumption and misuse of other substances, particularly among people with
29 mental health conditions, which increased the risk and number of fatal overdoses.⁷⁻⁸

30 It is important to recognize SUD among healthcare workers. Studies show that 10-15%
31 of healthcare professionals will misuse substances at some point.⁸⁻¹⁰ A healthcare practitioner
32 who has OUD may be required to enroll in a state-level program that mandates abstinence-
33 based models of SUD treatment to maintain professional licensure. The effectiveness of such
34 programs are not well studied.¹¹ An unknown number of healthcare providers who could
35 benefit from medications for SUD ultimately refuse such programs due to stigma,

36 criminalization of substance use, and the requirement to adhere to a rigid abstinence-only
37 approach. Instead of finishing a program, they often abandon their healthcare practice instead.
38 When a healthcare worker needs SUD treatment, it is imperative that comprehensive,
39 evidence-based, and stigma-free treatment and recovery services are available.¹²⁻¹³

40 Polysubstance use is also a growing concern. In 2019, nearly half of all drug overdose
41 deaths involved multiple drugs.¹⁴ In a sample of people with OUD from 2015 to 2017,
42 methamphetamine use tripled among people using heroin and doubled for people using
43 opioids. Xylazine, a veterinary tranquilizer, is sometimes combined with opioids which results in
44 a deep sedative effect and has been found in the US illicit drug supply, with increasing presence
45 across the US from 2020 to 2021.¹⁵ Xylazine has been found to cause lesions on extremities
46 that develop into chronic infected wounds, leading to amputation. Pharmacists can identify
47 such lesions, educate patients on possible causes, and advise on wound care options.

48 Access to SUD care remains limited. The delay between disease onset and initial
49 treatment is estimated to be four to seven years partly due to a lack of providers and
50 resources.¹⁶⁻¹⁷ The U.S. Department of Health and Human Services estimates there will be a
51 shortage of 23,650 primary care physicians¹⁸ by 2025. Two thirds of primary care shortage
52 areas are in rural communities,¹⁹ exacerbated by 130 hospitals in rural areas closing in the last
53 10 years. In 2022, nearly 37% of rural counties lacked even one clinician with a DATA-waiver to
54 prescribe buprenorphine for OUD,²⁰ which highlights the importance of barrier-free access to
55 SUD care. Robust data supports MOUD as the gold standard of treatment for OUD. Elimination
56 of the DATA-waiver in the Mainstreaming Addiction Treatment Act, as part of the Consolidated
57 Appropriations Act of 2023, allows any provider registered with the Drug Enforcement
58 Administration (DEA) to prescribe buprenorphine for OUD unless otherwise restricted by the
59 clinician’s state of licensure. While this increased the number of providers able to prescribe
60 MOUD, support services, such as behavioral health and withdrawal management, are still not
61 readily available in rural communities. The U.S. Department of Health and Human Services,
62 through the Substance Abuse and Mental Health Services Administration (SAMHSA), released
63 another important change in February 2024 to Part 8 of Title 42 in the Code of Federal
64 Regulations.²¹ This rule removes stigmatizing and outdated language, promotes a patient-
65 centered approach, and reduces barriers to Opioid Treatment Program (OTP) care delivery.
66 Important changes of less-stigmatizing terminology include replacing the terms *medication-*
67 *assisted treatment (MAT)* with *MOUD* and replacing *detoxification* with *withdrawal*
68 *management*. Some resulting OTP updates include allowing methadone take-home doses,
69 allowing telephone or video telehealth (e.g., telemedicine) for MOUD treatment initiation
70 without a prior in-person evaluation, and discouraging rigid reliance on toxicology testing
71 results. Research demonstrates that telemedicine is as effective as office-based treatment and
72 is associated with higher patient satisfaction and lower treatment discontinuation rates.²²⁻²⁷ A
73 stepped care model for MOUD has been described as a means of improving access to MOUD

74 with a “no wrong door” approach to care,²⁸ providing care where patients prefer to be treated.
75 Interprofessional collaborative care models have been fundamental to the success of such
76 programs, using nurse care managers, pharmacist care managers,²⁹ and physician-pharmacist³⁰⁻
77 ³¹ collaborative models to improve access to care, reduce care fragmentation, improve patient
78 satisfaction, and promote treatment retention.

79 It is important to recognize the degree to which stigma contributes to the prevalence of
80 SUD and overdose. People are stigmatized when they are labeled, set apart, and linked to
81 undesirable characteristics that lead to status loss and discrimination, affecting their income,
82 education, housing status, and well-being. Data suggests negative attitudes toward individuals
83 with prescription-based OUD exceed those reported for other medical conditions, including
84 mental illness.³² Substance use is featured in media representations of impoverished
85 populations,³³ and U.S. drug policies disproportionately target marginalized groups.³⁴⁻³⁵ Stigma
86 and discrimination experienced by LGBTQIA+ individuals have been associated with higher drug
87 overdose rates.³⁶ Stigmatizing attitudes among health professionals are common and is a
88 known barrier for access to MOUD.³⁷⁻⁴¹ Recent legislative changes are important early steps in
89 advocacy and policy that support barrier- and stigma-free access to SUD treatment.

