



SCREENING, INTERVENTION AND REFERRAL PRACTICES AMONG PRESCRIBERS AND PHARMACISTS TREATING PATIENTS WITH SUBSTANCE ABUSE DISORDER IN OHIO

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BACKGROUND

In 2012, the Ohio State Board of Pharmacy (OSBP) was awarded a Substance Abuse and Mental Health Services Administration (SAMHSA) Prescription Drug Monitoring Program (PDMP) Electronic Health Records (EHR) Integration and Interoperability Grant. The goals of the grant were to: (1) improve access to PDMP data for health care providers by embedding access to the Ohio Automated Rx Reporting System (OARRS, Ohio's PDMP) into the electronic health record software used by hospitals and physicians' offices, (2) embed access to OARRS into the pharmacy dispensing software of a pharmacy chain, and (3) increase access to prescription data from other states' PDMPs. OSBP is the single state agency in Ohio responsible for administering OARRS, which collects information regarding dispensed outpatient prescriptions for controlled substances from all Ohio-licensed pharmacies. OSBP is also responsible for enforcing laws governing the legal distribution of dangerous drugs.

In a technical assistance role, the Ohio Department of Mental Health and Addiction Service (OhioMHAS) conducted two surveys for the SAMHSA grant on behalf of OSBP and evaluated the results. The first evaluation explored factors influencing the enrollment of prescribers and pharmacists in OARRS and attempted to identify factors influencing pharmacists' and prescribers' access to OARRS information. This second and final evaluation, of how prescribers and pharmacists with access to OARRS provide intervention or referral to treatment for patients who may have a substance abuse disorder (SUD), would help to: (a) better understand the level of confidence of prescribers and pharmacists in using OARRS and other tools in the practice of intervention and referral to treatment for SUD patients; and (b) assist with crafting appropriate policies and guidelines to enhance intervention and referral practices.

METHODS

Instrument

OhioMHAS surveyed pharmacists and prescribers in June and July, 2014 using Survey Monkey®. Prescribers include physicians (both MDs and DOs), dentists, physician assistants, and nurse practitioners with prescriptive authority. The survey protocol was approved by the OhioMHAS Human Subjects Institutional Review Board. The survey instrument solicited responses to 35 questions from both prescribers and pharmacists in three areas: demographics (age, gender, and education), practice (primary practice setting, specialty, and primary position), and confidence in identifying drug diversion and the need for intervention or referral to treatment

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(see Appendix B for the survey instrument). Prescribers were also surveyed in: intervention practice with patients with substance use disorders (SUD), familiarity with SBIRT (Screening, Brief Intervention, and Referral to Treatment),¹ screening instruments used to assess risk, patient referral frequency, types of patient referrals, specialty education and/or training in pain management of SUD patients, concerns with referring patients for addiction treatment, and medication choices. Lastly, pharmacists were asked about times they declined to fill a prescription, types of patient referrals in the past 12 months, and screening instruments used for referrals.

The survey used a skip-logic design whereby pharmacists would answer the first seven general questions and then skip to the last three questions which were specifically designed for pharmacists. Likewise, prescribers were asked to answer the same general questions followed by the prescriber-specific questions and skipped the pharmacist-specific questions. The survey contained one Likert-type 7 points scale question allowing responses of strongly disagree, moderately disagree, slightly disagree, neither agree or disagree, slightly agree, moderately agree, and strongly agree to 12 statements. Respondents were allowed to indicate if any of the statements were not applicable to their field of practice.

Sample

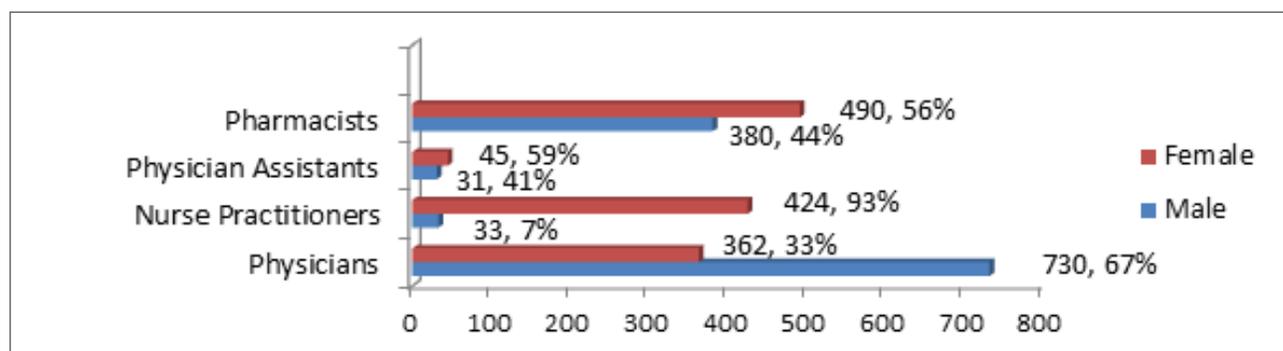
The link to the web-based survey was successfully emailed to 26,881 prescribers and pharmacists. A total of 2,553 complete, web-based responses were recorded, yielding a 9.5% response rate. Respondents were diverse in terms of age, gender, education, training, primary position, practice setting, prescribing experience, and training in pain management.

FINDINGS: PRESCRIBERS AND PHARMACISTS

Demographic Background

Of the 2,538 respondents comprising of prescribers and pharmacists, 28% reported their age as between 50 and 59 years old. This was followed by 30 to 39 years (22%), 40 to 49 years (22%), and 60 years and older (20%). Only 8% of the respondents were 30 years old or younger. In terms of gender composition, 53% of respondents were female versus 47% who were male. The gender breakdown varied between types of respondents (Figure 1).

Figure 1
Gender Disparities and Primary Position of Respondents



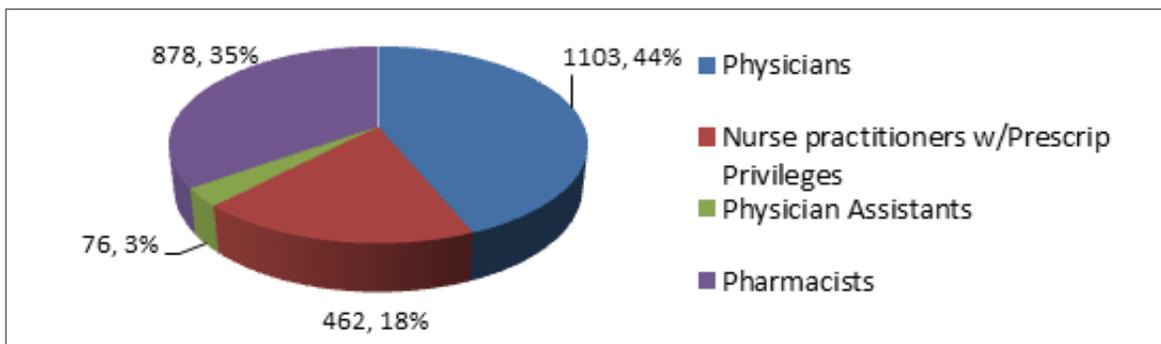
Educationally, 67.5% of the 2,512 respondents graduated from a medical, nursing or pharmacy school in the state of Ohio. Among 1,392 respondents, more than four-fifths (84%) had postgraduate training, such as residency, fellowship, and/or a certification program. Nearly 46% of 1,333 respondents reported having training in substance use disorders in the medical school.

