AACP REPORT

Report of the 2020 Special Committee on Substance Use and Pharmacy Education

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EXECUTIVE SUMMARY. The 2020 Special Committee on Substance Use and Pharmacy Education was charged to update the work of the 2010 Special Committee on Substance Abuse and Pharmacy Education Report (SAPER) specifically with recommendations on core curricular content and delivery processes on substance misuse and substance use disorder (SUD). This report provides information on the committee's process to address the charges, background information and resources pertaining to the charges, and rationale for SUD being a critical topic for curriculum at colleges and schools of pharmacy. This committee offers several recommendations to the Association of Colleges of Pharmacy (AACP) pertaining to the committee charges.

Keywords: substance misuse, substance use disorder, addiction, pharmacy education

INTRODUCTION AND COMMITTEE CHARGES

In 2019, a group of past and current leaders from the AACP Substance Use Disorder Special Interest Group (SUD SIG) was convened to form the 2020 Special Committee on Substance Use and Pharmacy Education to provide recommendations for pharmacy colleges and schools to prepare all student pharmacists to care for those with SUD.

The 2020 Special Committee on Substance Use and Pharmacy Education was charged by AACP President Todd Sorensen to update the work of the 2010 American Association of Colleges of Pharmacy (AACP) Special Committee on Substance Abuse and Pharmacy Education Report (SAPER)¹ specifically with recommendations on core curricular content and delivery processes on substance misuse and SUD. These updates are intended to

enable colleges and schools of pharmacy to prepare new pharmacy graduates across all settings to provide clinical care for individuals with SUD, and to prevent negative outcomes associated with substance use by empowering patients and bystanders through harm reduction strategies. The report also endorses continuing professional development for currently practicing pharmacists and pharmacy technicians to manage SUD and serves the dual purpose of establishing professional models for students as part of their training during introductory and advanced pharmacy practice experiences.

The 2020 Special Committee spent considerable time discussing its charges, the process to address the charges, and the work that needs to be addressed based on the 2010 AACP Special Committee on SAPER. The 2020 Special Committee conducted its work via teleconference and other electronic means to address its charges, host monthly meetings, and conduct follow-up calls. The 2020 Special Committee formed four groups, with each group focusing on a core topic on substance use pharmacy education and the directions that academic pharmacy needs

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to move in order to address the needs of the profession, its academic institutions, and society in general. Ultimately, this report aims to provide guidance on SUD curricula and continuing education for colleges and schools of pharmacy to prepare student pharmacists and pharmacy faculty to provide evidence-based and culturally sensitive care to patients with SUD.

Background

Since the publication of the 2010 SAPER,¹ substance misuse and SUDs have achieved greater recognition federally and by the medical and scientific research community as being a significant public health issue in the United States, with consequences of worsening health disparities for individuals with SUD and deadlier outcomes. Our report aims to support faculty as they prepare new pharmacy graduates to identify and support patients with SUD as a routine part of their standard professional practice in any setting through informing the academic pharmacy community of evidence-based, contemporary issues and approaches to SUD that are important to pharmacy curricula.

Pharmacists are frequently in contact with individuals who may have SUD and are receiving medical care. Thus, pharmacists in all settings have an opportunity and a responsibility to identify and support individuals with SUD using evidence-based strategies.¹ Colleges and schools of pharmacy bear the primary responsibility to prepare pharmacists to be able to provide patient care to individuals with SUD¹ and must therefore teach evidence-based best practices focused on medical and psychosocial care of individuals with a SUD. As an association committed to advancing pharmacy education, AACP has a long history of engagement in addressing SUD, within the academy, colleges of pharmacy, and in society at large. In 1988, the AACP House of Delegates adopted a resolution that supported the use of "Guidelines for the Development of Chemical Impairment Policies for Colleges of Pharmacy" by colleges of pharmacy.² Several years later, the 1990-91 Academic Affairs Committee developed the following policy statement that was adopted by the House of Delegates: "Pharmaceutical education has the responsibility to prepare students to address the problems of substance abuse and chemical dependency in society."³

AACP's SUD SIG [2019-present], previously named the Pharmacy Student and Faculty Impairment and the Substance Abuse Education and Assistance SIG, has continued to engage in shaping academic pharmacy's approach to SUDs. In 1999, this SIG collaborated to produce AACP's "Guidelines for the Development of Psychoactive Substance Use Disorder Policies for

Colleges of Pharmacy,"⁴ which updated the aforementioned 1988 document. In 1991 the "Curricular Guidelines for Pharmacy Education: Substance Abuse and Addictive Disease" was published.⁵ During his term of office in 2009-2010, President-Elect Jeffrey N. Baldwin created the AACP Special Committee on Substance Abuse and Pharmacy Education, which was charged with reviewing and revising the 1991 publication. The Committee was specifically charged to provide recommendations for pharmacy colleges and schools as they strive to prepare all student pharmacists to appropriately assist those with a SUD. The Committee was also directed to include recommendations on core curricular content and delivery, both for student pharmacists and continuing education for pharmacists, and on prevention and assistance processes within pharmacy colleges and schools. Although the actual report was longer, only the key recommendations and guidelines, "Report of the AACP Special Committee on Substance Abuse and Pharmacy Education" was published.¹

With SUD being one of the critical health problems of our time, the medical community and some federal agencies have adopted new stances to tackle this burgeoning issue, exhibited by updates to the Diagnostic and Statistical Manual of Mental Disorders (DSM)-5,⁶ the US Surgeon General Report in 2016,⁷ the National Drug Control Policy memorandum on Changing Federal Terminology Regarding Substance Use and Substance Use Disorder in 2017⁸ and the adoption of addiction as a bona fide subspecialty by the American Board of Medical Specialties in 2015. With these major changes having all occurred within the last decade, this update to the 2010 SAPER is timely.