90 Social determinants of health (SDOH), also known as social drivers of health, include
91 physical, sexual, or emotional traumas; gender; homelessness; economic instability; lower
92 educational attainment; discrimination; racism; and social stigma.⁴² These contribute to risk of
93 developing SUD, SUD severity, and limit access to treatment. Historical trauma, stigma, and
94 social exclusion from family and peer networks are associated with higher rates of overdose.⁴³
95 Adverse childhood experiences, traumas that occur in childhood, such as exposure to a parent’s
96 substance use or overdose, increase SUD risk in adulthood.⁴⁴ Communities with higher poverty
97 rates or economic hardship face higher rates of opioid-related deaths, and overdose is more
98 common among people who experience homelessness. Unhoused people are more likely to
99 continue drug use after an overdose and are nine times more likely to die from an overdose.
100 Research shows higher overdose death rates for non-Hispanic Black Americans and more
101 restricted access to MOUD and naloxone when compared to White Americans. Black Americans
102 are less likely to seek out SUD treatment, partly due to higher rates of incarceration associated
103 with SUD.⁴⁵⁻⁴⁷ It is estimated that 85% of the prison population has an active SUD or were
104 incarcerated for a crime involving drugs or drug use.⁴⁸ Despite evidence that SUD treatment
105 while incarcerated reduces drug use and crime upon reentry to the community, rates of SUD
106 treatment during incarceration are very low.⁴⁹

107 Inadequate professional education is a key barrier to SUD care as studies show that 45%
108 of patients who present for medical care are affected by SUD, yet healthcare providers often
109 fail to recognize the criteria for diagnosing it.⁵⁰ MOUD training during residency improves
110 physicians’ willingness and confidence to care for patients with OUD.⁵¹ Incorporating SUD into
111 pharmacy student curricula improves the attitudes of pharmacists caring for patients with

112 SUD.⁵⁰⁻⁵⁴ The need for expanded training was recognized by a 2020 call for action from the
113 National Academy of Medicine Action Collaborative on Countering the U.S. Opioid Epidemic to
114 improve clinician training on evidence-based care for patients with OUD.⁵⁵ In 2021, the
115 American Council for Graduate Medical Education released recommendations and resources on
116 preparing residents and fellows to manage pain and SUD, with considerations for both general
117 and specialty-specific elements.⁵⁶ During the same year, a survey of U.S. pharmacy schools
118 showed that respondent programs delivered a median of seven hours of OUD content in the
119 required coursework and that 56.8% of faculty agreed or strongly agreed that students were
120 adequately prepared to provide opioid interventions, with approximately 50% perceiving that
121 screening, assessment, prescribing, referrals, and stigma were covered adequately.⁵⁷ ASHP
122 policy supports the critical need for pharmacist education in SUD care: To encourage the
123 inclusion of longitudinal SUD training in didactic pharmacy curricula, starting with an early
124 initiation of education; use of evidence-based practices, including risk mitigation, harm
125 reduction, and destigmatizing communication strategies; and increasing experiential education
126 pertaining to SUD; and to support and foster standardized education and training on SUD,
127 including dispelling common misconceptions to the pharmacy workforce and other healthcare
128 professionals.⁵⁸

129

130 **Responsibilities**

131 Pharmacists have the opportunity and responsibility to be an important part of SUD prevention
132 and treatment, harm reduction, and recovery. Evidence shows that pharmacists' involvement in
133 SUD care improves access to treatment and patient satisfaction.^{30, 59-63} With nine of ten
134 Americans living within five miles of a pharmacy,⁶² pharmacists are the most accessible
135 healthcare professionals in the country. Pharmacist-provided comprehensive medication
136 management (CMM) services aim to achieve all five aspects of the quintuple aim⁶⁴ for
137 healthcare improvement: providing high-quality care, reducing healthcare-related costs,
138 improving the patient's care experience, improving healthcare professionals' work-life balance,
139 and achieving health equity. By providing CMM services, pharmacists ensure each medication
140 has an appropriate indication and is safe and effective, while verifying patients can take the
141 medication as intended and prescribed.⁶⁵ Pharmacists are equipped to lead efforts in SUD care
142 and can assist in a variety of patient care, employee health, and community activities across any
143 practice setting.

144 The scope of pharmacists' responsibilities in providing patient care will vary based on
145 the mission and policies of their healthcare organization as well as patient population, state
146 regulations, and local resources. The responsibilities listed below should be adapted to meet
147 specific needs and circumstances. Because each responsibility may be applied to any given
148 substance with the potential for misuse and harm, specific substances are not mentioned.

149

150 **Prevention.** Prevention of SUD includes a paradigm shift to promote multimodal and
151 multidisciplinary approaches to screening and monitoring for unhealthy substance use. The
152 following activities are involved in the pharmacists' roles in SUD prevention.

