

## Evidence Bibliography: Clinical Pharmacy Practice in Substance Use Disorder

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The following collection of publications and resources contributes to the growing evidence of pharmacist impact on care in patients with substance use disorder. Publications included address pharmacist interventions provided across treatment settings ranging from community pharmacy based opioid risk identification and reduction strategies to comprehensive medication management via pharmacist collaborative practice agreements and prescribing privileges. Position statements and documented practice models are included which highlight the value of pharmacists in this population. *To jump to specific sections of interest, please select from one of the following:*

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### *Outpatient Services*

Ives TJ et al. **Pharmacy practice in a chemical-dependency treatment center.** *Am J Hosp Pharm.* 1990,47(5):1080-3.

- **Design:** Descriptive practice review
- **Practices:** Pharmacist provided dispensing, drug information, staff and patient education, pharmacotherapeutic evaluation and management services, and served as the medical clinical coordinator within an outpatient methadone maintenance and chemical dependence clinic.
- **Outcomes/Conclusions:**
  - The pharmacist's knowledge of pharmacotherapy, drug products, and skill in assessing and managing problems related to substance use increased access of physicians and nurses for other patient-care activities and enhanced behavioral counselors' understanding of pharmacologic aspects patients with substance use disorder.
  - Inclusion of a pharmacist in the chemical-dependency healthcare team was accepted, valued, and recommended by clinic staff.

McCarty et al., **Training rural practitioners to use buprenorphine: Using the Change Book to facilitate technology transfer.** *Journal of Substance Abuse Treatment.* 2004;26(3);203-8.

- **Design:** Descriptive review of impact of completion of "The Change Book" training (Addiction Technology Transfer Centers) completed by 51 practitioners (17 physicians, 4 pharmacists, 2 nurse practitioners, 28 drug abuse counselors/administrators) from 7 Oregon counties on development of buprenorphine services



- **Practices:** Opioid Medication Initiative for Rural Oregon Residents (OMIROR) sought to improve access and quality of opioid dependence treatment through development of county teams which included a pharmacist to work collaboratively with physicians and drug treatment services.
- **Outcomes:**
  - Pre-post measure of attitudes and beliefs toward use of buprenorphine suggested significant improvements in attitude after training (especially among counselors)
  - 8 months post training: 10 of 17 physicians received buprenorphine waivers; 29 patients were in treatment with six of the physicians

*Feroni et al. Collaboration between general practitioners and pharmacists in the management of patients on high-dosage buprenorphine treatment. Prescribers' practices [Article in French]. Presse Med. 2005;34(17):1213-9.*

- **Design:** telephone survey of N=345 high-dosage buprenorphine (HDB) prescribers
- **Practices:** factors associated with general practitioner collaboration with dispensing pharmacists on management of patients receiving HDB was investigated
- **Outcomes:**
  - Only 54% of general practitioners reported collaborating with dispensing pharmacists in management of HDB patients (collaboration independently related to addiction training, favorable opinion of maintenance treatment, long experience in HDB management, and participation in specialized medical network)
  - Implementation of physician-pharmacist collaboration may require additional addiction medicine training for general practitioner and encouragement to participate in medical networks

*Grgas, M. Clinical psychiatric pharmacist involvement in an outpatient buprenorphine program. Mental Health Clinician. 2013;3(6):290-291.*

- **Design:** Descriptive review of clinical psychiatric pharmacist integration into an interdisciplinary team of psychiatrists and addiction therapists in a VA outpatient buprenorphine clinic
- **Practices:** the pharmacist devotes approximately ten hours per week to services including medication dispensing, monitoring (labs, random medication counts), patient counseling, and maintains weekly records of dosing, refill dates, and urine toxicology results.
- **Outcomes:**
  - Following psychiatric pharmacist integration, patient enrollment in buprenorphine clinic and patient satisfaction with outpatient pharmacy experience increased; pharmacy wait times and early refills decreased

*Suzuki et al., Implementation of a collaborative care management program with buprenorphine in primary care: A comparison between opioid-dependent patients and chronic pain patients using opioids non-medically. J Opioid Manag. 2014;10(3):159-168.*

- **Design:** prospective observational review of N=45 outpatients treated with buprenorphine in urban academic primary care clinic affiliated with tertiary care hospital
- **Practices:** the pharmacist case manager with expertise in pain management conducted buprenorphine inductions and all follow-up medication visits under the supervision of an x-waivered psychiatrist
- **Outcomes:**
  - 6-month treatment retention: 55.0% (n=25)
  - Proportion of aberrant urine toxicology results and craving scores significantly decreased from baseline to 6 months ( $p < 0.01$ )

- PCP confidence treating opioid dependence in primary care increased significantly from baseline to 18-months post-implementation ( $p < 0.01$ )

*DiPaula BA, Menachery E. Physician-Pharmacist Collaborative Care Model for Buprenorphine-maintained Opioid-dependent Patients. J Am Pharm Assoc. 2015; 55: 187-192.*

- **Design:** Retrospective chart review to describe impact of pharmacist-patient interactions on buprenorphine patient outcomes in a suburban health department program (N=12) over a 12-month period
- **Practices:** A Board Certified Psychiatric Pharmacist provided buprenorphine intake and follow-up appointments with physician collaboration and co-signature
- **Outcomes:**
  - N=12 patients completed full intake with 135 total follow-up appointments
  - 6-month retention rate=100%; 12-month retention rate = 73% (higher than previously published studies)
  - n=127 (98%) urine toxicology screens positive for buprenorphine; n=114 (88%) positive for buprenorphine and negative for illicit opioids; no suspected incidences of diversion
  - Estimated pilot program cost savings compared to average community cost without pharmacist involvement = \$22,000; projected future cost savings with transition of all health department buprenorphine patients to this model = \$63,000/year

*Thompson, CA. Pharmacist, physician collaborate at clinic to treat opioid dependence. Am J Health Syst Pharm. 2016;73(11):738-9. doi: 10.2146/news160034.*

- **Design:** descriptive review of collaborative care model for buprenorphine management in a county behavioral health service for homeless patients
- **Practices:** Psychiatric pharmacist provided comprehensive medication management for buprenorphine office and home induction and maintenance services with psychiatrist collaboration
- **Outcomes:** not reported

*Harris AH, et al. Multifaceted academic detailing program to increase pharmacotherapy for alcohol use disorder: interrupted time series evaluation of effectiveness. Addict Sci Clin Pract. 2016;11(1):15. doi: 10.1186/s13722-016-0063-8.*

- **Design:** interrupted time series design evaluated level and rate of change in monthly percent patients with alcohol use disorder (AUD) received naltrexone, acamprosate, disulfiram, or topiramate across multiple Veterans Health Administration (VHA) sites (N=37) following implementation of an academic detailing program.
  - Control group: 20-month post-implementation and 16-month pre-implementation outcomes were compared within participating study sites (N=37) and separately to all remaining VHA control facilities (to verify changes did not mimic secular trends for other facilities).
- **Practices:** clinical pharmacists provided academic detailing related to AUD pharmacotherapy to various staff including psychologists, psychiatrists, nurses, social workers, clinical pharmacists, primary physicians, clinical managers and other administrators.
- **Outcomes:**
  - Percent patients with AUD with study medication increased 4.9% pre-implementation to 8.3% post-implementation at intervention sites ( $p < 0.05$ )

- Pre-to-post implementation increase in prescribing rate slope within intervention sites compared to pre-implementation slope was significantly positive ( $p < .0001$ ); change in slope was significantly less for all other VHA sites (control) than the intervention sites ( $p < .001$ ).