In the first decade of the 21st century, pharmacy education has evolved in a variety of ways, which result in new implications for pharmacy's academic enterprise and the potential impact on the delivery of SUD education. New Accreditation Council for Pharmacy Education (ACPE) standards (Standards 16) require practice experiences to be interspersed throughout all professional years of the curriculum⁹ which presents a greater opportunity for practical exposure to SUD content. Another development in pharmacy education is the continued opening of new pharmacy colleges that are often located on university campuses with few other health professions programs, underscoring the need for innovative models to incorporate interprofessional education frequently cited for successfully delivering SUD education.¹⁰

The burden of SUD and the need for pharmacist engagement in SUD prevention, treatment and recovery is reflected in the startling statistics surrounding this medical condition. In 2018, 11.7% of the population aged 12

years or older reported current illicit drug use and 6.1% met the criteria for heavy alcohol use.¹¹ Additionally, a rise in prescription opioid use, opioid use disorder, and synthetic opioids causing significant morbidity and mortality has made opioid overdoses one of the most common causes of preventable death in the United States.¹² Despite the increasing prevalence and worsening consequences of SUD in 2018, only 3.7 million people received SUD treatment out of the estimated 21.2 million people in the US who needed treatment.¹³ Furthermore, the likelihood of receiving medications for opioid use disorder among diagnosed individuals has declined.¹⁴ The devastating impact of widespread treatment gaps, partially due to highly restrictive prescribing and dispensing regulations surrounding medications for opioid use disorder, has resulted in lowered US life expectancy, increased deaths of despair, greater disparities in diagnosis and lack of access to care, geographic disparities, and barriers related to social determinants of health. As recently as 2019, AACP conducted an opioid environmental scan to inform the pharmacy profession and other stakeholders of the efforts of colleges and schools of pharmacy to address the opioid crisis as a response to making sure pharmacy education and training remains current.¹⁵ Currently, the AACP house of delegates cumulative policy report contains five policies related to impairment and SUD.¹⁶

The 2020 Special Committee responded to the charge with careful consideration for the many advances in patient care for individuals with SUD and to address current societal needs particularly as it pertains to the 2017 declaration of the opioid overdose crisis as a national public health emergency in the US.¹⁷ The charge for the 2020 Special Committee of this report was to focus only on updates to the recommendations for curricular content and delivery from the 2010 report, however, the 2020 Special Committee stresses that assistance programs (state or otherwise) for students, faculty and staff are also essential and the content pertaining to this charge in the 2010 report is still relevant for reference.¹

2020 Environmental Influences

In the midst of addressing the public health challenges of the crises stemming from the opioid epidemic and other substance use disorders (SUD), while also ensuring that pharmacy colleges and schools prepare student pharmacists and practicing pharmacists to care for individuals with SUD, the environment in which we exist was dramatically shaken by two significant and influential factors: the coronavirus (COVID-19) pandemic, and the widespread movement to fight against social injustice, racism, and the resultant health disparities. The

management of COVID-19 has changed the roles, responsibilities and actions of pharmacists on the front lines of care, including SUD, in all practice settings. The historical, cultural and social context of racism in the United States, and their effects on the diagnosis and treatment of SUD also are considered as factors that cannot be ignored.¹⁸

The Special Committee recognized the unquestionable importance of integrating these environmental influences into the SUD discussion. However, in order to adequately do so, the Special Committee strongly encourages AACP to embark on a next wave of this work in which COVID-19, social and racial injustices, and health disparities are in the forefront of the recommendations on what pharmacy colleges and schools do to address their intersectionality with SUD in the education of student and practicing pharmacists.

Curriculum Guidelines

The individuals who participated in the 2020 Special Committee on Substance Use and Pharmacy Education combined current research on evidence-based treatment for individuals with SUD with their own clinical and public health experience to create curriculum guidelines and educational goals for colleges and schools of pharmacy.

The curriculum guidelines are comprised of six educational outcomes that are mapped to four major content areas:

1. Psychosocial aspects of substance use
2. Pharmacology and toxicology of substances of misuse
3. Screening, treatment and stigma
4. Legal and ethical issues

The four major content areas contain the core curricular content and address the anticipated and unanticipated effects of nonprescription drugs, legally prescribed drugs, alcohol, and other substances of potential misuse. Identifying characteristics of SUD are also included to allow pharmacists to assist in early screening and assistance where appropriate. Methods of prevention, intervention, referral, tapering, treatment, and recovery support are also presented.

Ideally, the proposed curricular content should be incorporated into the required educational experiences of all student pharmacists. Components of the SUD curriculum should be integrated throughout existing coursework and beginning as early as possible after students enter pharmacy studies. Thus, the coursework should span didactic classes and experiential work, both Introductory Pharmacy Practice Experiences and Advanced Pharmacy Practice Experiences. As each pharmacy

curriculum is unique, information provided in classes such as anatomy, physiology, biochemistry, pharmacology, and toxicology will dictate positioning of some of the suggested didactic material and experiential components.

Additional experiences could include: 1) electives within pharmacy curriculum; 2) didactic coursework available through other local colleges providing addiction education (it is recommended that the college/school accept these as pharmacy curricular electives); 3) advanced training and research in substance use disorders (eg, addiction fellowships or residency programs); and 4) professional SUD organization programming opportunities (eg, Association for Multidisciplinary Education and Research on Substance Use and Addiction [AMERSA]; American Society of Addiction Medicine [ASAM]; College of Psychiatric and Neurological Pharmacists [CPNP]; American Academy of Addiction Psychiatry [AAAP], Rx Drug Abuse and Heroin Summit, Betty Hazeldon Ford Summer Institute for Medical Students, APhA Institute on Substance Use Disorders).