¹SBIRT is a model of care designed to identify and address unhealthy substance use, including alcohol, tobacco, and medication misuse or abuse. Patients receive brief screening to identify unhealthy substance use or misuse. Those with a positive screen receive a brief motivational intervention focused on changing unhealthy behaviors, or referral for additional treatment if needed. SBIRT can be delivered by a range of providers, including physicians, nurses, psychologists, social workers and pharmacists. Visit: http://www.aoa.gov/AoARoot/AoA_Programs/HPW/Behavioral/docs2/Issue%20Brief%208%20Integration.pdf

Primary Position, Setting, and Specialty

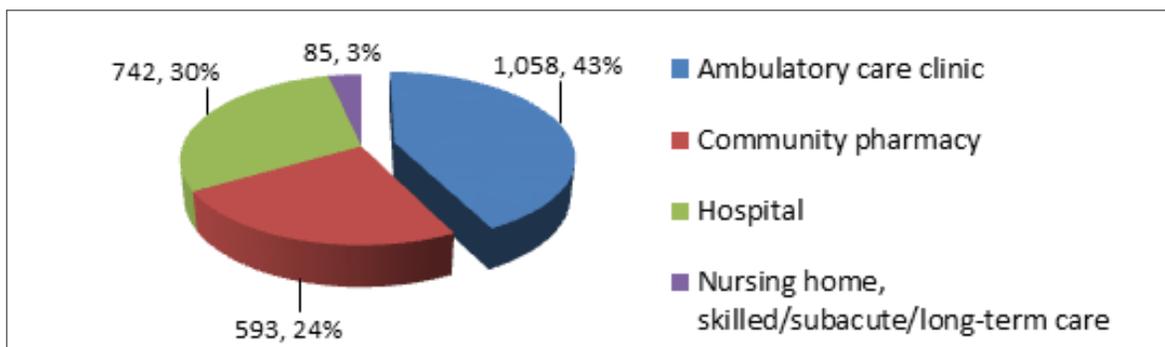
The majority of respondents (n=2,519) were physicians (43.8%), pharmacists (34.9%), and nurse practitioners (18.1%) (Figure 2).

Figure 2
Primary Position of Respondents



The distribution of current primary practice settings for pharmacists and prescribers (n=2,478) was: ambulatory care clinic (43%), hospital (30%), community pharmacy (24%), and nursing homes/other care (3%) (Figure 3).

Figure 3
Current Primary Practice Setting



When asked about practice specialty ($n = 1,742$), the top ten responses were: primary care/family practice (30%), internal medicine (12%), pediatrics (10%), emergency medicine (9%), psychiatry (6%), oncology and hematology (4%), obstetrics & gynecology (4%), surgery (3%), orthopedic surgery (4%), and geriatric medicine (2.5%). In addition to these responses, there were 569 open ended comments. A text analysis in Survey Monkey® revealed the top four responses: pharmacy (27%), various medicine specialties (e.g., hospital medicine, physical medicine, and occupational medicine) (25%), dentistry (10%), and various care (e.g., urgent, critical, palliative, ambulatory) (9%).

Screening, Intervention, and Referral

About 25% of 1,405 prescribers reported being familiar with Screening, Brief Intervention and Referral to Treatment (SBIRT).

Identifying Drug Diversion and Providing Intervention or Referral

The survey solicited responses on the confidence level of prescribers and pharmacists in their ability to identify, screen, and provide brief intervention and referrals to treatment. The table (see Appendix A) captures detailed responses of prescribers and pharmacists on 12 different confidence level statements based on a 7-point Likert scale, from “strongly disagree” to “strongly agree.” The respondents also were allowed to check if the specific statement was not applicable to their practice. The study findings speak to the general prescribing and filling practice and behavior of prescribers and pharmacists. Some of the OARRS related responses on how prescribers and pharmacists identify drug diversion and provide intervention and referral may have important insights for the prescription drug monitoring program in Ohio. Some are discussed in thematic groupings below.

OARRS Usage Confidence and Pharmacy Practice

The Board seeks to build and produce the best tool to provide optimum patient care in the state. It is hence insightful to know more about pharmacy practice and the pharmacists’ individual comfort level in discussing a sensitive and potentially difficult subject matter. Among others, of specific interest are at least four types of practice behaviors as reflected by confidence in: (a) usage of online drug diversion tools; (b) accurate identification of drug diversion based on an OARRS patient profile; and (c) accurate identification of SUD patients from an OARRS patient profile (Screening).

When asked if they feel confident in effectively using online drug diversion tools, 73.2% of pharmacists (n=868) were strongly confident compared to 57% prescribers (n=1,627). Hence pharmacists are found to be more confident than prescribers in the actual mechanics of using the tool even when fewer pharmacists may be aware of drug addiction programs because they do not work in mental health/drug addiction field like clinicians.

OARRS shows what was dispensed and what drugs are now in the supply chain. It is however difficult to show if drugs are diverted after dispensing. When asked if they feel confident in accurately identifying drug diversion from an OARRS patient profile, close to 50% of 868 pharmacists strongly agreed compared to 39.2% of 1,622 prescribers. About 57% of 1,399 prescribers did report screening patients for drug use/misuse/abuse.

Close to 70% (69.5%) of 2,499 prescribers and pharmacists moderately and strongly felt confident in accurately identifying patients with SUDs based on information from an OARRS patient profile. What is also encouraging is that more than half (57%) of 1,399 respondents reporting screening patients for drug use/misuse/abuse. A separate bivariate analysis of prescribers (n=1,626) and pharmacists (n=873) with identification of SUD patients found that a slightly more pharmacists were moderately (36%) as well as strongly (38%) confident compared to prescribers (34%, moderately; and 33%, strongly).

Intervention: Counseling

Respondents were asked if they feel comfortable in counseling patients to seek help with their potential SUDs. Among 1,622 prescribers, close to 29% moderately and 35% strongly agreed. In contrast, among 862 pharmacists only 20% moderately and 14% strongly agreed. This may be explained by the role of the pharmacists in patient care. Pharmacists rarely get the opportunity to get to know their patients in contrast to physicians who have at a minimum about 15 minutes with each patient.