Stammet MM, Spradley SS. **Evaluation of treatment changes following electronic consultation to a pharmacist-run urine drug testing service in a veterans healthcare system.** *J Opioid Manag.* 2016;12(6):389-395. doi: 10.5055/jom.2016.0358.

- **Design:** Retrospective chart review of N=143 pharmacist e-consults within a single VHA facility over a 2-year period.
- **Practices:** Pharmacist provided urine drug testing (UDT) electronic consultation (e-consult) service to assist providers with interpretation of this useful yet complex clinical tool. Completed e-consults provided either education-based (informative) or action based (decisive) recommendations.
- **Outcomes:**
  - 190 UDT results classified as expected, unexpected, or not necessarily inappropriate based on prescription profile at time of urine immunoassay test.
    - >70% of cases with no confirmatory testing ordered by requesting provider
    - 32% of cases classified as “unexpected” identified the presence of an illicit substance
    - 50% of cases classified as “unexpected” resulted in pharmacist recommendation for the requesting provider to take immediate action; timely documentation of post-consultation action by requesting provider was only present in 32% of cases.

Duvivier H., et al., **Indian Health Service pharmacists engaged in opioid safety initiatives and expanding access to naloxone.** *Journal of the American Pharmacists Association.* 2017;57:S135-S140.

- **Design:** Descriptive review of pharmacist-based interventions to mitigate harm from opioid use disorder within the Indian Health Service (ISH).
- **Practices:** Pharmacists’ clinical role range from individual consultation appointments to full prescriptive authority for controlled substances. Pharmacists collaborated with buprenorphine prescribers to coordinate comprehensive patient care, contribute to provision of buprenorphine tele-medicine services, and manage depot naltrexone injection therapy.
- **Outcomes/Conclusions:** Pharmacists within IHS augmented services to increase access to MAT for American Indians and Alaska Natives, increased access to naloxone for opioid overdose reversal, and developed a comprehensive training program and program measurement tools for law enforcement officers (used to train n=350 officers in 6 districts and conduct a mass naloxone dispensing initiative).

Lagisetty P, Klasa K, Bush C, Heisler M, Chopra V, Bohnert A. **Primary care models for treating opioid use disorders: What actually works? A systematic review.** *PLOS One.* 2017; 12(10): doi: 10.1371/journal.pone.0186315.

- **Design:** systemic review of primary care-based medication assisted treatment interventions for opioid use disorder aimed to identify program structures and processes associated with improved patient outcomes to guide future policy and implementation efforts
- **Practices:** Pharmacist roles across practices varied and included dispensing, providing clinical care management services, and clinical appointments for medication management for MAT for OUD.
- **Outcomes:**

- Key program factors associated with success included presence of integrated clinical teams with clinical care managers who were often advanced practice clinicians (i.e. nurses and pharmacists); use of patient care “agreements”; and use of home induction models.
- Clinical pharmacists can be utilized for complex medication dosing and management scenarios

*Gilmore Wilson C. & Fagan B. **Providing Office-Based Treatment of Opioid Use Disorder.** Annals of Family Medicine. 2017; 15(5).*

- **Design:** descriptive review of office-based opioid treatment (OBOT) implementation by an interdisciplinary team including a physician champion, clinical pharmacist, nurse practitioner, and licensed clinical social worker
- **Practices:** Pharmacist developed program policies and procedures, patient care agreements, and medication treatment protocols
- **Outcomes/Conclusions:**
  - Having a “core interdisciplinary team is essential”
  - In the first year, 5 faculty physicians prescribed buprenorphine for 14 maintenance patients.
  - In the second year, 11 additional physicians were trained, and services expanded to include buprenorphine induction services.

*Tewksbury A, et al. **Development of Collaborative Drug Therapy Management and Clinical Pharmacy Services in an Outpatient Psychiatric Clinic.** Journal of Pharmacy Practice. 2017; 31(3): 272-278.*

- **Design:** descriptive view outlining process through which board-certified psychiatric pharmacists may develop and implement a Collaborative Drug Therapy Management (CDTM) agreement within a community treatment center for mental health and substance abuse disorders.
- **Practices:** Outpatient clinical psychiatric pharmacy services involving independent patient appointments included but were not limited to assessment and management of polypharmacy, long-acting injectable antipsychotics, suspected nonadherence, medication reconciliation, transitions of care services, therapeutic drug monitoring, and antipsychotic metabolic monitoring.
- **Outcomes/Conclusions:** Key considerations for successful implementation and expansion of outpatient psychiatric clinical pharmacy services include ensuring collaborating provider/facility administration understanding of psychiatrist pharmacist clinical competence, potential positive influence on patient outcomes and cost savings, federal and state laws governing CDTM, and third-party billing mechanisms.

*Cucciare MA, Scarbrough CB. **Opportunities for Identifying and Addressing Unhealthy Substance Use in Rural Communities: A Commentary on Cucciare et al (2017).** Subst Abuse: Research and Treatment. 2018;12: 1-4.*

- **Design:** commentary
- **Practices:** The accessibility of pharmacists and their knowledge of commonly abused substances, including prescription medications, make them a practical yet underutilized provider for conducting substance use screening, intervention, and referring to care in the community.
- **Outcomes/Conclusions:**
  - Rural pharmacists currently report providing more public health services than their urban counterparts (i.e. disease state management, identifying health risk, working with community partners to address health problems, and referring patients to other health professionals)

- Retail clinics, churches, and pharmacies provide a currently underdeveloped opportunity for improving the availability of screening and brief counseling and linkage of rural substance users to more intensive substance use care

***Buprenorphine Physician-Pharmacist Collaboration in the Management of Patients with Opioid Use Disorder: CTN 0075 (Pharm-OUD-Care).* Duke University. 2017; ClinicalTrials.Gov (in development)**