Delivery Processes

The delivery process for content should take the form of traditional teaching approaches as well as innovative educational models focused on SUD which have demonstrated success across various outcomes for pharmacy students. Improvement in knowledge, skills, and attitudes towards SUD was found in a review of 14 studies on interprofessional education among health professional students, the majority involving three or more professions.¹⁰ When interprofessional education was paired with case-based problem-solving, students demonstrated improved recognition of health professional roles and improved communication and interaction in developing a patient-care plan that addresses social determinants of health around opioid misuse.¹⁹ Students attitudes towards individuals with SUD was also changed with a half-day interprofessional education workshop involving a panel of patients having lived experience with opioid use disorder.²⁰ Furthermore, student satisfaction was also achieved following an interprofessional workshop on opioid misuse consisting of a patient panel, simulated standardized patient encounter, paper-based case session, and naloxone training.²¹ Simulated abstinence experiences where students give up a habit for 6 weeks and discuss their experiences has also been shown to be effective to teach the concepts of addiction and recovery.²²

Academic service-learning as a pedagogical model for integration of relevant, community-based placements or projects on SUD has also proven beneficial in two studies. Participation in a community outreach event following a train-the-trainer naloxone seminar demonstrated

superior knowledge retention and more positive attitudes regarding naloxone access for illicit opioid use than attending the seminar alone.²³ Student participation in community-based outreach groups using public health policies to reduce the harms associated with drug misuse resulted in improved awareness of the harm-reduction philosophy and increased their sensitivity and empathy for drug misuse as a social issue and the people affected by it, when embedded within a basic medical science pharmacology course.²⁴ Academic service learning in this study morphed SUD from an isolated theory into a social and health issue with genuine and significant complexities where students realized that continued drug use, despite negative consequences, has a physiological basis and is not necessarily the result of an individual's unwillingness to quit. The ability of students to "humanize" the issue of drug misuse and use disorder provided students with a deeper understanding and a more compassionate view of how scientific concepts integrate with social issues that surround them.

Peer support groups (eg, 12-step program, Alcoholics Anonymous, Narcotics Anonymous) have existed as a component of SUD treatment since the 1930s. Benefits have been found by requiring student attendance to a mutual support group such as exposure to the negative effects of alcohol use resulting in more self-confidence to provide care for patients with alcohol use disorder.²⁵ Participating in community-based criminal justice alternatives for drug-related offenses such as drug courts also offer students a unique opportunity to explore personal biases and self-reflection related to their understanding of SUD.²⁶ Stigma and bias as well as a baseline lack of knowledge of substance use, addiction, and harm reduction has been reported among incoming pharmacy students.²⁷ Emphasis on improving student attitudes towards SUD is important because attitudes have been shown to predict dispensing decisions in pharmacy students particularly involving medications with potential for misuse or abuse.²⁸

Lastly, attendance at the APhA Institute on SUD is strongly encouraged for both students and faculty. Geared towards the pharmacy profession, this annual event covers many of the educational content areas described in this report and offers a valuable first-hand experience to participate in peer support groups for alcohol and substance use disorder. Colleges and schools of pharmacy can grant elective credit or accept transfer credit associated with the institute and funding opportunities should be offered for students and faculty to attend.

Continuing Professional Development

Pharmacy continuing professional development in SUD is crucial to meet the needs of increasing pharmacy

education for students. Faculty with limited experience to teach the curriculum and few actively practicing clinicians to model represent missed opportunities to change the landscape of how pharmacists' practice and treat SUD. From 2015 to 2018, approximately one-fifth of ACPE-approved opioid-related continuing professional education activities were delivered by colleges and schools of pharmacy.²⁹ Nearly one-third were exclusive to opioids and pain management indicating room for more targeted content to address SUD treatment, harm reduction, and stigma.

Three key points relevant to practicing pharmacists and across all core content include standard use of the term SUD, acceptance of SUD as part of mainstream medical practice, and the significance of reducing stigma. In 2013, the DSM-5 combined substance abuse and substance dependence from the DSM-4 into SUD, a single disorder measured on a continuum of severity.⁶ This change more accurately reflects progression and recovery associated with this disorder while also minimizing ambiguity and removing "legal problems" from the list of criteria. In 2016, the US Surgeon General released its first report on alcohol, drugs, and health highlighting the need to incorporate SUD treatment as part of mainstream healthcare to address the nearly 20 million Americans with SUD.⁷ Following decades of scientific research and medical advancements, the medical community now has a better understanding of SUD as a chronic relapsing-remitting neurological disease that is effectively managed with evidence-based strategies for prevention, treatment, and recovery.⁷ In 2017, the U.S. Office of National Drug Control Policy published a memorandum targeted at changing terminology to address stigma associated with SUD.⁸ Currently, the practicing medical community still displays reluctance in acceptance and treatment of patients with SUD. Pejorative language like abuse and referring to individuals as addicts perpetuate stigma and hinder attempts to improve care.^{30,31} Research demonstrates that stigma against people who use drugs, which is prevalent in society and among health care providers and student providers, leads to discriminatory behavior and reinforces barriers to effective care.^{8,27,32-36}

Six Educational Outcomes

The public health impact of substance misuse and SUD requires pharmacists to be able to address this patient care need in the community and within the health professions. Pharmacotherapy for individuals with SUD has advanced and the pharmacists' role in caring for individuals with SUD has expanded. The health professions have seen an increased recognition of the role that bias and stigma play in perpetuating health disparities for

individuals with SUDs, and increased attention to the critical role of language in describing substance misuse, SUD and related topics.^{37,38} The pharmacist's role in community education focused on substance misuse, SUD, and harm reduction has expanded substantially in the past decade. Recognizing these advances in pharmacy and public health practice, the educational outcomes provided by this report have been updated to align with the AACP-supported Entrustable Professional Activities (EPAs) for New Pharmacy Graduates, the 2013 Center for the Advancement of Pharmacy Education (CAPE) Outcomes, and the 2014 Joint Commission of Pharmacy Practitioners Pharmacists' Patient Care Process (PPCP).³⁹⁻⁴¹

The following six educational outcomes reflect the specific tasks and responsibilities that all new pharmacy graduates should be able to perform in any practice setting without direct supervision as students transition from completion of APPE into post-graduate opportunities and practice. The outcomes are also mapped to the content areas within this report using the roman numerals below.