Referral

When asked if they have the knowledge needed to refer patients who might have a substance abuse disorder to appropriate treatment, more (29%, moderately; and 30%, strongly) prescribers (n=1,625) agreed compared to pharmacists (18%, moderately; and 10% strongly). This is important from a training standpoint as well since we would like to see a higher percentage of especially pharmacists become confident in such referrals.

When asked if they felt comfortable in identifying potential “red flags” on an OARRS report which may help identify patients in need of referral to treatment for their SUDs, there was almost similar pattern in the individual responses of prescribers (n=1,628) and pharmacists (n=863). Close to 29% prescribers moderately and 40% strongly agreed as compared to 29% and 43% respectively for pharmacists.

Pressure from Patients or Employers to Write/Dispense Prescriptions

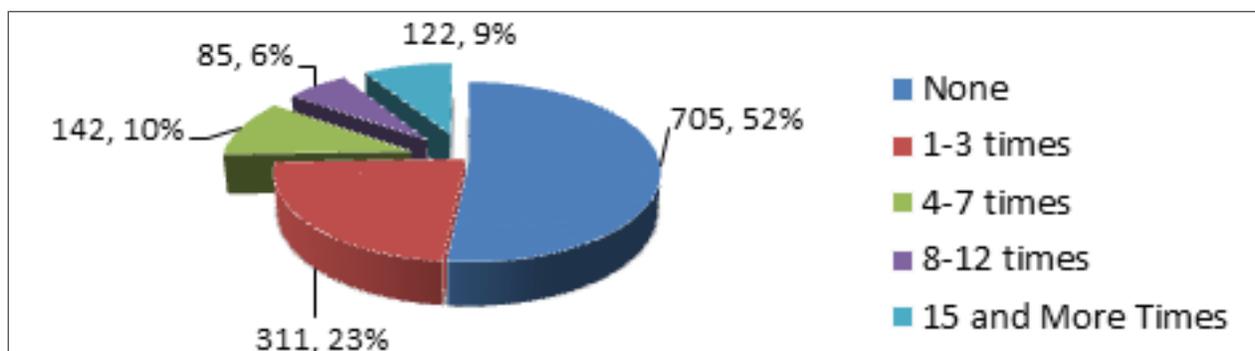
When asked if they felt pressured by patients to write/dispense prescriptions for medications with potential for abuse, 24% of 1,622 prescribers and 20% of 846 pharmacists moderately and strongly agreed. As for feeling pressured by their employers to write/dispense prescriptions for medications with potential for abuse, a little more than 5% of 1,623 prescribers and about 9% of 856 pharmacists moderately and strongly agreed.

PRESCRIBERS’ PERSPECTIVES

Patients Prescribers Dismissed from Practice or Declined to Treat

When asked how many patients they dismissed from their practice or declined to treat in the past year based on an OARRS report, the breakdown of the 1,365 total responses was: 52%, none (did not dismiss or decline); 23%, 1-3 times; 10%, 4-7 times; 6%, 8-12 times; and 9%, 15 or more times (Figure 4).

Figure 4
Patients dismissed or not treated



Screening Instruments Prescribers Use

A variety of instruments are used to screen patients at risk for substance use problems. From Table 1, the most popular instruments were (by percent of total respondents): CAGE (Cut down-Annoyed by-Guilty about-Eye-opener), 65% of 1,073; DAST (Drug Abuse Screening Test), 14.3% of 869; AUDIT (Alcohol Use Disorders Identification Test), 13% of 856; and ASSIST (Alcohol, Smoking, and Substance Involvement Screening Test), and 12% of 844.

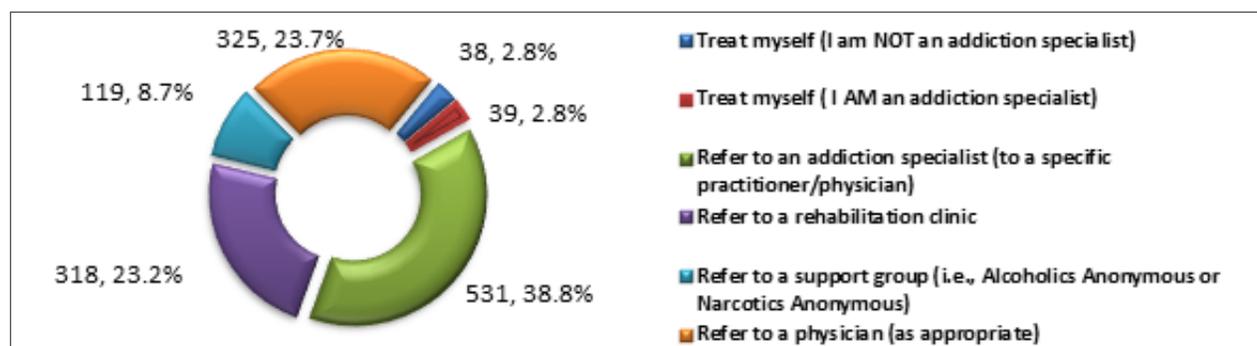
Table 1. Screening Instruments Used by Prescribers

Screening Instruments	Yes (%)	No (%)	Total (100%)
AUDIT [Alcohol Use Disorders Identification Test]	108 (12.6)	748 (87.4%)	856
AUDIT-C [Alcohol Use Disorders Identification Test-Consumption], WHO	70 (8.2%)	779 (91.8%)	849
ASSIST [Alcohol, Smoking, and Substance Involvement Screening Test]	101 (12%)	743 (88%)	844
CAGE [Cut down., Annoyed by., Guilty about..., Eye-opener.]	697(65%)	376 (35%)	1,073
DAST [Drug Abuse Screening Test]	124 (14.3%)	745 (85.7%)	869
MAST [Michigan Alcoholism Screening Test]	43 (5.1%)	796 (94.9%)	839
NIAAA [National Institute on Alcohol Abuse and Alcoholism] Alcohol Consumption Questions	42 (5.2%)	772 (94.8%)	814

Prescribers’ Intervention Approach with SUD Patients

Of the 1,370 responses related to intervention practice with patients with a substance abuse disorder, three practices were most prevalent: 39% referred them to an addiction specialist, 24% referred the patient to a physician, and 23% referred them to a rehabilitation clinic (Figure 5).