- **Design:** open-label, single arm, pilot study of pharmacist-administered buprenorphine/naloxone maintenance care
- **Practices:** examines the feasibility and acceptability of transitioning office-based buprenorphine treatment of opioid use disorder from physicians to pharmacists.
- **Outcomes/Conclusions:** pending; results will inform the development of a future multi-site randomized clinical trial

***Tewell R, Edgerton L, Kyle E. Establishment of a pharmacist-led service for patients at high risk for opioid overdose. Am J Health Syst Pharm. 2018;75(6):376-383. doi: 10.2146/ajhp170294.***

- **Design:** descriptive review of implementation of pharmacist-led naloxone clinic in a pain management population within a family medicine clinic
- **Practices:** Pharmacist identified potential naloxone candidates via chart review, provided education to patient and/or identified caregiver, and naloxone prescriptions.
- **Outcomes/Conclusions:**
  - During the first 6 months of clinic operations, 49 patients identified a “at risk for opioid overdose”; pharmacists educated 84% (n=41) of identified patients and confirmed 69% had filled a naloxone prescription
  - Pharmacist education sessions were completed as follows: 61% (n=25) during physician visit; 27% (n=11) during pharmacist-specific appointment; 12% (n=5%) via telephone

***Riley TB, Alemagno S. Pharmacist utilization of prescription opioid misuse interventions: Acceptability among pharmacists and patients. Res Social Adm Pharm. 2019;12:1178221818805980***

- **Design:** survey of Ohio community pharmacists and patient acceptance of pharmacy-based opioid interventions.
- **Practices:** Pharmacy-based interventions evaluated included patient counseling, prescription drug monitoring program monitoring, naloxone-based interventions, and referral to treatment resources
- **Outcomes:**
  - Pharmacists and patients view the use of patient counseling and prescription drug monitoring program validation of prescriptions as acceptable opioid-misuse interventions
  - Patients expressed interest in naloxone-based interventions while many pharmacists were opposed

***Pringle JL, Cochran J, Aruru M. Role of pharmacists in the Opioid Use Disorder (OUD) crisis. Res Social Adm Pharm. 2019;15(2):228-229.***

- **Design:** descriptive review of a Screening, Brief Intervention, and Referral to Treatment (SBIRT) community pharmacist program
- **Practices:** Pharmacist provided brief patient counseling including motivational interviewing principles aimed at enhancing motivation for eliminating or reducing alcohol and/or opioid misuse; enhancing motivation to access harm reduction and/or behavioral health services; and provided “ward handoffs” to other healthcare managers for treatment services.



- **Outcomes/Conclusions:** community pharmacists should be trained and activated in conducting public health campaigns and riving efforts to reduce the Opioid Crisis

Jensen AN, Beam CM, Douglass AR, Brabson JE, Colvard M, Bean J. **Description of a pharmacist-led clinical video telehealth group clinic for opioid overdose prevention and naloxone education.** *Ment Health Clin.* 2019 Jul 1;9(4):294-297.

- **Design:** retrospective chart review of naloxone related outcomes of a pharmacist-led clinical video telehealth (CVT) naloxone education group clinic vs. all other clinics at a Veterans Affairs Medical Center
- **Practices:** 1 Board Certified Psychiatric Pharmacist provided weekly naloxone groups including overdose prevention education and naloxone prescription via scope of practice simultaneously via CVT to urban and rural veterans across 2 main campuses and 4 community-based clinics. Patients were identified by clinic pharmacist via population management tools or referred by the opioid prescriber.
- **Outcomes/Conclusions:** 6-months post-implementation
  - Substance use disorder population trended toward lower rates of prescribing through the CVT clinic compared to all other clinics (21.4% vs 31.9%; P = .0821)
  - Patients identified by CVT clinic pharmacist more likely to have concomitant opioid benzodiazepine prescription (69.1% vs. 34.4%, p<0.001)
  - Naloxone CVT group clinic is an efficient strategy to extend services to high-risk patients beyond urban areas with 1 pharmacist prescribing 21.2% (n=84) of all facility naloxone during study period

Cariveau D, Fay AE, Baker D. **Evaluation of a pharmacist-led naloxone co-prescribing program in primary care.** *Journal of American Pharmacists Association.* 2019;59(6):867-871.

- **Design:** Single-cohort pre- and post-intervention study
- **Practices:** Pharmacists imbedded in a primary care clinic educated clinical staff regarding naloxone, created quick links within the electronic health record for ease of prescribing, identified patients on chronic opioid therapy for pain who met criteria for naloxone (e.g. MED>50mg, concurrent benzodiazepine, substance use disorder, history of overdose), and educated patients.
- **Outcomes/conclusions:**
  - Increased naloxone chronic opioid therapy co-prescribing [3.4% to 372% (p=0.0001)]
  - Interventions by embedded clinical pharmacist helped to overcome common barriers to naloxone access.

Griffin S, Wishart B, Bricker K, Luebchow A. **Impact of a pharmacist-driven intervention on the outpatient dispensing of naloxone.** *Journal of the American Pharmacists Association.* 2019;59(4):s161-s166.

- **Design:** Quasi-experimental, nonrandomized interventional study
- **Practices:** 5 outpatient pharmacists affiliated with an academic medical center provided patient-specific education regarding respiratory depression and overdose risk factors and offered prescription naloxone per North Carolina state health director order at initial visit
- **Outcomes/conclusions:** Pharmacist-driven intervention was associated with an increase in naloxone dispensing; of 38 eligible patients, n=2 naloxone prescriptions dispensed pre-implementation vs. 11 post-implementation (n = 0.007)

Cochran G, Chen Q, Field C. **A community pharmacy-led intervention for opioid medication misuse: A small scale randomized clinical trial.** *Drug and Alcohol Dependence.* 2019;206:107570.

- **Design:** randomized control trial
- **Practices:** Patients who screened positive for prescription opioid misuse using the Prescription Opioid Misuse Index were assigned to either standard medication counseling (SMC) by pharmacist or SMC plus brief motivational intervention-medication therapy management (BMI-MTM) [8-weekly sessions by pharmacist].
- **Outcomes/conclusions:**
  - High level of agreement among BMI-MTM participants for satisfaction per patient survey; at 3 months, patients who underwent BMI-MTM (n=15) had greater improvements in Opioid Misuse Index, pain (Short Form-36), and depression scales (PHQ-9) compared to SMC (n=17)

Wells I. **Medication-assisted treatment for opioid use disorder (OUD): Solving the puzzle with clinical pharmacy providers.** *J Pharm Pract.* 2020;33(2):124.