- I - Psychosocial aspects of substance use;
 - II - Pharmacology and toxicology of substances of misuse;
 - III - Screening, treatment and stigma;
 - IV - Legal and ethical issues
1. Collect and analyze patient information to establish and implement patient-centered goals aligned with interdisciplinary evidence-based practice and a harm reduction approach for a substance misuse or SUD care plan with follow up, monitoring, and referral to care. (Patient provider) (Content areas I, II, III)
 2. Collaborate as a member of an interprofessional team to implement the array of services for SUD recovery and provide support for ongoing recovery of individuals with SUD, family members, and other persons involved. (Interprofessional team) (Content areas I, III)
 3. Identify individuals at risk for substance misuse or SUD related to prescribed, nonprescription, and illicit drugs; minimize adverse events and errors related to medications to treat SUD; and maximize the use of medications to treat SUD (population health promoter) (Content areas I, II, III, IV)
 4. Educate patients and professional colleagues in a non-stigmatizing manner regarding the therapeutic, pharmacologic, and toxicologic properties of commonly misused substances and medications to treat SUD. Apply evidence-based information to advance care for and counsel patients with SUD using person first non-pejorative language. (Information master) (Content areas I, II, III)

5. Oversee the medication use process to maximize the use of medications for SUD and verify medication orders for SUD with knowledge of the policies and regulations surrounding treatment access and payment models. (Practice Manager) (Content areas III, IV)
6. Create a plan for continuous professional development to care for individuals with SUD, embrace involvement in SUD community education and universal prevention programs, and advocate for policy and regulatory change to enhance access and payment for SUD treatment (self-developer) (Content areas III, IV)

Four Educational Content Areas

The committee suggests SUD education should comprise four major content areas: 1. psychosocial aspects of substance use; 2. pharmacology and toxicology of substances of misuse; 3. screening, treatment and stigma; and 4. legal and ethical issues. The descriptions that follow suggest the ideal positioning of certain material, the nature of required and elective experiences, and other recommendations for implementation within the curriculum. The committee has provided recommended learning objectives for each of these four content areas (Appendix 1) that can be used to guide lecturers in developing content.

1. Psychosocial Aspects of Substance Use

It is recommended that pedagogical material focused on psychosocial aspects of substance use be initiated within the first year of the pharmacy curriculum within required courses. Instructors should preferably have direct clinical experience providing care for patients with SUD or should at least have relevant expertise in social-behavioral science. Essential course topics should include a basic introduction to substance use patterns, pathophysiology of SUD, the impact of substance use and SUD on public health, misuse prevention strategies, behavioral and pharmacological treatment, harm reduction, clinical interventions, and supportive language.^{1,27} Recognizing the critical role that pharmacists play in community education, social and medical assistance resources and best practices in providing community education programs and clinical communication in a trauma-informed and culturally sensitive manner, and at an appropriate literacy level, should be included.^{42,43} Recognizing that bias and misinformation contributes to the stigma that serves as a major barrier in treating SUD,^{37,44} student pharmacists should be prepared to articulate why SUD is a medical condition rather than a moral failing while also supporting person-

first language that de-stigmatizes addiction. Students should be able to articulate an awareness of the role of social determinants of health in substance use initiation, adverse childhood experiences, trauma-informed care, SUD prevalence, treatment, and clinical outcomes, as well as the need for interprofessional collaboration which addresses social barriers to care.¹⁹

Experiential opportunities to apply foundational SUD knowledge in clinical environments must be developed and supported.^{42,43} Advanced pharmacy practice experiences (APPEs) are of particular value,^{26,28,42} however the 2019 AACP opioid environmental scan identified a severe shortage of APPEs that focus on SUD.¹⁵ Elective courses and co-curricular activities designed to prepare student pharmacists to provide community education may also be placed early in the curriculum. Engaging student pharmacists in community education programs early in their professional training is known to be an effective mechanism for conveying and reinforcing foundational knowledge in this domain.^{23,45-47} Kindergarten through 12th (K-12) grade curriculum guides concerning substance misuse prevention are often available from schools, as well as governmental (eg, NIDA.gov) or community organizations dedicated to substance use education. It is desirable to have the student pharmacists participate in the presentation of a program suitable for community drug education, with supervision by an individual experienced in such education, and to encourage participation by individuals in recovery and/or who have lived experience.

2. Pharmacology and Toxicology of Substances of Misuse

Substance misuse can occur with opioids, anxiolytics, sedatives, stimulants, and nitrous oxide which are among the classes of medication with FDA approved therapeutic indications. Pharmacology, toxicology, and therapeutic aspects of these medications as they are used in clinical practice should reside within the corresponding courses by indication or practice setting (eg, critical care, pain and palliative care, anesthesia, psychiatry). Sufficient emphasis on risk of misuse, dependence and development of SUD should be addressed for common substances of potential misuse to help inform appropriate treatment. Other substances such as cannabis and psychedelics are entering the field of therapeutic options even if deemed to have no currently accepted medical use in the United States as defined by the Controlled Substances Act. Curriculum should include coverage for substances of potential misuse, including but not limited to alcohol, tobacco, opioids, stimulants, cannabis, phenylcyclidine, psilocybin, and kratom. Consideration for

which substances are commonly misused within a geographical context can help prioritize which drugs/substances are covered.

Lectures should be given by pharmacology or clinical practice faculty or, when appropriate, presented by invited subject matter experts from local pharmacies, poison control centers, toxicology/forensic laboratories, other campus health professions disciplines, campus, community, or governmental SUD resources or treatment facilities.