**Figure 5
Prescribers’ Intervention with SUD Patients**



Prescribers’ Total Patient Referrals in Past 12 Months by Program Types

Prescribers most often refer patients to one of four popular programs: an addiction specialist or physician, rehabilitation clinic, Alcoholics Anonymous, and Narcotics Anonymous (Table 2). The breakdown of prescribers’ frequency of patient referrals to an addiction specialist/physician in past 12 months (n=1,306) was: close to 34%, 1 to 5 referrals; about 5%, 6 to 10 referrals; and 5%, 11 to 20 referrals. As for prescribers’ frequency of patient referrals to a rehabilitation clinic (n=1,306), close to 32% made 1 to 5 referrals, a little more than 6% referred 6 to 10 times, 4% referred 11 to 20 times, and 3.5% referred 21 to 50 times. Of 1,293 prescribers, about 9% treated patient themselves between 1 and 5 times and 4% treated 100 or more times.

Table 2: Frequency of Prescribers' Patient Referrals for Various Programs, Past 12 Months

Program Types (Total Respondents)	Referrals (%)						
	None	1-5 times	6-10 times	11-20 times	21-50 times	51 -99 times	100 >
Alcoholics Anonymous (n=1,317)	52.9	31.0	6.2	4.5	3.1	.5	1.8
Narcotics Anonymous (n=1,307)	70.8	20.0	3.6	1.9	1.8	.3	1.6
Addiction specialist (physician) (n=1,306)	53.3	33.7	4.9	4.6	2.2	.3	1.0
Rehab clinic (n=1,306)	51.2	31.7	6.2	4.1	3.6	1.1	2.1
12-step self-help organizations (n=1,287)	69.4	17.2	4.4	2.9	3.3	.7	2.1
Treated patient myself (n=1,293)	79.7	8.8	1.9	2.3	2.8	.5	4.0

Prescriber Follow-up Regarding Patients Referred to Treatment Providers

Nearly 69% of 1,226 prescribers consistently asked the patients who returned for a follow-up visit if they went to the referred treatment providers.

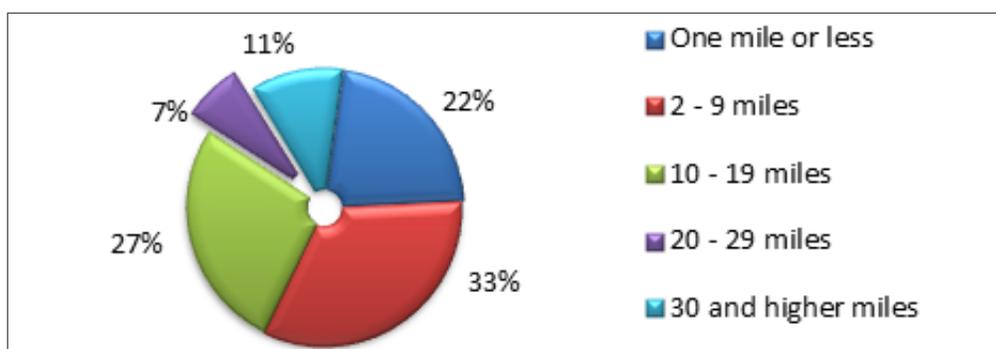
SAMHSA Locator Use, Awareness, and Data Waiver

Approximately 7% of 1,374 respondents reporting using the SAMHSA Locator, an on-line resource for finding information on locating physicians and treatment programs authorized to treat opioid addiction with buprenorphine products. A little less than 70% reported not being aware of such a resource. About 9% of 1,374 prescribers knew a DATA Waived Physician (DWP).²

What is the estimated distance (in miles) to the nearest treatment program or addiction specialist?

Of the 1,185 prescribers, 33% reported a treatment program or addiction specialist between two to nine miles from their clinical facility followed by 26% reporting of having at least one between 10 through 19 miles. Twenty-two percent reported having such services within one mile or less distance (figure 6).

Figure 6
Estimated Distance from Prescriber to Closest Program



¹ DEA Requirements for DATA Waived Physicians (DWPs). On October 17, 2000, Congress passed the Drug Addiction Treatment Act (DATA) which permits qualified physicians to treat narcotic dependence with schedules III-V narcotic controlled substances that have been approved by the Food and Drug Administration (FDA) for that indication. The legislation waives the requirement for obtaining a separate Drug Enforcement Administration (DEA) registration as a Narcotic Treatment Program (NTP) for qualified physicians administering, dispensing, and prescribing these specific FDA approved controlled substances. More information at: http://www.deadiversion.usdoj.gov/pubs/docs/dwp_buprenorphine.htm

Concerns about Referring Someone to Addiction Treatment

The survey asked prescribers for concerns about or challenges with referring a patient to addiction treatment. Almost 72% of 1,215 prescribers were concerned about denials of substance abuse and resistance to referrals from patients suspected for substance abuse. In addressing the challenge of tapering patients off opioids and still managing their chronic pain, about 51% of 1,212 prescribers admitted to having such concerns. Among 1,212 prescribers, about 50% faced challenges in finding a provider in close proximity so the progression of treatment can be followed. Thirty-six percent of 1,201 prescribers had concerns whether the patients will be provided treatment in conjunction with behavioral therapy to ensure a successful outcome.

Physicians or Treatment Programs in their Community Prescribers Trust to Refer a Patient

A significant percentage of 1,311 respondents (72%) reported having physicians and/or local treatment programs available in the community to whom they felt comfortable referring a patient. Fourteen percent said that there are local treatment programs but they are not comfortable in referring a patient. Three percent were addiction specialists and treated patients themselves. Eleven percent noted having no local treatment programs in their community.

Table 3: Prescribers and Treatment Program Availability in the Community

Statements	"n" (%)
I am an addiction specialist and treat patient myself	39 (3.0%)
Yes, there are local treatment programs available in my community	941 (72.0%)
There are local treatment programs, but I am not comfortable	184 (14.0%)
No, there are no local treatment programs in my community	147 (11.0%)
Total	1,311 (100%)

Prescribers' Prescribing Experience, Training, and Pain Management Practice

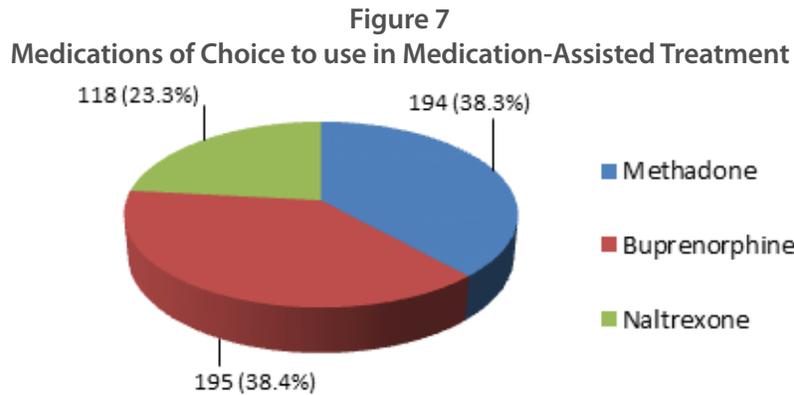
Among 1,410 prescribers, close to 22% had 1-5 years of prescribing experience, followed by about 16% who had 30 years and more. Fifteen percent each had 6-10 years and 11-15 years of prescribing experience. One percent did not prescribe.