- **Resource type:** commentary
- **Summary:** description of integration and application of pharmacists as a collaborative provider for management of buprenorphine/naloxone for opioid use disorder at Minneapolis VA Healthsystem and Cleveland Clinic at Akron General as presented by interprofessional group at the 2019 American Society of Health-system Pharmacists Midyear Clinical Meeting

Wright QE, Higginbotham S, Bunk E, Covvey JR. **The impact of a pharmacist-led naloxone education and community distribution project on local use of naloxone.** *J A Pharm Assoc.* 2020;1544-3191(19)305535-7.

- **Design:** Prospective survey study
- **Practices:** Pharmacists offered and provided education on opioid use disorder and naloxone to individuals attending community outreach events.
- **Outcomes/Conclusions:** of N=265 participants given naloxone spray, 21.5% (n=57) completed both initial and 3-month follow-up surveys; approximately 3.5% (n=2) of survey respondents reported utilizing naloxone which was dispensed. A total of 52.6% of respondents believed the naloxone initiatives decreased stigma of illicit opioid use.

Ford JH 2nd, Gilson A, Mott DA. **Systematic analysis of the service process and the legislative and regulatory environment for a pharmacist-provided naltrexone injection service in Wisconsin.** *Pharmacy (Basel).* 2019;7(2):E29.

- **Design:** Exploratory study of Wisconsin's pharmacy laws which authorize pharmacists to provide a naltrexone injection service including semi-structured pharmacist interview (n=4)
- **Practices:** community pharmacists created infrastructures with naltrexone injection training, obtained CLIA waiver to administer rapid drug screen, created private space for administration, and established collaborative practice agreements with behavioral health practitioner or physician prescriber; n=1 pharmacist reported patients were referred by provider (80%) or treated as walk-ins (20%)
- **Conclusions:** Wisconsin laws and new partnership between community pharmacists, individuals, and prescribers highlight potential for community pharmacy in addressing OUD. Barriers included transportation, service infrastructure, reimbursement, and practitioner awareness and acceptance.



Manzur V, Mirzaian E, Huynh T. **Implementation and assessment of a pilot, community pharmacist-based, opioid pain medication management program.** *J Am Pharm Assoc.* 2020; S1544-3191(19): 30537-0.

- **Design:** Care gap evaluation via retrospective chart review in a community pharmacy setting within an academic medical center
- **Practices:**
  - Pharmacist identified patients from a rheumatology clinic prescribed at least 1 opioid medication and >1 short acting opioid, >90 MMED, >7-day supply of medication, and/or inappropriate medication combinations; gaps identified included minimal documentation of risk mitigation strategies and absence of naloxone
  - N=11 patients seen by pharmacist prior to clinic appointment; interventions included comprehensive assessment of presenting problem and recommendations to provider, PDMP search and mood evaluation, medication and naloxone education, and evaluation of lab needs
- **Outcomes/conclusions:** community pharmacists can engage patients and providers to fill care gaps for high risk patients and optimize pain management; untreated depression, anxiety, and insomnia were the most common problems identified by pharmacists

Bingham JM, Taylor AM, Boesen KP. **Preliminary investigation of pharmacist-delivered, direct-to-provider interventions to reduce co-prescribing of opioids and benzodiazepines among a Medicare population.** *Pharmacy.* 2020;8:25.

- **Design:** Retrospective review of prescription claims data
- **Practices:** Medication therapy management (MTM) tele-pharmacists identified patients with concurrent prescriptions for opioids and benzodiazepines via prescription claims data and provided recommendation to prescriber to discontinue one of the co-prescribed drugs.
- **Outcomes/conclusions:** 37,990 (65.79%) of pharmacist interventions resulted in a medication discontinuation by the provider. Top medications discontinued included hydrocodone/APAP, alprazolam, and tramadol; initial evidence supports pharmacist-supported direct-to-prescriber programs as an effective medication safety strategy.

Yates D, Frey T, Montgomery JC. **Utilizing risk index for overdose or serious opioid-induced respiratory depression (RIOSORD) scores to prioritize offer of rescue naloxone in an outpatient veteran population: A telephone-based project.** *Subst Abus.* 2018;39(2):182-184. doi: 10.1080/08897077.2018.1449171.

- **Design:** descriptive, retrospective review
- **Practices:** identify primary care veterans at highest risk for serious opioid-related adverse events using the Risk Index for Overdose and Serious Opioid-Induced Respiratory Depression (RIOSORD) and offer rescue naloxone kits by telephone-based outreach
- **Outcomes/conclusions:**
  - n = 38 (92.7%) of patients identified as high risk within 3-month period reached by telephone; n=26 (63.4%) of those reached agreed to naloxone prescription
  - pharmacist-led telephone-based outreach is a viable option for distributing naloxone to high-risk populations using an opioid related risk stratification tool

Lagisetty, P., et al. **A physician-pharmacist collaborative care model to prevent opioid misuse.** *American Journal of Health-System Pharmacy.* 2020; 77(10): 771-780.

- **Design:** Descriptive review
- **Practices:** A pharmacist provided in-person consultation visit and optional follow-up visit for the assistance of chronic pain management in 2 primary care practices over 4 month period. Eligible patients had chronic pain and a long-term prescription for opioids or buprenorphine or were referred by their primary care physician (PCP)
- **Outcomes/conclusions:**
  - n=46 of N=182 eligible patients completed all follow-up with n=43 (91%) receiving opioids over the past 6 months.
  - Pharmacist recommended adding or switching to a nonopioid pain medication (n=30), switching to buprenorphine for pain and complex persistent opioid dependence (n=20), and tapering opioids (n=3).
  - All physicians found the intervention acceptable and wanted more guidance on prescribing buprenorphine for pain.

Hoefling, A. D., et al. **Impact of pharmacist contact via telephone vs letter on rate of acquisition of naloxone rescue kits by patients with opioid use disorder.** *Substance Abuse.* 2020; 1-5.

- **Design:** Retrospective study
- **Practices:** Mental health clinical pharmacy specialists (CPS) at VA St. Louis HCS aimed to increase distribution of naloxone rescue kits to patients with Opioid Use Disorder (OUD). Study groups included those contacted by letter alone and those contacted by both letter and phone call.
- **Outcomes/conclusions:**
  - N= 335 patients were included
  - N=185 patients targeted for phone follow-up, n=81 were reached (43.8%), and n=254 received the letter alone.
  - The primary outcome was achieved by n=13 (5.1%) and n=52 (64.2%) participants in the letter alone and letter plus phone contact groups, respectively (p < 0.001).
  - Non-white race, prior participation in rehabilitation and active opioid prescription were also associated with a higher rate of kit obtainment.

Brunet, N., et al. **Increasing buprenorphine access for veterans with opioid use disorder in rural clinics using telemedicine.** *Substance Abuse.* 2020; 1-8.