3. Screening, Treatment and Stigma

Didactic education devoted to the identification, intervention, and treatment of SUD is important to teach the skills, attitudes, and knowledge to provide effective care for patients with SUD. Previously, the AACP taskforce had recommended devoting a minimum of 4 hours to this topic area as part of their extended report. With greater research to support screening, intervention, and treatment now available, more time is likely necessary to introduce and reinforce this content area. Students and faculty have also expressed a high interest in topics such as withdrawal, pain management, and recognition of signs and symptoms of addiction in patients.⁴⁸ Given the positive outcomes associated with medications to treat SUD, pharmacists play a significant role in promoting their safe and appropriate use as well as identifying those who will benefit from their initiation. Topics pertaining to screening, motivational interviewing, and treatment not covered in a pharmacotherapeutics course sequence can be housed under other required courses such as those for public health, healthcare communications, interprofessional education, or pharmacy practice fundamentals or introductory courses.

Screening and treatment topics include but are not limited to: evidence-based practices such as universal screening, motivational interviewing; DSM-5 criteria for SUD diagnosis, SUD etiology (eg, genetics, stress, neurotransmitters, neurobiology of addiction, adverse childhood experiences, co-occurring psychiatric disorders), treatment for intoxication, overdose and withdrawal of common substance use; evidence-based medications for treatment of SUD as a chronic recurring disease, patient monitoring and urine drug screens; motivational interviewing, counseling and handling difficult patient interactions, and prevention and harm reduction principles. Referral to treatment should include pharmacotherapy as a first-line treatment option but should also include non-pharmacologic treatment options including counseling, behavioral therapy, peer support groups, and contingency management. Pharmacists should be aware that treatment should be individualized and that meeting patients where

they are in their recovery is more effective than coercive treatment.

All 50 states and the District of Columbia have expanded naloxone access laws, many of which give pharmacists more authority to dispense naloxone.⁴⁹ In fact, a significant decrease in fatal opioid overdoses was linked to states allowing pharmacists the direct authority to dispense naloxone without a conventional prescription which makes it incumbent for pharmacists to be able to identify those individuals as part of their training. Naloxone counseling and opioid overdose management training delivered in the pharmacy curriculum will help pharmacists meet this need.

The stigma or negative attitudes and behaviors experienced by individuals with SUD is distinct from other chronic diseases because they are perceived as having personal control over relapse and recurrent use and are therefore responsible and oftentimes blamed for their disease. A handful of studies and systematic reviews report health professionals commonly held adverse attitudes regarding patients with SUD³²⁻³⁴ which have been linked to a variety of barriers to healthcare access and poor clinical outcomes for people who use drugs.^{32,35,36} Language plays a significant role in perpetuating stigma, thus training should encourage students to use person-first and stigma-reducing language and avoid non-inclusive terminology.

Studies have found that people or health professionals with lived SUD experience, returning to "tell their stories" can have a strong impact on student perception of SUD and improve their attitudes towards treating people with SUD.⁵⁰ Student attendance at an "open" 12-step meeting helps to break through the social "stigma" associated with these diseases.²⁵ Faculty who have utilized 12-step meeting attendance as part of the learning process have found this to be a valuable and highly educational experience. Student reflection papers written about the 12-step experience help students to evaluate their feelings or biases about individuals with SUD.

Local 12-step programs, alcohol and drug information services, community education programs, and state and federal resources can provide highly educational information. A directory of area treatment programs, DATA-2000 waived prescribers (Drug Addiction Treatment Act of 2000), and state impaired pharmacist and health professional programs is suggested handout material. The www.usaprn.org website lists pharmacist recovery assistance programs by state and the SAMHSA treatment locator is available to search for waived prescribers able to prescribe buprenorphine for the treatment of opioid use disorder from an office-based setting. (<https://www.samhsa.gov/>

medication-assisted-treatment/practitioner-program-data/treatment-practitioner-locator).

Introductory pharmacy practice experiences (IPPE) and advanced pharmacy practice experiences (APPE) should be considered in SUD treatment centers, office-based opioid treatment, inpatient addiction consult services, harm reduction programs, emergency departments, addiction medicine inpatient consultation services, drug courts, prisons, and addiction research centers such as the National Institute on Drug Abuse (NIDA) and National Institute on Alcohol Abuse and Alcoholism (NIAAA). Inclusion of SUD topics in student organization programming and in college/school seminar programs should be encouraged as student-led efforts to raise awareness.

4. Legal and Ethical Issues

A significant expansion of laws and regulations have been enacted since 2010 that increase the ability of pharmacists to provide patient-centered care to people who use and misuse controlled and illegal substances, as well as those with SUD who are in and out of recovery. Updated legal and ethical issues surrounding SUD that are important for inclusion in the current pharmacy curricula will be discussed in this section.

Ethical and legal content exploring access to and use of alcohol and nicotine containing products, as well as treatment of their misuse and related disorders is essential given the extent of damage they cause in terms of rates of preventable deaths.⁵¹ Significant changes have occurred nationwide regarding medical and recreational access to cannabis products. Students should be cognizant of the changing national and state roles of the pharmacist in laws governing cannabis cultivation, sales, and employment.^{52,53} Curricula should also include time to discuss the legal challenges around access to and use of novel, emerging, and/or synthetic psychoactive substances and “designer drugs” (eg, psychedelics, cathinones, synthetic cannabinoids (ie, K2), kratom, illicitly manufactured fentanyl).⁵⁴⁻⁵⁸