Of 1,392 prescribers, almost four-fifths (84.2%) had completed postgraduate training, such as residency, fellowship, certificate programs, and/or certification. As for specific trainings in SUDs, 46% of 1,333 prescribers had training while in medical school; 41.1% of 1,315 prescribers had training during residency; and 40.1% of 1,315 prescribers had training during post-residency. Additionally, prescribers were also asked about additional training. Forty-five percent of 1,367 prescribers had training on interviewing skills needed to effectively screen for substance use and abuse in patients. Forty-five percent of 1,362 prescribers reported having additional training on skills needed to recognize the high rate of psychiatric and medical comorbidity and how to screen patients for both. When asked about additional training, close to 28% of 1,359 prescribers reported being trained on how to evaluate a patient's stage of addiction and recommend substance abuse treatment. Thirty-six percent of 1,353 prescribers reported having training in skills needed to provide addiction prevention counseling and for setting limits on requests for prescription medications.

Given the wide prevalence of prescribing drugs for pain, the survey solicited information on respondents with specialized training in pain management practices. Results indicate about 12% of 1,406 respondents had completed residency or certificate programs in pain management. Thirty-eight percent of prescribers practiced in a setting where they assisted with pain management on a daily basis.

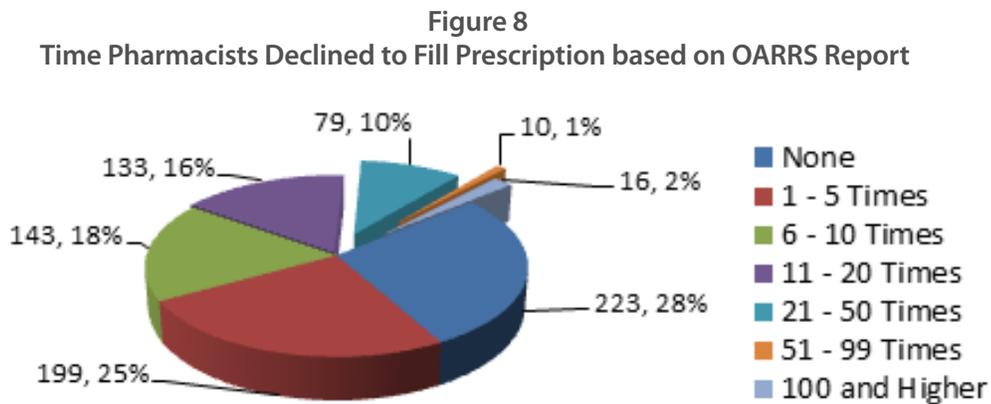
Medications of Choice to use in Medication-Assisted Treatment

Among 507 respondents, the favored medications for use in Medication-Assisted Treatment (MAT) were: Buprenorphine, 38.5%; Methadone, 38.3%; and Naltrexone, 23.3% (Figure 7).



PHARMACISTS: PRESCRIPTION, REFERRAL, AND SCREENING INSTRUMENTS

Pharmacists were asked how many times in past 12 months they have declined to fill a prescription for a patient based on the information found on an OARRS report. Of the 803 responses, 28% responded “none” meaning none of the OARRS reports they received convinced them to not fill a prescription. As for those pharmacists who decided not to fill prescriptions based on information in an OARRS report, 25% declined 1 to 5 times, 18% 6 to 10 times, 16% 11 to 20 times, 10% 21 to 50 times, 1% 51 to 99 times, and 2% 100 times or more (Figure 8).



Pharmacist’s Patient Referrals by Program Type

Pharmacists report using three primary methods or programs when referring patients to treatment. The programs include addiction specialist or physician, rehabilitation clinic, and 12-step self-help organizations. Based on pharmacists’ frequency of patient referrals to an addiction specialist/physician in the past 12 months (n=801), 5.2% referred at least once, close to 7% referred two to five times, and 2.5% referred six times or more. As for pharmacists’ frequency of patient referrals to a rehabilitation clinic (n=798), 3.8% referred at least once, 3.4% referred two to five times, and close to 2% referred six times or more.

Screening Instrument Pharmacists Use Consistently to Make Referrals

Pharmacists appear to make some use of screening instruments on a consistent basis to make patient referrals. An overwhelming majority (between 80 and 90%) admitted to not being familiar with some of the popular screening instruments used in the addiction treatment field. The screening instruments that pharmacists used more frequently were: CAGE (6.3% of 766 pharmacists), DAST (2.4% of 761 pharmacists), and ASSIST (2.2% of 761 pharmacists).

Table 4: Frequency of Screening Instrument Pharmacists Use for Patient Referrals

Screening Instruments (n)	Yes (%)	No (%)	Not familiar (%)
AUDIT [Alcohol Use Disorders Identification Test] (n=764)	1.3	10.1	88.6
AUDIT-C [Alcohol Use Disorders Identification Test-Consumption], WHO (n=676)	.9	10.5	88.6
ASSIST [Alcohol, Smoking, and Substance Involvement Screening Test] (n=761)	2.2	12.0	85.8
CAGE [Cut down., Annoyed by., Guilty about..., Eye-opener..] (n=766)	6.3	13.7	80.0
DAST [Drug Abuse Screening Test] (n=761)	2.4	11.5	86.1
MAST [Michigan Alcoholism Screening Test] (n=759)	.5	9.4	90.1
NIAAA [National Institute on Alcohol Abuse and Alcoholism] Alcohol Consumption Questions (n=752)	1.1	11.8	87.1

CONCLUDING OBSERVATIONS

The findings of the survey OhioMHAS conducted on behalf of the OSBP provides insightful and varied reflections on how prescribers and pharmacists with access to OARRS currently provide intervention or referral to treatment for patients who may have a substance abuse disorder. A few points are worth noting.