- 153 1. Providing early intervention to individuals who misuse substances but do not meet
154 criteria for an SUD diagnosis. Early intervention includes screening and providing brief
155 motivational interventions to educate individuals about the risks of unhealthy substance
156 use and connect the patient's motivations and goals to limiting use of unhealthy
157 substances.
- 158 2. Developing practices and policies in collaboration with other healthcare providers,
159 communities, and local governments to prevent drug-related overdoses and deaths as
160 part of state and federal overdose prevention action plans.
- 161 3. Increasing awareness of the risks associated with prescription opioid use and misuse, as
162 well as educating patients who are prescribed opioids about the risks of medication
163 sharing and encouraging appropriate disposal.
- 164 4. Providing resources and education to patients and clinicians on nonopioid pain
165 management strategies, including addressing mental health and substance use
166 treatment needs.
- 167 5. Participating in activities and providing education for healthcare providers, health
168 systems, and communities to prevent unhealthy substance use among adolescents and
169 young adults that include connecting those with an SUD to medication treatment.

170

171 **Clinical care.** Healthcare systems and their leadership have a responsibility to ensure that
172 clinical pharmacy services are integrated into the SUD care provided by the interprofessional
173 healthcare team. The opportunities listed below are for pharmacists to provide comprehensive
174 SUD care to patients across the spectrum of treatment, harm reduction, and recovery.

- 175 1. Incorporating into practice screening for substance misuse, including alcohol (e.g.,
176 Alcohol Use Disorders Identification Test – Concise⁶⁶ [AUDIT-C]), opioids, or other illicit
177 substances (e.g., Current Opioid Misuse Measure⁶⁷ [COMMS]), addressing results that
178 may indicate unhealthy substance use or misuse, and providing treatment by including
179 medications on formulary or creating a network of referrals for evaluation and
180 treatment.
- 181 2. Adopting motivational interviewing or brief intervention to engage patients in
182 treatment and methods of harm reduction.
- 183 3. Initiating, titrating, and managing evidence-based pharmacotherapy for SUD including,
184 timely follow-up, and monitoring for withdrawal symptoms and medication side effects.
- 185 4. Providing patient and caregiver education regarding unhealthy substance use, the
186 dangers of medication sharing, harm reduction strategies, proper disposal of unused
187 medications or illicit substances, and self-care (e.g., groups, resources).

- 188 5. Providing optional referrals to appropriate support groups for the needs of people
189 whose lives are affected by their own or another person's SUD or unhealthy substance
190 use.
- 191 6. Employing shared decision-making to promote collaborative, evidence-based, patient-
192 centered care with realistic treatment goals.
- 193 7. Using non-stigmatizing language with patients, caregivers, and the healthcare team in
194 verbal and written communications.⁶⁸
- 195 8. Implementing harm reduction strategies, such as reviewing medications for high-risk
196 combinations, providing overdose education, offering naloxone, screening for suicide
197 risk, and providing nonprescription syringes and drug test strips as well as syringe
198 disposal for patients who use illicit drugs.
- 199 9. Referring patients for other care and social services that impact treatment, health
200 equity, or recovery, and ensuring care coordination (e.g., therapy, housing assistance,
201 acute care needs, mental health therapy).
- 202 10. Incorporating evidence-based contingency management when needed as part of SUD
203 treatment plan (e.g., stimulant use disorders).
- 204 11. Collaborating with acute care, outpatient, and ambulatory care providers to ensure
205 transitions of care and care coordination for patients after discharge for SUD treatment.
- 206 12. Performing population health outreach to engage patients in needed care and offer SUD
207 treatment, overdose prevention, harm reduction, and other needed services (e.g.,
208 mental health and pain care) to patients lost to follow-up, high-risk and vulnerable
209 populations (e.g., unhoused or justice-involved people, and those with a history of
210 overdose or SUD), and underserved patients prone to health inequity.
- 211 13. Educating patients about the correct use, storage, handling, and disposal of prescription
212 medications.

213

214 **Recovery.** Pharmacists should be involved in fostering SUD recovery by performing the
215 following activities.

- 216 1. Ensuring patient confidentiality of participation in treatment and recovery activities,
217 including colleagues or other health professionals by complying with HIPAA, 42 CFR Part
218 2, state laws, and professional ethics standards.
- 219 2. Participating in interprofessional efforts to support and care for the healthcare
220 organization's employees and patients who are recovering from SUD.
- 221 3. Supporting and encouraging the recovery of health professionals with SUD through
222 employee support programs, including: (a) being willing to hire or retain employees; (b)
223 participating in monitoring and reporting requirements associated with recovery; (c)
224 maintaining an environment supportive of recovery; (d) establishing behavioral

225 standards and norms among all employees that discourage unhealthy substance use,
226 and (e) participating in peer-assistance programs.

227 4. Providing ongoing pharmaceutical and supportive care for patients being treated for
228 SUD.

229 5. Maintaining knowledge of professional support groups (e.g., state and national level
230 pharmacist recovery networks) and other local, state, and national organizations'
231 programs and resources available for preventing and treating SUD to share with
232 patients.