- **Design:** Quality improvement project
- **Practices:** A psychiatric clinical pharmacy specialist served as an internal facilitator by visiting with rural outpatient clinics' frontline staff/managers, providing medication for opioid use disorder (MOUD) education, supporting psychiatry providers, and briefing hospital leadership. The goal was to increase availability of MOUD to Veterans, focusing on tele-prescribing buprenorphine to rural sites.
- **Outcomes/conclusions:**
  - N=12 Veterans were transferred to the rural telehealth buprenorphine clinic (home inductions: n=2; monitored induction at CBOC: n=4; transferred from another facility once tele-buprenorphine was made available: n=6).
  - n=9 (75%) remained on buprenorphine for a six month time period after beginning buprenorphine telehealth services.



- Overall, implementing tele-prescribing was negotiated with stakeholders at the target clinics and operationalized in a toolkit to guide future efforts.

**LeSaint, K. T., et al. *Buprenorphine for Opioid Use Disorder in the Emergency Department: A Retrospective Chart Review*. *Western Journal of Emergency Medicine*. 2020; 21(5), 1175.**

- **Design:** Retrospective chart review
- **Practices:** An emergency physician and pharmacist implemented a protocol using buprenorphine for the treatment of patients with opioid withdrawal at an academic, Level I trauma center. Patients included in this study were those in the ED for whom buprenorphine was administered to treat opioid withdrawal during an 18-month period
- **Outcomes/conclusions:**
  - N=77 patients who received buprenorphine, n=33 (43%) did not present with the chief complaint of opioid withdrawal; 74% last used heroin and presented in moderate opioid withdrawal
  - n=1 case of precipitated withdrawal occurred after buprenorphine administration
  - n=23 (30%) of patients received outpatient follow-up
  - Results underscore the safety, effectiveness, and feasibility of ED-initiated buprenorphine administration.

**Moore, T., et al. *Increasing access to care using clinical pharmacy specialist providers in outpatient mental health: Successful practice integration within the Department of Veterans Affairs*. *Journal of the American Pharmacists Association*. 2020.**

- **Summary:** The MH clinical pharmacy specialist (CPS) provider serves in many key roles to improve patient-centered care and medication outcomes by supporting the needs of the MH team, patients, and caregivers in areas of comprehensive medication management. MH CPS providers are integrated as MH providers in general and specialty MH clinics, behavioral health clinics embedded in primary care, residential rehabilitation facilities, specialty MH programs, and in inpatient MH units to improve access, quality, and safety. Overall, the MH CPS provider improves access to care, clinical outcomes, and safety when deployed as direct patient care providers on Veterans Affairs (VA) interprofessional care teams. VA MH clinical pharmacy practice continues to demonstrate what the MH CPS provider, practicing at the top of their license, can achieve as a core member in MH team-based care.

**Gordon, A. J., et al. *Stepped Care for Opioid Use Disorder Train the Trainer (SCOUTT) initiative: Expanding access to medication treatment for opioid use disorder within Veterans Health Administration facilities*. *Substance Abuse*. 2020; 41(3), 275-282.**

- **Summary:** In the Spring of 2018, the VHA initiated the Stepped Care for Opioid Use Disorder, Train the Trainer (SCOUTT) Initiative to facilitate access to MOUD in VHA non-SUD care settings. The SCOUTT Initiative's primary goal is to increase MOUD prescribing in VHA primary care, mental health, and pain clinics by training providers working in those settings on how to provide MOUD and to facilitate implementation by providing an ongoing learning collaborative. The VHA Office of Mental Health & Suicide Prevention (OMHSP) collaborated with a wide representation of VHA stakeholders in originating, planning, and implementing the SCOUTT Initiative, including leaders representing (among others) national pain, primary care, mental health, SUD specialty-care, primary care mental health integration, pharmacy, nursing, and education services. These leaders formed the multidisciplinary Planning Committee for the SCOUTT Initiative that began meeting monthly in January 2018 and continues to meet today.



Kenney A, Cox N, Bryan MA, Cochran G. **Brief intervention medication therapy management: Establishment of an opioid misuse intervention model delivered in a community pharmacy.** *Am J Health-Syst Pharm.* 2021 Feb 8;78(4):310-319. doi: 10.1093/ajhp/zxaa389.

- **Design:** Practice Research Report-Key findings from 4 distinct studies (multisite cross-sectional pharmacist survey; multistakeholder intervention planning project; multisite cross-sectional patient survey; small-scale randomized trial)
- **Practices:** Study results show development of evidence for the Brief Intervention Medication Therapy Management (BIMTM) model to detect and address patient opioid misuse. BIMTM is an intervention consisting of 9 sessions. One medication management session is delivered in person by a community pharmacist, and the remaining sessions are delivered telephonically by a patient navigator to follow on goals established and address concomitant health concerns that increase risk for misuse.
- **Outcomes/Conclusion:** Overall, the establishment of BIMTM supports community pharmacist identification and intervention with patients engaged in opioid misuse

Santa HM, Amirova SG, Ventricelli DJ, Downs GE, Nowalk AA, Pringle JL, Aruru M. **Preparing pharmacists to increase naloxone dispensing within community pharmacies under the Pennsylvania standing order.** *Am J Health Syst Pharm.* 2021 Feb 8;78(4):327-335. doi: 10.1093/ajhp/zxaa387. *Substance Abuse.* 2020; 41(3), 275-282.

- **Design:** Descriptive Report-SBIRT (screening, brief intervention, and referral to treatment) and naloxone training and pre-post survey results
- **Practices:** Twenty-four pharmacists in Philadelphia, PA completed SBIRT and naloxone trainings. Each pharmacy had at least 1 pharmacy champion who received additional training on and helped develop pharmacy site-specific naloxone dispensing protocols
- **Outcomes/Conclusion:** Pre-post survey results showed a reduction in stigmatizing attitudes regarding naloxone dispensing; an increase in understanding of the standing order and appropriate naloxone use; and an increase in self-reported confidence in ability to appropriately identify, discuss, and dispense naloxone to patients. All pharmacies increased their average monthly dispensing rate following protocol implementation. Pharmacists who received both trainings were more likely to change naloxone dispensing practices and increase dispensing in community pharmacies.

DeRonne BM, Wong KR, Schultz E, Jones E, Krebs EE. **Implementation of a pharmacist care manager model to expand availability of medications for opioid use disorder.** *Am J Health Syst Pharm.* 2021 Feb 8;78(4):354-359. doi: 10.1093/ajhp/zxaa405.