Content related to contemporary statutes and regulations regarding access to, control, and administration of controlled substances, harm reduction equipment, drug paraphernalia, medications for opioid use disorder (ie, buprenorphine, methadone, naltrexone), and opioid antagonists (eg, naloxone access laws) should be included as part of law course curricula.⁵⁹⁻⁶² Students should also be taught relevant national and state pharmacy association policies related to SUD. For example, the American Pharmacists Association (APhA) House of Delegates has passed and reaffirmed policies banning sales of alcohol, cigarettes, and e-cigarettes (ENDS) in all pharmacies, and has recently addressed cannabis, opioid antagonists, harm

reduction, and medications for opioid use disorder.⁶³ The American Society of Health-System Pharmacy (ASHP) has policies related to controlled substance diversion and the pharmacist’s role in substance use disorder prevention and education.^{43,64} The AACP House of Delegates has passed several policies on pharmacist impairment and teaching solutions for the overall public health threat of the opioid overdose crisis, from naloxone to pain management.^{15,16} Legal issues related to identification, intervention, referral, treatment, and recovery of students and pharmacists, as well as issues relating to confidentiality, liability, and licensure are important to be introduced in the didactic curriculum. To promote content reinforcement, retention and updates, and to provide opportunities for students to apply policy knowledge to clinical information and patient management, this content should be placed at several points in the curriculum prior to and within experiential practice experiences.

Legal and ethical issues are an integral part of pharmacotherapy classes and practice laboratories. Assessment methods such as case studies, OSCE, role-playing, and more, can be used to help students explore the legal and ethical issues commonly associated with SUD and its treatment. Students should also be provided learning opportunities exposing them to ethical and moral issues commonly encountered or held by others in the context of addiction and SUD treatment.⁶⁵⁻⁷² Through these learning experiences students should be given the opportunity to reflect on their perceptions of people who use drugs and people diagnosed with SUD. Furthermore, people with lived experience should be invited to discuss their variable and often negative interactions within the healthcare, justice, and correctional systems throughout didactic, experiential, and co-curricular courses.

Service learning and experiential courses that include ethics components offer opportunities for increased student understanding of the complex interrelationships between drugs, social and structural determinants of health, and the justice and legal systems. These components should include discussions of legal and regulatory policies, the roles and authority of government agencies, patient confidentiality, professional liability, and public and private third-party reimbursement.^{73,74} Instructors should have a contemporary knowledge of federal, state, and local professional, law enforcement, and regulatory aspects of controlled substances and substance use disorder management. To add context, campus, community, or governmental resources such as substance use disorder counselors or educators, members of the Board of Pharmacy, representatives of enforcement agencies, corrections officials, and community prevention and treatment organizations should be involved in the curriculum. Most

importantly, people with lived experience (people who have been diagnosed with substance use disorders and/or justice-involved individuals) should not only be recruited to describe their experiences, but also to inform curricular content and delivery. When feasible, these individuals should be equitably and appropriately compensated for their contributions to the curriculum, as well as assuring anonymity and confidentiality, if so desired.

To optimize, sustain, and expand both the independent and collaborative roles of pharmacists in the care of patients with SUDs, AMERSA has developed core competencies for pharmacists to address substance use in the 21st century.⁷⁵ Key concepts, skills, and attitudes are outlined, with links to entrustable professional activities to assist with integration into a variety of ideally interdisciplinary curricular activities.

RECOMMENDATIONS

Primary Recommendations

1. The Committee recommends that all AACP member colleges and schools of pharmacy address substance use disorders as a serious public health issue by updating their curriculum to reflect the recommendations of this report with SUD content integration in their didactic curriculum, experiential education, co-curriculum, and research programs.
2. The Committee recommends that AACP communicate these needs and collaborate with the leadership of professional bodies (eg, JCPP, IPEC, FASHP) as well as to other professional healthcare organizations (eg, NAM Opioid Collaborative, APhA) in recognizing SUD as a shared priority of interest in protecting our nation's public health. The Committee recommends that SUD is a required topic covered in the ACPE Accreditation Standards, the NAPLEX competencies and examination, and the practice standards of all professional pharmacy organizations in order to incentivize AACP member colleges and schools of pharmacy to adopt SUD curriculum to prepare student pharmacists.

Secondary Recommendations

These recommendations are essential and important pillars to support and achieve the primary recommendation although they were not extensively covered in this report.

1. The Committee recommends that AACP member colleges and schools of pharmacy and other accredited continuing education providers ensure that the proportion of continuing education programs addressing SUD with an emphasis on causality, prevention,

treatment, and harm reduction is comparable to the proportion of programming on other chronic disease states, to ensure practitioners across all settings have the necessary baseline knowledge and experience to be able to serve patients with SUD and model student learning opportunities.

2. The Committee recommends that AACP member institutions promote and offer programs (eg, conference programming sessions, webinars, grand rounds, and podcasts, etc.) on SUD for faculty and staff development to embrace SUD treatment as a standard part of medical care and to reduce stigma associated with SUD that interferes with the ability to achieve widespread access to treatment and stymies progress in policy and advocacy for SUD treatment.
3. The Committee recommends that future work be done to map the EPA Core Statements, the PPCP Process statements, and the CAPE Domains to the 2020 Report's educational outcomes.
4. The Committee recommends that future work be done to address SUD in the context of the COVID-19 pandemic, and social justice and health disparity issues.

CONCLUSION

AACP has recognized the importance of pharmacists addressing SUD as far back as 1991. Until now, the most recent guidance for SUD within the pharmacy curricula was published in 2010. Over the past 10 years, many important changes now improve how SUD is treated, managed, and discussed. Among them is the recognition that health providers, including pharmacists, across all settings will likely care for individuals with SUD given the prevalence of Americans with SUD. This 2020 Special Committee report aims to provide guidance on SUD curricula and continuing education for colleges and schools of pharmacy to prepare student pharmacists and pharmacy faculty to provide evidence-based and culturally sensitive care to patients with SUD. The report highlights six educational outcomes and four educational content areas that should be implemented and delivered throughout the pharmacy curricula.