233 6. Nurturing a stigma-free workplace culture and encouraging colleagues affected by SUD
234 or unhealthy substance use to engage in employee assistance programs and other
235 available recovery services to encourage treatment success, including leave policy
236 flexibilities that allow for such participation.

237

238 **Healthcare system and workforce support.** Pharmacists should be involved in healthcare
239 system and workforce support by performing the following activities.

240 1. Participating in or contributing to the development of unhealthy substance use
241 prevention and medication-first assistance programs within healthcare organizations
242 that consist of (a) a written substance use policy; (b) an employee education and
243 awareness program; (c) a supervisor training program; (d) an employee assistance
244 program; (e) peer support systems, such as pharmacist recovery networks; and (f) drug
245 testing.⁶⁹

246 2. Recognizing and then actively and immediately addressing any student or employee,
247 including healthcare professionals, appearing under the influence of substances that
248 impair their ability to safely perform their responsibilities, in alignment with the
249 organization's policies and procedures, the principles of ethical and responsible
250 pharmacy practice, and statutory requirements.

251 3. Promoting integration of pharmacy technicians as a means of supporting clinical
252 pharmacy practice through review of population health dashboards for outreach
253 opportunities; taking medication histories; administering validated substance use
254 screening tools; ensuring completion of lab tests, other safety monitoring, and referrals;
255 engaging patients in care through stigma-free approaches, vaccine administration, and
256 other activities within the scope of pharmacy technician practice.

257 4. Discouraging prescribing practices that lead to an excessive supply of controlled
258 substances or inappropriate long-term opioid use (e.g., prescribing a larger quantity of
259 pain medication than is clinically needed for treatment of short-term pain) as well as
260 inappropriate involuntary tapering of opioid-based therapy.

261 5. Establishing a multidisciplinary controlled substance inventory system, in compliance
262 with statutory and regulatory requirements, that discourages diversion and enhances

- 263 accountability, such as purchase of controlled substances in tamper-evident containers,
264 maintenance of a perpetual inventory, and utilization of an ongoing surveillance system.
- 265 6. Working with local, state, and federal authorities in controlling substance misuse,
266 including participation in state prescription drug monitoring programs, encouraging
267 participation in appropriate prescription disposal programs, complying with controlled
268 substance reporting regulations, and cooperating in investigations that involve the
269 misuse of controlled substances, especially diversion from a healthcare organization.
- 270 7. Working with medical laboratories to identify misused substances through drug and
271 poison control information systems, establishing proper specimen collection procedures
272 based on knowledge of the pharmacokinetic properties of misused substances, and
273 selecting proper laboratory tests to detect suspected substances of misuse and to
274 detect tampering of samples.
- 275 8. Promoting healthcare system participation in unhealthy substance use education and
276 prevention programs (e.g., primary and secondary schools, colleges, churches, and civic
277 organizations).
- 278 9. Maintaining personal professional competency in the consequences of unhealthy
279 substance use and SUD prevention, treatment, recovery, harm reduction, and overdose
280 prevention through formal and informal continuing education.
- 281 10. Opposing the sale of alcohol and tobacco products by pharmacists and in pharmacies.
- 282

283 **Education and research.** Pharmacists' roles in SUD-related education and research include
284 performing the following activities.

- 285 1. Participating in research and contributing to evidence that demonstrates important
286 pharmacist roles and impacts on unhealthy substance use, overdose prevention, SUD
287 treatment, and fostering recovery as part of collaborative care interprofessional
288 practice.
- 289 2. Providing recommendations about the appropriate use of psychoactive substances to
290 healthcare providers and the public, including people recovering from SUD and their
291 caregivers.⁷⁰
- 292 3. Contributing to the development of college of pharmacy curricula, pharmacy technician
293 education, residency program training experiences, and postgraduate continuing
294 education on the topic of unhealthy substance use and SUD prevention, treatment,
295 harm reduction, and fostering recovery.⁷¹
- 296 4. Providing SUD and unhealthy substance use education to the pharmacy workforce in
297 addition to other professionals and employees of the healthcare organization.
- 298 5. Consulting with SUD counselors in SUD treatment programs about the pharmacology of
299 unregulated substances and medications used for SUD treatment.
- 300

301 **Advocacy.** Access barriers to SUD care are multifactorial and must be addressed to improve
302 health equity for patients who need this care. Advocacy must include care processes that
303 promote care delivery systems integration and removal of regulatory and legal barriers,
304 particularly those related to public and private health insurance coverage restrictions on
305 pharmacist scope of practice and reimbursement for providing clinical services. Advocates must
306 ensure sustainable care through reimbursement and payment policies that incentivize the
307 provision of high-value care. Enhanced access to comprehensive SUD care through direct
308 patient care activities and defined pharmacy workforce roles will depend largely on successful
309 advocacy for the following objectives.