- **Design:** Descriptive reports – overview of a clinical pharmacist care manager (CPCM) model for medications for OUD treatment
- **Practices/Description:** At the Minneapolis Veterans Affairs Health Care System the CPCM model for medications for OUD (MOUD) was identified as a care model that would address patient and facility barriers to effective OUD treatment. Pharmacists were integral in program development and implementation and served as the main care providers. An interim evaluation of the program established that the proportion of patients with OUD receiving MOUD had increased, with use of the program resulting in treatment of 109 unique patients during 625 visits. Key program implementation facilitators included the facility leadership establishing increased use of MOUD as a priority area, identification of a physician champion, and a history of successful expansion of clinical pharmacy specialist practice within the VA system. Implementation barriers included factors related to provider engagement, patient identification, and program support. The CPCM model of provision of MOUD expanded the pharmacist role in buprenorphine management.

Rife, T., Tat, C., & Malakootian, M. **Evaluation of an opioid risk mitigation initiative for veterans undergoing hip or knee arthroplasty at San Francisco Veterans Affairs Health Care System** *Am J Health Syst Pharm.* 2021 Feb 8;78(4), 336-344. doi: 10.1093/ajhp/zxaa406.

- **Design:** Descriptive report – Quality improvement project
- **Practices:** A quality improvement project was conducted to evaluate the number of pharmacist-provided opioid risk mitigation recommendations implemented by orthopedic providers for patients who underwent total hip or knee arthroplasty at SFVHCS. A pharmacist-led workflow for completing risk mitigation reviews was developed in collaboration with orthopedic providers, and urine drug screening was added to the preoperative laboratory testing protocol. The following recommendations were communicated via electronic medical record: limit postoperative opioids to a 7- or 14-day supply based on risk of suicide and/or overdose, offer naloxone and a medication disposal bag, and order a urine drug screen if not already completed.
- **Outcomes/conclusion:** Risk reviews were completed for 75 patients. Among 64 patients with 2-month post-discharge data available, 88% (7 of 8) of 7-day and 79% (44 of 56) of 14-day opioid supply recommendations were implemented; 41% (26 of 59) of recommendations to issue a medication disposal bag, 17% (2 of 12) recommendations to order a missing urine drug screen, and 9% (5 of 55) of recommendations to offer naloxone were implemented.

Wu LT, John WS, Ghitza UE, Wahle A, Matthews AG, Lewis M, Hart B, Hubbard Z, Bowlby LA, Greenblatt LH, Mannelli P; Pharm-ODU-Care Collaborative Investigators. **Buprenorphine physician-pharmacist collaboration in the management of patients with opioid use disorder: results from a multisite study of the National Drug Abuse Treatment Clinical Trials Network.** *Addiction.* 2021 Jan 11. doi: 10.1111/add.15353.

- **Design:** Nonrandomized, single-arm, open-label feasibility trial investigating the feasibility/acceptability of a new collaborative care model involving buprenorphine-waivered physicians and community pharmacists.
- **Practices:** This study looked at three office-based buprenorphine treatment (OBBT) clinics and three community pharmacies in the United States (total of six physicians and six pharmacists involved). Patients with a DSM-5 diagnosis for OUD on buprenorphine maintenance were included. After screening, eligible patients' buprenorphine care was transferred from their OBBT physician to a community pharmacist for 6 months. Primary outcomes included recruitment, treatment retention and adherence, and opioid use. Secondary outcomes were intervention fidelity, pharmacists' use of prescription drug monitoring program (PDMP), participant safety, and satisfaction with treatment delivery.
- **Outcomes/Conclusions:** 71/76 of eligible participants enrolled into the study. There were high rates of treatment retention (88.7%) and adherence (95.3%) at the end of the study. The proportion of opioid-positive urine drug screens (UDSs) among complete cases at month 6 was (4.9%, 3/61). Pharmacists used PDMP at 96.8% of visits. There were no opioid-related safety events. Over 90% of patients endorsed that they were "very satisfied with their experience and the quality of treatment offered." Similarly, positive ratings of satisfaction were found among physicians/pharmacists. This showed the feasibility and acceptability to patients of this collaborative care model.

Rife T, Tat C, Jones J, Pennington DL. **An initiative to increase opioid overdose education and naloxone distribution for homeless veterans residing in contracted housing facilities.** *J Am Assoc Nurse Pract.* 2021 Mar 12. doi: 10.1097/JXX.0000000000000577.

- **Design:** prospective single-arm cohort QI intervention
- **Practice:** Many housing facilities for homeless veterans contracted with the San Francisco Veterans Affairs Health Care System are located in neighborhoods with high rates of opioid overdose. This quality improvement (QI) initiative aimed to increase provision of opioid overdose education and naloxone for veterans and staff at contracted housing facilities.
- **Outcomes/Conclusions:** A total of 18 contracted veteran housing programs were contacted from July 2019 through January 2020 to schedule training. Of those, 13 programs responded to outreach and 10 visits were completed at 8 housing facilities. Training was provided by pharmacist and nurse practitioner trainers to 26 staff members and 59 veterans. Naloxone was prescribed to 37 veterans. Overall, A pharmacist-led and nurse practitioner–led initiative was effective in increasing veteran and staff access to opioid overdose education and naloxone at >44% contracted veteran housing facilities.

Napoli K, Grant M, Remines J, Nadpara P, Goode JR. **Impact of pharmacist counseling to enhance the accessibility of naloxone nasal spray to patients in a community pharmacy setting.** *J Am Pharm Assoc (2003).* 2021 Jan 10;S1544-3191(20)30628-2. doi: 10.1016/j.japh.2020.12.007.

- **Design:** Prospective 4-month, interventional study in southwest Virginia conducted at 5 geographically similar large community chain pharmacies
- **Practices:** A National Drug Code activity report within each store was used to identify patients (18-64 yo), filling opioid medication without naloxone. A pharmacist recommended naloxone to patients at the point of care. Patients accepting the recommendation for naloxone received pharmacist counseling from a standardized counseling script and by using a naloxone nasal spray demo kit. All eligible patients were provided a postintervention survey assessing their confidence with naloxone, if naloxone had been recommended before, and if they were picking up naloxone on the basis of the pharmacist’s recommendation.
- **Outcomes/Conclusion:** A total of 121 naloxone prescriptions were dispensed (36% increase compared to previous year). In total, 38 patients completed the postintervention survey. After receiving pharmacist counseling, patients indicated being very confident with administering naloxone correctly and for recognizing an opioid overdose, 73.9% and 65.2%, respectively. Of the patients who completed the survey, 60.5% received naloxone and accepted counseling from the pharmacist.

Mailloux LM, Haas MT, Larew JM, DeJongh BM. **Development and implementation of a physician-pharmacist collaborative practice model for provision and management of buprenorphine/naloxone.** *Ment Health Clin.* 2021 Jan 8;11(1):35-39. doi: 10.9740/mhc.2021.01.035.