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Appendix 1. Suggested Learning Objectives for Each of the Four Educational Content Areas

I. Psychosocial aspects of substance use

1. Define the following terms: substance use disorder, physical dependence, psychological dependence, addiction, tolerance, abstinence, withdrawal, treatment, recovery, incentive salience, relapse, stigma, trauma, harm reduction, and adverse childhood experiences.
2. Discuss key historical events and shifts relevant to substance use, such as changes in societal norms or common prescribing practices, and how this history provides a perspective for contemporary drug issues.
3. Describe the role of generally accepted psychoactive drug use, such as caffeine, alcohol, nicotine, and cannabis in the contemporary U.S. in shaping and meeting the needs of a society.
4. Summarize current data regarding the epidemiology of substance use, substance use disorders, and substance-related harm, including a consideration of demographic and socioeconomic correlations (eg, social determinants of health).
5. Identify risk factors for the development of substance use disorders.
6. Discuss the relationship between substance use and personal harms such as physical diseases, mental illness, incarceration, homelessness, unemployment, and suicide.
7. Discuss the relationship between substance use and racial injustice, crime, violence, displaced children, and economic costs.
8. Describe the impact of discriminatory views held by pharmacists and other healthcare providers, as well as their use of stigmatizing terminology (eg, drug abuser, addict, junkie, and clean vs dirty), on key health outcomes for people who use drugs.
9. Recognize the public health role of pharmacists and student pharmacists in community substance use education, prevention, harm reduction, treatment, and recovery.

II. Pharmacology and toxicology of substances of misuse

1. Explain the major pharmacological effects, therapeutic uses, adverse effects, overdose effects, misuse potential, and withdrawal symptoms associated with substances of misuse including but not limited to those that are FDA-approved (prescription and nonprescription) and those classified as controlled substances or illicit/street/designer drugs.
2. Discuss the use of these substances by various populations (eg, pediatrics, elderly, during pregnancy and breastfeeding).
3. Discuss applicable patient monitoring parameters of substance use (intensity of use (lifetime, past year, past 30 days - current use); types/classes of substances used; frequency and severity of medical and social problems with use (overdose, hospitalization, ED visits; intimate partner violence, incarceration, job loss); types and frequency of treatments used and their outcomes).
4. Identify the potential to reduce the overuse of high-risk medications in order to prevent substance use disorder and suggest alternative treatment options.
5. Describe the medications used to treat intoxication, withdrawal, overdose, and maintenance treatment of SUD, including mechanism of action, appropriate use, dosage forms, dosing and administration timing, adverse effects, drug interactions, storage, and handling of missed doses.
6. Perform counseling for patients and caregivers about the appropriate use, storage, handling, and disposal of herbal/supplement, nonprescription and prescription drugs.

III. Screening, treatment and stigma

1. Identify and apply the major diagnostic criteria for SUD according to DSM-5.
2. Identify common screening tools for substance misuse and SUD.
3. Describe the process and evidence for Screening, Brief Intervention, and Referral to Treatment (SBIRT).
4. Explain how SUD is a chronic, reoccurring, lifelong disease with evidenced based treatment options that should be individualized according to the patient's level of acceptance.
5. Describe the ASAM levels of care.
6. Explain the modalities of treatment for SUD and related disorders (behavioral health, detoxification, residential services, pharmacotherapy) and their comparative impact on morbidity and mortality.
7. Assess the severity of intoxication, withdrawal, and substance use disorder using validated clinical tools.
8. Explain the basic principles of cognitive behavioral therapy, dialectical behavior therapy, moral recognition therapy, contingency management, trauma-informed care, and peer support services (eg, 12 step programs, support groups), and medications for addiction treatment (MAT).
9. Describe the role and impact of adjunctive measures in treatment and recovery such as stress management, trigger management, and wellness.
10. Discuss patient-specific therapeutic goals of SUD treatment, monitoring and expected outcomes.
11. Practice educating patients, caregivers, family members and friends on use of naloxone to respond to an opioid overdose.

12. Discuss the role of urine, hair, saliva, and other types of drug and alcohol testing in recovery. Identify common medications that increase the likelihood of false positives or false negatives. Define procedures to reduce the likelihood of false positives, false negatives, and sample tampering.
13. List harm reduction principles.
14. Identify indicators, proven prevention and harm reduction strategies, and contingency plans in the event of a patient's return to use.
15. Optimize substance misuse educational content for patients, caregivers, prescribers, law enforcement, healthcare workers, employers, and policymakers.
16. Perform motivational interviewing to assist the patient's pursuit of healthier and less harmful choices.
17. Give examples of referrals for further evaluation, treatment, peer support, and community resources (eg, housing, employment, childcare, education).
18. Treat encounters with patients living with SUDs as with any other patient with a chronic, re-occurring, lifelong disease without personal bias, stigma, discrimination, and/or judgment of the patient
19. Demonstrate empathy and compassion to those with SUD and their family, friends, and caregivers affected.
20. In all settings, role model use of non-stigmatizing language.

IV. Legal and ethical issues

1. Discuss existing laws and penalties pertaining to alcohol, nicotine, cannabis, opioids, and novel psychoactive substances and the control, distribution, and misuse of prescription drugs and other substances.
2. Define impairment in the context of labor law, employee assistance/recovery programs, considering different cultural, environmental, community and societal norms and laws.
3. Discuss appropriate pharmacy security considerations to deter theft of controlled substances.
4. Discuss the legal implications of dispensing prescriptions when there is clear evidence that the patient is seeking controlled substances in the absence of a legitimate medical need.
5. Describe appropriate action to take when a pharmacist is presented with a forged or altered prescription.
6. Compare and contrast the different roles and regulations of state and federal agencies, including but not limited to: DEA, FDA, SAMHSA, CDC, and DHHS.
7. Explain legal and ethical issues relating to medications for addiction and naloxone access, collaborative practice agreements (CPA), standing orders, protocols, Good Samaritan laws, drug testing, drug checking, sterile nonprescription syringe access, PDMP use, and DEA drug classification.
8. Explain the nature and intent of federal laws governing patient confidentiality, especially regarding treatment records (eg, 42 CFR part 2, HIPAA), and compare and contrast the balance of confidentiality with the benefits of integrated primary care management of substance use disorders.
9. Discuss the benefits, limitations, and disproportionate enforcement of existing state and federal laws and penalties as they pertain to control, distribution, and misuse of drugs and other substances.
10. Advocate for pharmacist and student pharmacist involvement in substance misuse legal and regulatory reform movements.
11. Teach students to lead public discourse on the development, implementation, and expansion of policies related to prescription medication misuse and illegal substance use, harm reduction, expansion of access to therapies for opioid-related overdose, pharmacotherapy of SUD's, and social justice.
12. Sustain professional competence in substance misuse and SUD legal and regulatory issues through formal and informal continuing professional development.