- 310 1. Creation of payment models for pharmacist clinical services for patients with SUD across
311 inpatient and outpatient settings that align with state and regulatory laws.
- 312 2. Integration of interprofessional education and clinical training for pharmacists in SUD
313 prevention, treatment, harm reduction, and in fostering recovery as part of the required
314 graduate curriculum and residency programs.
- 315 3. Pharmacist involvement in evaluation of changes in patient outcomes resulting from
316 policies such as the Centers for Disease Control and Prevention (CDC) Clinical Practice
317 Guideline for Prescribing Opioids for Pain—United States, 2022 and identification of
318 necessary updates to improve patient outcomes.⁷²
- 319 4. Review of prescription opioid restriction policies to identify, promote, and meaningfully
320 support access to evidence-based pharmacotherapy for patients living with chronic pain,
321 OUD, or both.
- 322 5. Reduction or removal of cost-sharing and administrative barriers for individuals to carry
323 naloxone and promotion of good Samaritan laws that legally protect naloxone use.
- 324 6. Adoption of laws and policies that support barrier-free, legal access to unlimited sterile
325 needle and syringe service programs to prevent the spread of bloodborne infectious
326 diseases, as well as drug test strips to reduce overdoses among patients who use illicit
327 substances.
- 328 7. Promotion of pharmacy workforce support for community-based harm reduction efforts
329 in distributing naloxone, providing sterile syringe services and drug test strips to people
330 who use illicit drugs, and providing connections to peer recovery specialists and
331 overdose prevention centers.
- 332 8. Use of data monitoring and surveillance for entities receiving federal grants to execute
333 overdose-related action plans, publicly report on the programs' progress, and partner
334 with professional pharmacy, harm reduction, and other relevant organizations.
- 335 9. Implementation of evidence-based, comprehensive, medication-first, and harm
336 reduction-informed approaches in all SUD specialty care, primary care, and inpatient
337 settings for all people who seek treatment.

Authors

Terri Jorgenson, RPH, BCPS

National Program Manager, Clinical Practice Integration and Model Advancement
Veterans Health Administration
Department of Veterans Affairs

Tran H. Tran, PharmD, BCPS

Medical Science Liaison
Central Region at Braeburn
Chicago, Illinois

Jeffrey Bratberg, Pharm.D., FAPhA

Clinical Professor
University of Rhode Island - College of Pharmacy
Kingston, Rhode Island

Disclosures

The authors have declared no potential conflicts of interest.

Additional information

Developed through the ASHP Council on Pharmacy Practice and approved by the ASHP Board of Directors on **MONTH XX, 2025**, and by the ASHP House of Delegates on **MONTH XX, 2025**. This statement supersedes a previous version dated June 2, 2013.

References

1. Substance Abuse and Mental Health Services Administration. 2023. "Key Substance Use and mental Health Indicators in the United States: Results from the 2022 National Survey on Drug Use and Health." Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration. <https://www.samhsa.gov/data/sites/default/files/reports/rpt42731/2022-nsduh-nnr.pdf> (accessed 2024 Jan 29).
2. Centers for Disease Control and Prevention. Provisional drug overdose death counts. www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm (accessed 2024 Jan 29).
3. Beyer D. The Economic Toll of the Opioid Crisis Reached Nearly \$1.5 Trillion in 2020. Joint Economic Committee, U.S. Congress. www.jec.senate.gov/public/_cache/files/67bcd7f-4232-40ea-9263-f033d280c567/jec-cost-of-opioids-issue-brief.pdf (accessed 2024 Jan 29).
4. Florence C, Luo F, Rice K. The economic burden of opioid use disorder and fatal opioid overdose in the United States, 2017. *Drug and Alcohol Depend.* 2021; 218. doi:10.1016/j.drugalcdep.2020.108350.
5. Kariisa M, Patel P, Smith H, et al. Notes from the field: xylazine detection and involvement in drug overdose deaths — United States, 2019. *Morb Mortal Wkly Rep.* 2021;70(37):1300.
6. Centers for Disease Control and Prevention. *Drinking too much alcohol can harm your health. Learn the facts.* 2022. www.cdc.gov/alcohol/fact-sheets/alcohol-use.htm (accessed 2024 Jan 29).
7. Cornford C, Close H. The physical health of people who inject drugs: complexities, challenges, and continuity. *Br J Gen Pract.* 2016; 66(647):286-287. doi:10.3399/bjgp16X685333.