- **Design:** Quality improvement looking at a physician-pharmacist collaborative practice models (PPCPM) implementation for management of patients on MOUD with buprenorphine/naloxone
- **Practices:** A PPCPM for management of patients on MOUD with buprenorphine/naloxone was piloted in an outpatient substance use disorder clinic. Approximately 4 hours per week were dedicated to physician-pharmacist collaborative medical appointments for a 5-month trial period. The pharmacist met with the patient first and then staffed the case with the collaborating psychiatrist. Descriptive data from PPCPM appointments was collected and compared to data from psychiatrist-only appointments.

- **Outcomes/Conclusions:** 25 patients were seen over 44 appointments (estimated 33 hours of psychiatrist time saved). Average initial and end buprenorphine doses, urine drug screen (UDS) results, and mental health (MH) medication interventions were similar between patients seen in PPCPM appointments compared with those seen in psychiatrist-only appointments. Collection of UDS, identification and management of MOUD adherence issues, other service referrals, and medication reconciliation intervention were more frequent in PPCPM appointments. Overall, implementation of a PPCPM allowed for provision of a similar level of care regarding MOUD and MH-related medication management while saving psychiatrist time.

*Kennedy AG, Wood M, Starecheski G, Belcher R, Cote E. Academic detailing with ambulatory pharmacists to support naloxone counseling. J Am Pharm Assoc (2003). 2021 Feb 20;S1544-3191(21)00033-9. doi: 10.1016/j.japh.2021.01.031.*

- **Design:** Descriptive report – academic detailing program to pharmacists on the topic of counseling and promoting naloxone to patients
- **Practices:** Pharmacists were recruited by convenience sampling. Three pharmacists who were experienced with academic detailing techniques provided the education. Survey data were collected to evaluate the program.
- **Outcomes/Conclusions:** 33 pharmacists participated who worked in a variety of ambulatory settings, including chain or corporate-owned pharmacies (58%), hospital-owned specialty pharmacies (15%), hospital-owned community pharmacies (15%), and independently owned or other pharmacies (12%). 28 (85%) completed an immediate post-session evaluation survey. 27 (96%) indicated they felt the information presented will impact their practice or patient care. 11 (33%) completed a second post-session survey, self-reporting improvements related to counseling patients about naloxone. Overall, participating in academic detailing supports community pharmacists' providing patient counseling about naloxone.

*Wu S, Frey T, Wenthur CJ. Naloxone acceptance by outpatient veterans: A risk-prioritized telephone outreach event. Res Social Adm Pharm. 2021;17(5):1017-1020.*

- **Design:** Prospective quality improvement project
- **Practices:** The Risk Index for Overdose or Serious Opioid-Induced Respiratory Depression (RIOSORD) tool was used to identify patients with risk class  $\geq 4$  who did not have a naloxone kit filled in the past year. Pharmacy trainees contacted at-risk patients and offered naloxone during a team-based telephone outreach event.
- **Outcomes/Conclusions:**
  - There was a statistically significant increase in the proportion of at-risk patients who had a naloxone kit before versus after the event (difference = 0.35,  $p < 1 \times 10^{-6}$ ). Per-protocol analysis showed that of 164 patients contacted, 67% were reached ( $n = 109$ ) and 80 patients accepted naloxone, corresponding to a 73% acceptance rate for those reached. The average reported time spent on phone call and documentation per patient reached was 14 minutes.
  - A team-based telephone outreach event is an effective method for distributing naloxone to at-risk outpatient veterans.

## Inpatient Services

Haynes M. **Pharmacist involvement in a chemical-dependency rehabilitation program.** *Am J Hosp Pharm.* 1988 Oct;45(10):2099-101.

- **Design:** descriptive review of pharmacist intervention with specialized education on alcoholism and addiction
- **Practices:** Pharmacists provide pharmaceutical services to meet the medical needs of patients during detoxification; development of detoxification protocols for management of withdrawal from drugs of abuse; education of patients and their families, other clinical staff members, and pharmacy students about the pathophysiology of addiction, treatment options, and the foundations of recovery; medication and addiction counseling; and multidisciplinary team support of recovery. The pharmacist employed at this hospital spends about 70% of her time with pharmaceutical services and 30% with counseling services.
- **Outcomes/Conclusions:**
  - Pharmacists in a chemical-dependency rehabilitation program have a unique opportunity to affect positively the physical and emotional health of recovering individuals by taking on responsibilities beyond traditional pharmacy practice.

Raphael, C, Fedoruk E. **Practice Spotlight: Pharmacists of the Centre for Addiction and Mental Health.** *The Canadian Journal of Hospital Pharmacy.* 2008; 61(5):346-347.

- **Design:** descriptive review of pharmaceutical services within the Canadian Centre for Addiction and Mental Health provided by approximately 30 pharmacists with expertise in addictions and mental health.
- **Practices:** Pharmacist provided a range of clinical and medication management services and play an important role in the education and training of students, hospital staff, clients, and the general public. In addition, pharmacists may participate in policy development and dissemination and in research. CAMH pharmacists work within multidisciplinary health teams (which also include, among others, psychiatrists, other physicians, nurses, occupational therapists, social workers, dieticians, and recreational therapists) and the patient population.

Andrews LB, Bridgeman MB, Dalal KS, et al. **Implementation of a pharmacist-driven pain management consultation service for hospitalized adults with a history of substance abuse.** *Int J Clin Pract.* 2013;67(12):1342-9.

- **Design:** descriptive review of implementation of a pharmacist-driven pain management service for inpatients with concomitant substance use disorder
- **Practices:** Clinical pharmacists provided pain pharmacotherapy recommendations with a goal of adequate pain management and behavior modification (preferentially prescribing patient-controlled analgesia (PCA), oral opioids, or non-opioid alternatives)
- **Outcomes:**
  - End of 3-month pilot period: a significant reduction of 25% in intermittent morphine and 42% in intermittent hydromorphone use (month prior vs. pilot conclusion); increase frequency of PCAs use (n=3 vs. n=12) in the month prior to and concluding implementation.
  - All team members surveyed noted decreased intravenous intermittent opioid use corresponding with decrease in disruptive and intimidating behavior.

Acquisto NM, Schult RF, Sarnoski-Roberts S. Effect of pharmacist-led task force to reduce opioid prescribing in the emergency department. *J Am Pharm Assoc.* 2019;76(22):15.