- ❖ SBIRT seems to be an area where we could drive awareness among prescribers for enhanced screening, intervention, and referrals of patients especially with substance use disorders.
- ❖ The fact that only 40% of the prescribers felt strongly confident in accurately identifying drug diversion based on patient information in OARRS, it is important from a training standpoint to create greater awareness in order that a higher percentage of prescribers will confidently make such referrals.
- ❖ The fact that pharmacists (moderately, 36%; strongly, 38%) were more confident than prescribers (moderately, 34%; strongly, 33%) in identifying SUD patients leads to two plausible arguments: (1) it is possible they are identifying patients with a SUD because of the medications they are taking; and/or (2) the OARRS report could also be showing the treatment, not just identifying prospective patients.
- ❖ It was encouraging to find 34% of pharmacists feeling comfortable in speaking with patients about their potential substance abuse disorder. It may still be beneficial to provide training and guidance to enhance confidence in counseling by an increased number of physicians and pharmacists.
- ❖ Since being more aware of the red flags on an OARRS report and being willing to say no to a patient can have a meaningful impact on reducing diversion, there seems to be room for increased education to prescribers and pharmacists to enable them to effectively identify patients in need of treatment referrals for their SUDs.
- ❖ Since the findings revealed that about 31% of the prescribers did not follow-up with patients to verify if they went to the referred treatment providers, this may be an area for encouraging more consistent follow-ups.

We can now better understand the level of confidence that prescribers and pharmacists exhibit in using OARRS and other tools in the practice of intervention and referral to treatment for patients with substance abuse disorders and highlight areas where follow-up could be encouraged for a better standard of treatment. These results can assist with crafting appropriate policies and guidelines to enhance intervention and referral practices in patient treatment.

Acknowledgements:

First and foremost, thank you to the prescribers and pharmacists who took their valuable time to participate in this study by completing the Survey Monkey® questionnaire. This report has greatly benefitted from the critical feedback provided from the OARRS department at the Ohio State Board of Pharmacy. The author sincerely appreciates its help. Thanks are also due to Dr. Jinhee J. Lee, National Advisory Board Member, Public Health Advisor, Division of Pharmacologic Therapies, Center for Substance Abuse Treatment, SAMHSA for suggesting some important questions for inclusion in the survey and for her constant support and guidance. Additional thanks to Dr. Kraig J. Knudsen, Chief, OhioMHAS Bureau of Research and Evaluation for his editorial comments and suggestions. Finally, the author sincerely appreciates the input from Mr. Steve O'Neil, Director, Ohio SBIRT Project.

Appendix A
Drug Diversion, SUD Patients, Intervention or Referral to Treatment

Statements		Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither	Slightly Agree	Moderately Agree	Strongly Agree	Not Applicable	Total
1. Confident in identifying patients with potential SUD	Prescribers (n)	13	37	40	65	219	748	484	28	1634
	Prescribers (%)	0.8%	2.3%	2.4%	4.0%	13.4%	45.8%	29.6%	1.7%	100.0%
	Pharmacists (n)	9	11	18	42	123	401	242	28	874
	Pharmacists (%)	1.0%	1.3%	2.1%	4.8%	14.1%	45.9%	27.7%	3.2%	100.0%
	Total (N)	22	48	58	107	342	1,149	726	56	2,508
	Total (%)	0.9%	1.9%	2.3%	4.3%	13.6%	45.8%	28.9%	2.2%	100%
2. Confident in referring patients with potential SUD to appropriate Treatment	Prescribers (n)	35	62	99	93	199	500	599	43	1,630
	Prescribers (%)	2.1%	3.8%	6.1%	5.7%	12.2%	30.7%	36.7%	2.6%	100.0%
	Pharmacists (n)	43	60	91	131	175	176	105	89	870
	Pharmacists (%)	4.9%	6.9%	10.5%	15.1%	20.1%	20.2%	12.1%	10.2%	100.0%
	Total (N)	78	122	190	224	374	676	704	132	2,500
	Total (%)	3.1%	4.9%	7.6%	9.0%	15.0%	27.0%	28.2%	5.3%	100%
3. Confident in effectively using online drug diversion tools (i.e. OARRS)	Prescribers (n)	34	26	37	73	134	333	930	69	1,627
	Prescribers (%)	2.1%	1.6%	2.3%	4.5%	8.2%	20.5%	57.2%	3.7%	100.0%
	Pharmacists (n)	8	4	14	15	34	130	635	28	868
	Pharmacists (%)	0.9%	0.5%	1.6%	1.7%	3.9%	15.0%	73.2%	3.2%	100.0%
	Total (N)	42	30	51	88	168	463	1,565	88	2,495
	Total (%)	1.7%	1.2%	2.0%	3.5%	6.7%	18.6%	62.7%	3.5%	100%
4. Confident in accurately identifying drug diversion from an OARRS patient profile	Prescribers (n)	33	41	57	102	206	494	636	53	1,622
	Prescribers (%)	2.0%	2.5%	3.5%	6.3%	12.7%	30.5%	39.2%	3.3%	100.0%
	Pharmacists (n)	7	11	20	29	82	269	430	20	868
	Pharmacists (%)	0.8%	1.3%	2.3%	3.3%	9.4%	31.0%	49.5%	2.3%	100.0%
	Total (N)	40	52	77	131	288	763	1066	73	2,490
	Total (%)	1.6%	2.1%	3.1%	5.3%	11.6%	30.6%	42.8%	2.90%	100.0%
5. Confident in accurately identifying patients with SUD from an OARRS patient profile	Prescribers (n)	35	37	58	118	238	558	533	49	1,626
	Prescribers (%)	2.2%	2.3%	3.6%	7.3%	14.6%	34.3%	32.8%	3.0%	100.0%
	Pharmacists (n)	8	10	26	49	113	314	331	22	873
	Pharmacists (%)	0.9%	1.1%	3.0%	5.6%	12.9%	36.0%	37.9%	2.5%	100.0%
	Total (N)	43	47	84	167	351	872	864	71	2,499
	Total (%)	1.7%	1.9%	3.4%	6.7%	14.0%	34.9%	34.60%	2.8%	100.0%
6. Generally write a prescription despite my concerns about a patient's SUD	Prescribers (n)	810	397	167	105	58	21	16	50	1,624
	Prescribers (%)	49.9%	24.4%	10.3%	6.5%	3.6%	1.3%	1.0%	3.1%	100.0%
	Pharmacists (n)	37	11	6	36	2	0	3	725	820
	Pharmacists (%)	4.5%	1.3%	0.7%	4.4%	0.2%	0.0%	0.4%	88.4%	100.0%
	Total (N)	847	408	173	141	60	21	19	775	2,444
	Total (%)	34.7%	16.7%	7.1%	5.8%	2.5%	0.95%	0.8%	31.7%	100.0%

Appendix A, continued.
Drug Diversion, SUD Patients, Intervention or Referral to Treatment