8. Centers for Disease Control and Prevention. Drug Overdose Deaths Among Persons Aged 10–19 Years — United States, July 2019–December 2021. *Morb Mortal Wkly Rep.* 2022; 71(50): 1576–1582. www.cdc.gov/mmwr/volumes/71/wr/mm7150a2.htm (accessed 2024 Jan 29).
9. Bennett J, O'Donovan D. Substance misuse by doctors, nurses, and other healthcare workers. *Current Opinion in Psychiatry.* (2001)14, 195–199.
10. Merlo LJ, Trejo-Lopez J, Conwell T, et al. Patterns of substance abuse initiation among healthcare professionals in recovery. *The American Journal on Addictions.* 2013;22, 605–612.
11. Federation of State Physician Health Programs. State Programs. 2024. www.fsphp.org/state-programs (accessed 2024 Nov 5).
12. Beletsky L, Wakeman SE, Fiscella K. Practicing What We Preach — Ending Physician Health Program Bans on Opioid-Agonist Therapy. *N Engl J Med.* 2019;381(9):796–798. doi:10.1056/nejmp1907875.
13. White KM, Hill LG, Perez JC, et al. Policies regarding use of medications for opioid use disorder in professional recovery programs: A scoping review. *Subst Abus.* 2022; 43(1):749–755. doi: 10.1080/08897077.2021.2010161.
14. O'Donnell J, Gladden RM, Mattson CL, et al. Vital Signs: Characteristics of Drug Overdose Deaths Involving Opioids and Stimulants — 24 States and the District of Columbia, January–June 2019. *Morb Mortal Wkly Rep.* 2020; 69:1189–1197. doi: 10.15585/mmwr.mm6935a1.
15. Kariisa M, Patel P, Smith H, et al. Notes from the field: xylazine detection and involvement in drug overdose deaths — United States, 2019. *Morb Mortal Wkly Rep.* 2021;70(37):1300.
16. Blanco C, Iza M, Schwartz RP, et al. Probability and predictors of treatment-seeking for prescription opioid use disorders: A national study. *Drug and Alcohol Depend.* 2013; 131(1-2):143–148.
17. Wang PS, Berglund P, Olfson M, et al. Failure and delay in initial treatment contact after first onset of mental disorders in the national comorbidity survey replication. *Archives of General Psychiatry.* 2005; 62(6):603–613.
18. Bureau of Health Workforce, Health Resources and Services Administration. National and Regional Projections of Supply and Demand for Primary Care Practitioners: 2013–2025. bhw.hrsa.gov/sites/default/files/bureau-health-workforce/data-research/primary-care-national-projections-2013-2025.pdf (accessed 2024 Jan 29).
19. Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill. Rural hospital closures: 2010–present. 2014. www.shepscenter.unc.edu/programs-projects/rural-health/rural-hospital-closures/#citem_fe3f-61e3 (accessed 2024 Jan 29).
20. Andrilla CHA, Patterson DG. Tracking the geographic distribution and growth of clinicians with a DEA waiver to prescribe buprenorphine to treat opioid use disorder. *J Rural Health.* 2022; 38: 87–92. doi: 10.1111/jrh.12569.
21. Substance Abuse and Mental Health Services Administration. Medications for the Treatment of Opioid Use Disorder. 2023. www.federalregister.gov/documents/2024/02/02/2024-01693/medications-for-the-treatment-of-opioid-use-disorder (accessed 2024 Jan 29).
22. King VL, Brooner RK, Peirce JM, et al. A randomized trial of Web-based videoconferencing for substance abuse counseling. *J Subst Abuse Treat.* 2014; 46(1):36–42. doi: 10.1016/j.jsat.2013.08.009.
23. Vakkalanka JP, Lund BC, Ward MM, et al. Telehealth Utilization Is Associated with Lower Risk of Discontinuation of Buprenorphine: a Retrospective Cohort Study of US Veterans. *J Gen Intern Med.* 2022; 37, 1610–1618. doi: 10.1007/s11606-021-06969-1.
24. Guille C, Simpson AN, Douglas E, et al. Treatment of Opioid Use Disorder in Pregnant Women via Telemedicine: A Nonrandomized Controlled Trial. *JAMA Netw Open.* 2020; 3(1):e1920177. doi: 10.1001/jamanetworkopen.2019.20177.