Appendix 2. The Six Educational Outcomes in the 2020 Special Report Mapped to the *Educational Goals* from the 2010 SAPER and *Pharmacy Core Competencies* from the Specific Disciplines Addressing Substance Use: AMERSA in the 21st Century

The following six educational outcomes reflect the specific tasks and responsibilities that all new pharmacy graduates should be able to perform in any practice setting without direct supervision as students transition from completion of APPE into post-graduate opportunities and practice. As part of the committee process, the outcomes (and educational goals) were also mapped to the four content areas within this report using the roman numerals designated below.

- I - Psychosocial aspects of substance use
- II - Pharmacology and toxicology of substances of misuse
- III - Screening, treatment and stigma
- IV - Legal and ethical issues

1. Collect and analyze patient information to establish and implement patient-centered goals aligned with interdisciplinary evidence-based practice and a harm reduction approach for a substance misuse or SUD care plan with follow up, monitoring, and referral to care. (Patient provider) (Content areas I, II, III)

- 2010 SAPER Describe the etiology, neurobiology, personal effects, and societal effects of substance use and addiction (I, II, III)
- 2010 SAPER Recognize impairment, describe early intervention and medications for SUD treatment and management. (I, II, III)
 - a. AMERSA: Engage patients suspected to be affected by substance use disorders to accurately use information collection tools (CIWA, COWA, WAS, ASI, OTI, etc.), assess patient info, offer brief intervention and referral to care (SBIRT), as well as involvement in continued care, including administration and management of SUD therapies.

2. Collaborate as a member of an interprofessional team to implement the array of services for SUD recovery and provide support for ongoing recovery of individuals with SUD, family members, and other persons involved. (Interprofessional team) (Content areas I, III)

- 2010 SAPER Describe the array of services for SUD recovery and discuss and utilize methods of providing support for the ongoing recovery of individuals with SUD, family members, and other persons involved. (I, III)
 - a. AMERSA: Display professionalism and role model compassionate, harm reduction influenced behaviors through interdisciplinary work and advocacy for pharmacist current and expanded roles in the treatment of patients with SUD, as well as provide and complete continuing education programs for the greater good of the profession and public health.

3. Identify individuals at risk for substance misuse or SUD related to prescribed, nonprescription, and illicit drugs; minimize adverse events and errors related to medications to treat SUD; and maximize the use of medications to treat SUD (population health promoter) (Content areas I, II, III, IV)

- 2010 SAPER Recognize the prevalence and consequences of substance use and addiction in the U.S. as well as trends specific to their practice region. (I, II, III, IV)
- 2010 SAPER Recognize the importance of population level prevention by being able to identify risk factors, misuse potential, and universal SUD screening for common drugs of misuse (prescribed, nonprescription, and illegal drugs) and the laws which regulate their use. (III)
 - a. AMERSA: Understand and utilize all available medication-related information as pertains to substance use disorder including but not limited to pharmacology, pharmacokinetics, and toxicology of medications and drugs that are misused, indications and uses SUD therapies, well as a comprehensive review of non-SUD related medications.

4. Educate patients and professional colleagues in a non-stigmatizing manner regarding the therapeutic, pharmacologic, and toxicologic properties of commonly misused substances and medications to treat SUD. Apply evidence-based information to advance care for and counsel patients with SUD using person first non-pejorative language. (Information master) (Content areas I, II, III)

- 2010 SAPER Describe the therapeutic, pharmacological, and toxicological properties of alcohol and other commonly misused drugs. (II)
- 2010 SAPER Counsel individuals who are recovering from SUD concerning appropriate use of herbals/supplements, non-prescription and prescription drugs. (III)
- 2010 SAPER Recognize the role of stigma in perpetuating barriers for individuals with SUD and embrace activities and communication shown to reduce stigma related to SUD. (I, III)
 - a. AMERSA: Educate patients and other healthcare workers about benefits, risks, and adverse effects associated with substance use disorder and its treatments, safe storage and disposal of medications, as well as evidence-based resources and tools available for SUD treatment.

5. Oversee the medication use process to maximize the use of medications for SUD and verify medication orders for SUD with knowledge of the policies and regulations surrounding treatment access and payment models. (Practice Manager) (Content areas III, IV)

- 2010 SAPER Advocate for pharmacist involvement in SUD community education, universal prevention, and harm reduction programs, and policy and regulation surrounding treatment access and equitable payment models. (III, IV)

6. Create a plan for continuous professional development to care for individuals with SUD, embrace involvement in SUD community education and universal prevention programs, and advocate for policy and regulatory change to enhance access and payment for SUD treatment (self-developer) (Content areas III, IV)

- 2010 SAPER Explain how SUD impacts the professional role(s) of a pharmacist across all settings in order to align SUD treatment with mainstream medical care. (III, IV)
- 2010 SAPER Advocate for pharmacist involvement in SUD community education, universal prevention programs, and policy and regulation surround treatment access and payment models. (repeat from 5) (III, IV)