Statements		Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither	Slightly Agree	Moderately Agree	Strongly Agree	Not Applicable	Total
7. Pressured by patients to write/dispense prescriptions for medications with potential for abuse	Prescribers (n)	427	207	122	138	270	199	194	65	1622
	Prescribers (%)	26.3%	12.8%	7.5%	8.5%	16.6%	12.3%	12.0%	4.0%	100.0%
	Pharmacists (n)	108	38	48	70	88	90	78	326	846
	Pharmacists (%)	12.8%	4.5%	5.7%	8.3%	10.4%	10.6%	9.2%	38.5%	100.0%
	Total (N)	535	245	170	208	358	289	272	391	2,468
	Total (%)	21.7%	9.9%	6.9%	8.4%	14.50%	11.7%	11.0%	15.8%	100.0%
8. Pressured by employer to write/dispense prescriptions for medications with potential for abuse	Prescribers (n)	1,017	180	64	85	58	44	43	132	1,623
	Prescribers (%)	62.7%	11.1%	3.9%	5.2%	3.6%	2.7%	2.6%	8.1%	100.0%
	Pharmacists (n)	276	74	66	78	42	40	32	248	856
	Pharmacists (%)	32.2%	8.6%	7.7%	9.1%	4.9%	4.7%	3.7%	29.0%	100.0
	Total (N)	1,293	254	130	163	100	84	75	380	2,479
	Total (%)	52.2%	10.2%	5.2%	6.6%	4.0%	3.4%	3.0%	15.3%	100.0%
9. Comfortable identifying potential "red flags" on an OARRS report which may help identify patients in need of referral to treatment for their SUDs.	Prescribers (n)	35	30	47	110	203	470	647	86	1,628
	Prescribers (%)	2.1%	1.8%	2.9%	6.8%	12.5%	28.9%	39.7%	5.3%	100.0%
	Pharmacists (n)	10	8	20	49	106	250	368	52	863
	Pharmacists (%)	1.2%	0.9%	2.3%	5.7%	12.3%	29.0%	42.6%	6.0%	100.0%
	Total (N)	45	38	67	159	309	720	1,015	138	2,491
	Total (%)	1.8%	1.5%	2.7%	6.4%	12.4%	28.9%	40.7%	5.5%	100.0%
10. Comfortable speaking with patients about their SUDs	Prescribers (n)	17	38	108	111	267	490	531	67	1,629
	Prescribers (%)	1.0%	2.3%	6.6%	6.8%	16.4%	30.1%	32.6%	4.1%	100.0%
	Pharmacists (n)	63	75	125	95	161	175	112	60	866
	Pharmacists (%)	7.3%	8.7%	14.4%	11.0%	18.6%	20.2%	12.9%	6.9%	100.0%
	Total (N)	80	113	233	206	428	665	643	127	2,495
	Total (%)	3.2%	4.5%	9.3%	8.3%	17.2%	26.7%	25.8%	5.1%	100.0%
11. Comfortable counseling a patient to seek help with their potential SUDs.	Prescribers (n)	34	62	114	111	248	456	519	78	1,622
	Prescribers (%)	2.1%	3.8%	7.0%	6.8%	15.3%	28.1%	32.0%	4.8%	100.0%
	Pharmacists (n)	55	79	114	103	160	170	121	60	862
	Pharmacists (%)	6.4%	9.2%	13.2%	11.9%	18.6%	19.7%	14.0%	7.0%	100.0%
	Total (N)	89	141	228	214	408	626	640	138	2,484
	Total (%)	3.6%	5.7%	9.2%	8.6%	16.4%	25.2%	25.8%	5.6%	100.0%
12. Have the knowledge needed to refer a patient to treatment and intervention for SUD.	Prescribers (n)	34	86	100	119	249	480	494	63	1,625
	Prescribers (%)	2.1%	5.3%	6.2%	7.3%	15.3%	29.5%	30.4%	3.9%	100.0%
	Pharmacists (n)	63	86	125	123	156	153	88	69	863
	Pharmacists (%)	7.3%	10.0%	14.5%	14.3%	18.1%	17.7%	10.2%	8.0%	100.0%
	Total (N)	97	172	225	242	405	633	582	132	2,488
	Total (%)	3.9%	6.9%	9.0%	9.71%	16.3%	25.4%	23.4%	5.3%	100.0%

APPENDIX B:

Survey #2: Prescribers and Pharmacists Providing Intervention and Referrals to Treatment for Patients with Substance Abuse Disorder

Both Prescribers and Pharmacists:

Demographics

1. What is your age?

- <30 30-39 40-49 50-59 >59

2. What is your gender?

- Male Female

3. What is your current primary practice setting? (select one)

- Ambulatory care clinic
 Community pharmacy
 Hospital
 Nursing home, skilled care, sub-acute or long-term care facility

4. What is your practice specialty?

- | | | |
|--|--|---|
| <input type="checkbox"/> Primary Care/Family Practice | <input type="checkbox"/> Internal Medicine | <input type="checkbox"/> Psychiatry |
| <input type="checkbox"/> Addiction Medicine | <input type="checkbox"/> Pain Management | <input type="checkbox"/> Cardiology |
| <input type="checkbox"/> Endocrinology | <input type="checkbox"/> Gastroenterology | <input type="checkbox"/> Geriatric Medicine |
| <input type="checkbox"/> Oncology and Hematology | <input type="checkbox"/> Nephrology | <input type="checkbox"/> Infectious Disease |
| <input type="checkbox"/> Hospice and Palliative medicine | <input type="checkbox"/> Pulmonary Disease | <input type="checkbox"/> Rheumatology |
| <input type="checkbox"/> Emergency Medicine | <input type="checkbox"/> Neurosurgery | <input type="checkbox"/> Urology |
| <input type="checkbox"/> Psychiatry | <input type="checkbox"/> Radiology | <input type="checkbox"/> Orthopedic Surgery |
| <input type="checkbox"/> Obstetrics & Gynecology | <input type="checkbox"/> Otolaryngology (E.N.T.) | <input type="checkbox"/> Surgery |
| <input type="checkbox"/> Allergy and Immunology | <input type="checkbox"/> Anesthesiology | <input type="checkbox"/> Dermatology |
| <input type="checkbox"/> Ophthalmology | <input type="checkbox"/> Pediatrics | <input type="checkbox"/> Neurology |

Other (please specify) _____

5. Did you graduate from a medical/nursing/pharmacy school in the State of Ohio?

- Yes No

6. When did you graduate with your medical degree? _____ [enter Year]

Confidence in Identifying Drug Diversion and Need for Intervention or Referral to Treatment

7. Using the following scale, please rate yourself on the following statements:

Statements	<i>Strongly Disagree</i>	<i>Moderately Disagree</i>	<i>Slightly Disagree</i>	<i>Neither or Neutral</i>	<i>Slightly Agree</i>	<i>Moderately Agree</i>	<i>Strongly Agree</i>	<i>Not applicable</i>	<i>Total</i>
1. Confident in identifying patients with potential SUD									
2. Confident in referring patient with potential SUD to appropriate treatment									
3. Confident in effectively using online drug diversion tools (i.e. OARRS)									
4. Confident in accurately identifying drug diversion from an OARRS patient profile									
5. Confident in accurately identifying patients with a substance abuse disorder from an OARRS patient profile									
6. Generally write a prescription despite my concerns about a patient's substance abuse disorder									
7. Pressured by patients to write/dispense prescriptions for medications with potential for abuse									
8. Pressured by employer to write/dispense prescriptions for medications with potential for abuse									
9. Comfortable identifying potential "red flags" on an OARRS report which may help identify patients in need of referral to treatment for their SUDs.									
10. Comfortable speaking with patients about their potential SUDs.									
11. Comfortable counseling a patient to seek help with their potential SUDs.									
12. Have the knowledge needed to refer a patient to Treatment and intervention for SUD.									