25. Weintraub E, Seneviratne C, Anane J, et al. Mobile Telemedicine for Buprenorphine Treatment in Rural Populations With Opioid Use Disorder. *JAMA Netw Open*. 2021; 4(8). doi: 10.1001/jamanetworkopen.2021.18487.
26. Hammerslag LR, Mack A, Chandler RK, et al. Telemedicine Buprenorphine Initiation and Retention in Opioid Use Disorder Treatment for Medicaid Enrollees. *JAMA Netw Open*. 2023; 6(10). doi: 10.1001/jamanetworkopen.2023.36914.
27. Zheng W, Nickasch M, Lander L, et al. Treatment Outcome Comparison Between Telepsychiatry and Face-to-face Buprenorphine Medication-assisted Treatment for Opioid Use Disorder: A 2-Year Retrospective Data Analysis. *J Addict Med*. 2017;11(2):138-144. doi:10.1097/ADM.0000000000000287.
28. Gordon AJ, Drexler K, Hawkins EJ, et al. Stepped Care for Opioid Use Disorder Train the Trainer (SCOUTT) initiative: Expanding access to medication treatment for opioid use disorder within Veterans Health Administration facilities. *Subst Abus*. 2020; 41(3):275-282. doi: 10.1080/08897077.2020.1787299.
29. DeRonne BM, Wong K, Schultz E, et al., Implementation of a pharmacist care manager model to expand availability of medications for opioid use disorder, *Am J Health-Syst Pharm*. 2021; 78(4): 354-359. doi: 10.1093/ajhp/zxaa405.
30. Wu LT, John WS, Ghitza, UE, et. al. Buprenorphine physician–pharmacist collaboration in the management of patients with opioid use disorder: results from a multisite study of the National Drug Abuse Treatment Clinical Trials Network. *Addiction*. 116: 1805-1816. doi:10.1111/add.15353.
31. Caron O, Fay AE, Pressley H, et al. Four models of pharmacist-integrated office-based opioid treatment. *J Am Coll Clin Pharm*. 2022; 5(4): 413-421. doi:10.1002/jac5.1607.
32. Link BG, Phelan JC. Conceptualizing stigma. *Annual Review of Sociology*. 2001; 27:363-385.
33. Bullock HE, Wyche KF, Williams WR. Media images of the poor. *Journal of Social Issues*. 2001; 57:229–246.
34. Barry CL, McGinty EE, Pescosolido BA, et al. Stigma, discrimination, treatment effectiveness, and policy: Public views about drug addiction and mental illness. *Psychiatric Services*. 2014; 65(10):1269–1272.
35. Singer M, Page JB. The social value of drug addicts: Uses of the useless. Left Coast Press, Inc; 2014.
36. Stanford S, Raja K, Pegna SW, et al. Identifying the Root Causes of Drug Overdose Health Inequities and Related Social Determinants of Health: A Literature Review. National Association of County & City Officials; 2021.
37. Morone JA. Enemies of the people: The moral dimension to public health. *Journal of Health Politics, Policy, and Law*. 1997; 22(4):993–1020.
38. Brondani MA, Alan R, Donnelly L. Stigma of addiction and mental illness in healthcare: The case of patients' experiences in dental settings. *PLOS ONE*. 2017; 12(5).
39. DeFlavio JR, Rolin SA, Nordstrom BR, et al. Analysis of barriers to adoption of buprenorphine maintenance therapy by family physicians. *Rural and Remote Health*. 2015; 15:3019.
40. Livingston JD, Adams E, Jordan M, et al. Primary care physicians' views about prescribing methadone to treat opioid use disorder. *Substance Use & Misuse*. 2018; 53(2):344–353.
41. van Boekel LC, Brouwers EPM, van Weeghel J, et al. Stigma among health professionals towards patients with substance use disorders and its consequences for healthcare delivery: Systematic review. *Drug and Alcohol Depend*. 2013; 131:23–35.
42. Lin C, Cousins SJ, Zhu Y, et al. A scoping review of social determinants of health's impact on substance use disorders over the life course. *J Subst Use Addict Treat*. 2024;166:209484. doi:10.1016/j.josat.2024.209484.
43. Delcher C, Harris DR, Anthony N, et al. Substance use disorders and social determinants of health from electronic medical records obtained during Kentucky's “triple wave” Pharmacology

- Biochemistry and Behavior. *Pharmacol Biochem Behav.* 2022; 221. doi:10.1016/j.pbb.2022.173495.
44. Centers for Disease Control and Prevention. Drug Overdose Deaths Among Persons Aged 10–19 Years — United States, July 2019–December 2021. *Morb Mortal Wkly Rep.* 2022; 71(50): 1576-1582. www.cdc.gov/mmwr/volumes/71/wr/mm7150a2.htm (accessed 2024 Jan 29).
 45. Substance Abuse and Mental Health Services Administration. The Opioid Crisis and the Black/African American Population: An Urgent Issue. (DHHS Publication No. PEP 20-05-02-001). 2020.
 46. Zang X, Walley AY, Chatterjee A, et al. Changes to opioid overdose deaths and community naloxone access among Black, Hispanic and White people from 2016 to 2021 with the onset of the COVID-19 pandemic: An interrupted time-series analysis in Massachusetts, USA. *Addiction.* 2023; 118(12):2413-2423. doi:10.1111/add.16324.
 47. Nolen S, Trinidad AJ, Jordan AE, et al. Racial/ethnic differences in receipt of naloxone distributed by opioid overdose prevention programs in New York City. *Harm Reduction Journal.* 2023; 20(1). doi:10.1186/s12954-023-00891.
 48. National Institute on Drug Abuse. Criminal Justice DrugFacts. nida.nih.gov/publications/drugfacts/criminal-justice. (accessed 2024 Jan 29).
 49. American Civil Liberties Union. ACLU Report: Over-Jailed and Un-Treated, How the Failure to Provide Treatment for Substance Use in Prisons and Jails Fuels the Overdose Epidemic June 30, 2021. <https://www.aclu.org/publications/report-over-jailed-and-un-treated>. (accessed 2024 Nov 27).
 50. Substance Abuse and Mental Health Services Administration. 2008 SAMSHA National Survey on Drug Use and Health. <http://www.drugabusestatistics.samhsa.gov/nsduh/2k8nsduh/2k8Results.cfm#Ch2,figure2> (accessed 2024 Jan 29).
 51. McCarty D, Rieckmann T, Green C, et al. Training rural practitioners to use buprenorphine; using the change book to facilitate technology transfer. *J Subst Abuse Treat.* 2004; 26(3): 203-208.
 52. Jarvi A, Hughes P, Shepherd JG, et al. Impact of elective on students' perceptions of treating patients with a substance use disorder. *J Am Pharm Assoc.* 2020; 60(4): e43-e46.
 53. Muzyk AJ, Peedin E, Lipetzky J, et al. Substance use education in US schools of pharmacy: A systematic review of the literature. *Subst Abus.* 2017; 38(4): 455-463.
 54. Miller LN, Mercer SL. Drugs of abuse and addiction: An integrated approach to teaching. *Curr Pharm Teach Learn.* 2017; 9(3): 405-414.
 55. Madras BK, NJ Ahmad, J Wen, et al. Improving Access to Evidence-Based Medical Treatment for Opioid Use Disorder: Strategies to Address Key Barriers Within the Treatment System. *NAM Perspectives.* doi:10.31478/202004b.
 56. Accreditation Council for Graduate Medication Education. Opioid Use Disorder. www.acgme.org/meetings-and-educational-activities/opioid-use-disorder/ (accessed 2024 Jan 29).
 57. Nichols MA, Riley EG, Chao AS, et al. Opioid Use Disorder Curricular Content in US-Based Doctor of Pharmacy Programs. *American Journal of Pharmaceutical Education.* 2023; 87(6). doi:10.1016/j.ajpe.2023.100061.
 58. American Society of Health-System Pharmacists. ASHP policy position 2245: substance use disorder. www.ashp.org/pharmacy-practice/policy-positions-and-guidelines/browse-by-document-type/policy-positions?loginreturnUrl=SSOCheckOnly (accessed 2024 Jan 29).
 59. Suzuki J, Matthews M, Brick D, et al. Implementation of a collaborative care management program with buprenorphine in primary care: A comparison between opioid-dependent patients and chronic pain patients using opioids non-medically. *J Opioid Manag.* 2014; 10(3):159-168. doi:10.5055/jom.2014.0204.

60. DiPaula BA, Menachery E. Physician-pharmacist collaborative care model. *J Am Pharm Assoc* (2003). 2015 Mar-Apr;55(2):187-92. doi: 10.1331/JAPhA.2015.14177.
61. Smith A, Hansen J, Colvard M, et al. Impact of a pharmacist-led substance use disorder transitions of care clinic on post-discharge medication treatment retention. *J Subst Abuse Treat*. 2021; 130:108440. doi:10.1016/j.jsat.2021.108440.
62. Berenbrok LA, Tang S, Gabriel N, et al. Access to community pharmacies: A nationwide geographic information systems cross-sectional analysis. *J Am Pharm Assoc*. 2022; 62 (6): 1544-3191. doi:10.1016/j.japh.2022.07.003.
63. Pals H, Bratberg J. Improving access to care via psychiatric clinical pharmacist practitioner collaborative management of buprenorphine for opioid use disorder. *J Am Pharm Assoc*. 2022; S1544-3191(22)00078-4. doi:10.1016/j.japh.2022.03.006.
64. Nundy S, Cooper LA, Mate KS. The Quintuple Aim for Health Care Improvement. *JAMA*. 2022;327(6):521. doi:10.1001/jama.2021.25181.
65. Get the Medications Right (GTMRx Institute). The Outcomes of Implementing and Integrating Comprehensive Medication Management in Team-Based Care: A Review of the Evidence on Quality, Access and Costs, December 2023. GTMR-evidence-doc-12182023_Final.pdf (accessed 2024 Jan 29).
66. Bush K, Kivlahan DR, McDonnell MB, et al (1998). The AUDIT alcohol consumption questions (AUDIT-C): an effective brief screening test for problem drinking. Ambulatory Care Quality Improvement Project (ACQUIP). *Arch Intern Med*. 158:1789-95.
67. Meltzer EC, Rybin D, Saitz R, et al. Identifying prescription opioid use disorder in primary care: Diagnostic characteristics of the Current Opioid Misuse Measure (COMM). *PAIN*. 2011; 152:397-402. doi.org/10.1016/j.pain.2010.11.006.
68. American Society of Health-System Pharmacists. ASHP policy position 2235: Use of inclusive verbal and written language. www.ashp.org/pharmacy-practice/policy-positions-and-guidelines/browse-by-document-type/policy-positions?loginreturnUrl=SSOCheckOnly (accessed 2024 Feb 29).
69. Substance Abuse and Mental Health Services Administration. Making your workplace drug-free: a kit for employers (2007). <http://store.samhsa.gov/shin/content//SMA07-4230/SMA07-4230.pdf> (accessed 2014 Jun 24).
70. Davis NH. Dispensing and prescribing cautions for medical care during recovery from alcohol and drug addiction. *J Pharm Pract*. 1991; 6:362-8.
71. DeSimone EM, Kissack JC, Scott DM et al. Curricular guidelines for pharmacy: substance abuse and addictive disease. www.aacp.org/resources/education/Documents/CurricularGuidelinesforPharmacy-SubstanceAbuseandAddictiveDisease.pdf (accessed 2014 May 27).
72. Centers for Disease Control and Prevention. Clinical Practice Guideline for Prescribing Opioids for Pain—United States, 2022. www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm (accessed 2024 Feb 28).