8. What is your primary position? (select one)
- Physician (MD, OD, Podiatrist...)
 - Nurse Practitioner with Prescription Privileges (CNP, ANP)
 - Physician Assistant
 - Medical resident
 - Pharmacist **(skip to Q. 34)**

Prescribers Only:

9. In the past year, how many patients have you dismissed from your practice or declined to treat based on the information found on an OARRS report? _____ (enter number).
10. How do you intervene with patients with a substance abuse disorder?
- a. ____ Treat myself (I am NOT an addiction specialist)
 - b. ____ Treat myself (I AM an addiction specialist)
 - c. ____ Refer to an addiction specialist (to a specific practitioner/physician)
 - d. ____ Refer to a rehabilitation clinic
 - e. ____ Refer to a support group (i.e., Alcoholics Anonymous or Narcotics Anonymous)
 - f. ____ Refer to a physician (as appropriate)
11. Are you familiar with Screening, Brief Intervention and Referral to Treatment (SBIRT)?
- Yes No
12. Do you screen patients for drug use/misuse/abuse?
- Yes No
13. Which of the following screening instrument do you use to determine patients at risk for substance use problems?

Screening Instruments	Yes	No
AUDIT [Alcohol Use Disorders Identification Test]		
AUDIT-C [Alcohol Use Disorders Identification Test-Consumption], WHO		
ASSIST [Alcohol, Smoking, and Substance Involvement Screening Test]		
CAGE [Cut down., Annoyed by., Guilty about. . ., Eye-opener..]		
DAST [Drug Abuse Screening Test]		
MAST [Michigan Alcoholism Screening Test]		
NIAAA [National Council on Alcohol Abuse and Alcoholism] Alcohol Consumption Questions		
Other [Note]_____		

14. How frequently do you make patient referrals **for drug abuse treatment**?
- ___ times a day
- ___ times a week
- ___ other (please specify) _____.

15. When patients come back for follow-up visits, do you consistently ask them if they went to the referred treatment providers?

Yes No

16. In the past 12 months, how many times have you referred a patient to:

- g. Alcoholics Anonymous _____ (number of) times
- h. Narcotics Anonymous _____ (number of) times
- i. Addiction specialist (specific physician) _____ (number of) times
- j. Rehab clinic _____ (number of) times
- k. Other 12-step self-help organizations _____ (number of) times
- l. Treated patient myself _____ number of times

17. How many years have you been prescribing?

1-5 6-10 11-15 16-20 21-25 26-30 >30 Do not prescribe

18. Have you completed any postgraduate training, such as residency, fellowship, certificate programs, and/or certification?

Yes No

19. Have you completed any specialized training (e.g. residency, certificate programs, etc.) in pain management?

Yes No

20. Do you practice in a setting where you assist with pain management on a daily basis?

Yes No

21. Have you had any training in Substance Use Disorders in Medical School?

Yes No

22. Have you had any training in Substance Use Disorders during Residency?

Yes No

23. Have you had any training in Substance Use Disorders during Post-Residency?

Yes No

24. Have you had any additional training in any of the following?

Training Type	Yes	No
Type of interviewing skills needed to effectively screen for substance use and abuse in patients		
Skills needed to recognize the high rate of psychiatric and medical comorbidity and how to screen patients for both		
Evaluating a patient's stage of addiction and recommending substance abuse treatment		
Skills needed to provide addiction prevention counseling and for setting limits on requests for prescription medications		

25. Do you use any of the SAMHSA locator, an on-line resource for finding information on locating physicians and treatment programs authorized to treat opioid addiction with buprenorphine products?

Yes No Not aware of this resource

26. Do you have physicians or treatment programs in your community you trust to refer someone?

- I am an addiction specialist and treat patients myself.
- Yes, there are local treatment programs available in my community whom I trust.
- There are local treatment programs, but I am not comfortable with their programs or outcomes.
- No, there are no local treatment programs in my community.

27. What is the estimated distance (in miles) to the nearest treatment program or addiction specialist?

_____ miles

28. Do you know a physician with a DATA waiver? Yes No

29. What concerns do you have about referring someone to addiction treatment?

- Challenges in tapering patients off opioids and still manage their chronic pain
- Denials of substance abuse and resistance to referrals from patients suspected for substance abuse
- Challenges of finding a provider in closer proximity so that the progression of treatment can be followed
- Not sure if the patients will be provided the treatment in conjunction with behavioral therapy to ensure a successful outcome

30. What medications do you prefer to use in medication-assisted treatment?

- methadone
- buprenorphine
- naltrexone

31. Which medication do you prefer to use in maintenance therapy?

- methadone
- buprenorphine
- naltrexone

32. Are you familiar with the concepts of recovery? Yes No

Pharmacists Only:

33. In the past year, how many times have you declined to fill a prescription for a patient based on the information found on an OARRS report? _____ (enter number)

34. In the past 12 months, how many times have you referred a patient to

- a. Alcoholics Anonymous _____ (number of) times
- b. Narcotics Anonymous _____ (number of) times
- c. Addiction specialist (specific physician) _____ (number of) times
- d. Rehab clinic _____ (number of) times
- e. 12-step self-help organizations _____ (number of) times
- f. Treated patient myself _____ number of times

35. Which of the following screening instrument do you use consistently to make referrals?

Screening Instruments	Yes	No	Not familiar with this
AUDIT [Alcohol Use Disorders Identification Test]			
AUDIT-C [Alcohol Use Disorders Identification Test-Consumption], WHO			
ASSIST [Alcohol, Smoking, and Substance Involvement Screening Test]			
CAGE [C ut down., A nnoyed by., G uilty about..., E ye-opener..]			
DAST [Drug Abuse Screening Test]			
MAST [Michigan Alcoholism Screening Test]			
NIAAA [National Council on Alcohol Abuse and Alcoholism] Alcohol Consumption Questions			
Other [Note] _____			

THANK YOU FOR YOUR PARTICIPATION