- **Design:** Observational evaluation of opioid use outcomes



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- **Practices:** Interdisciplinary ED opioid reduction task force was formed by emergency medicine and toxicology clinical pharmacy specialists. Primary goals were to reduce overall opioid use in adult and pediatric EDs and opioid discharge prescriptions by 30% over 12-months; developed documents including opioid prescribing guideline and disease state-specific treatment pathways for multimodal pain management, pain management for patients with opioid dependence, and treatment of opioid withdrawal and naloxone prescribing with standard phrases and talking points.
- **Outcomes/conclusions:** clinical pharmacist-led ED opioid reduction program demonstrated positive results, with 63.5% reduction in overall ED opioid orders and significant decrease in monthly ED opioid orders per 1,000 visits at 12 months

*Tran TH, Swoboda H, Perticone K, Ramsey E, Thompson H, Hill K, Karnik NS. **The substance use intervention team: A hospital-based intervention and outpatient clinic to improve care for patients with substance use disorders.** Am J Health Syst Pharm. 2021 Feb 8;78(4):345-353. doi: 10.1093/ajhp/zxaa408.*

- **Design:** Descriptive report-Development of substance use intervention team (SUIT) and related outcomes
- **Practices:** The SUIT program provides inpatient consultation services as well as medical and behavioral clinic visits to transition patients to long-term treatment and is comprised of physicians, nurse practitioners, a clinical pharmacist, social workers, and a nurse. The medical center initiated screening efforts in tandem with its interdisciplinary team and clinic. The team would attempt to start appropriately selected patients with SUD on medications for SUD while hospitalized. The clinical pharmacist rounds with the inpatient SUIT service, counsels patients, and oversees the inpatient and outpatient medication use process.
- **Outcomes/Conclusion:** From January- December 2018, 87.2% of patients admitted to the hospital received initial SUD screening. Of the patients who screened positive, 1,400 received a brief intervention by a unit social worker; the SUIT service was consulted on 880 patients, and multiple medications for SUD were started during inpatient care. The SUIT service can serve as a model for programs working to implement SBIRT and SUD treatment services.

*Kirby T, Connell R, Linneman T. **Assessment of the impact of an opioid-specific education series on rates of medication-assisted treatment for opioid use disorder in veterans.** Am J Health Syst Pharm. 2021 Feb 8;78(4):301-309. doi: 10.1093/ajhp/zxaa386.*

- **Design:** Practice research report– retrospective cohort analysis
- **Practices:** This report compared rates of MAT, and OUD-related ED visits and/or hospital admissions within 1 year, between Veterans with OUD who completed inpatient rehabilitation prior to implementation of a series of group sessions designed to engage intrinsic motivation to change behavior surrounding opioid abuse and provide education about MAT (the control group) and those who completed rehabilitation after implementation of the education program (the intervention group). A post hoc, multivariate analysis was performed to evaluate possible predictors of MAT use and ED and/or hospital readmission. Groups were led by existing staff, including psychologists, social workers, and a clinical pharmacy specialist.
- **Results/Conclusion:** 158 patients were included (95-control group vs 63-intervention group. Rates of MAT were 25% (24/95) and 75% (47/ 63) respectively (P < 0.01). Opioid series participation and MAT use were independently associated with decreased rates of OUD-related ED visits and/or hospital admission (hazard ratios of 0.16 [95% CI, 0.06-0.44] and 0.32 [95% CI, 0.14-0.77], respectively) within 1

year after rehabilitation completion. Overall, focused OUD-related education in a substance abuse program for veterans with OUD increased rates of MAT and was associated with a decrease in OUD-related ED visits and/or hospital admission within 1 year.

Moore PQ, Cheema N, Celmins LE, Patel A, Follman S, Soni H, Szwak JA, Pho MT, Carter K, Arora VM. **Point-of-care naloxone distribution in the emergency department: A pilot study.** *Am J Health Syst Pharm.* 2021 Feb 8;78(4):360-366. doi: 10.1093/ajhp/zxaa409.

- **Design:** Descriptive report-protocol development for POC OEND in the ED
- **Practices:** A multidisciplinary team of experts including pharmacists developed the protocol, which included 5 steps: (1) patient screening, (2) order placement in the electronic health record (EHR), (3) a patient training video, (4) dispensing of naloxone kit, and (5) written discharge instructions. The naloxone kits were assembled, labeled to meet requirements for a prescription, and stored in an automated dispensing cabinet. Two pharmacists, 30 attending physicians, 65 resident physicians, and 108 nurses were trained.
- **Outcomes/Conclusions:** In 8 months, 134 orders for take-home naloxone were entered and 117 naloxone kits were dispensed, (87.3% obtainment rate). The indication for take-home naloxone kit was heroin use for 61 patients (92.4%). Overall, POC naloxone distribution is feasible and yielded a rate of obtainment significantly higher than previous studies in which naloxone was prescribed.

### Hybrid Services

Ash N, Tuten J, Bohenek W, Latham B. **A comprehensive approach to addressing the opioid epidemic in a large health system.** *Am J Health Syst Pharm.* 2021 Feb 8;78(4):320-326. doi: 10.1093/ajhp/zxaa388.

- **Design:** Descriptive Report-Implementation of a system-wide Opioid Steering Committee at a nonprofit Catholic health system
- **Practices:** The committee was chaired by a senior pharmacy executive and supported by 4 subcommittees: data analytics, education development, outreach and assessment, and electronic health record (EHR). The committee developed and implemented several initiatives, including forming a database with prescribing data by specialty and geographical location, implementing a standardized screening approach in the emergency department, challenging hospitals to create partnerships with local schools, and creating EHR enhancements to change opioid prescribing habits.
- **Outcomes/Conclusion:** The prescribed opioid burden was reduced from 65.3 to 35.2 morphine milligram equivalents (MME) from 2016 to 2019 (46% absolute reduction). During this same time the number of acute prescription orders with a MME dose >30 was reduced by 52% (from 37,793 to 17,822 prescriptions per year).

Costa T, Zhang M. **The innovative role of an "opioid overdose prevention pharmacist" at a mental health teaching hospital.** *Am J Health Syst Pharm.* 2021 Feb 8;78(4):292-296. doi: 10.1093/ajhp/zxaa407.

- **Design:** Descriptive practice review
- **Summary:** National and provincial changes aimed at improving access to harm reduction programs catalyzed the creation of the opioid overdose prevention pharmacist position at Centre for Addiction and Mental Health (CAMH) in Canada. The pharmacist acted as the central developer and coordinator of key deliverables, including an opioid overdose risk assessment tool, and provided education and training across the organization. The pharmacist trained clinicians within outpatient addictions

services, as well as inpatient units and other outpatient clinics. Benefits of this initiative have extended beyond CAMH, such that resources have been made available to other organizations and can be modified and adapted to suit their needs. The pharmacist continues to be available for consultation by other institutions for implementation advice and knowledge translation at a health-systems level.

### *Policy, Position Statements, & Practice Models*

*American Society of Health-System Pharmacists. ASHP statement on the pharmacist's role in substance abuse prevention, education, and assistance. Am J Health-Syst Pharm. 2016; 73: e267-70.*

- **Resource type:** Professional organization position statement outlines specific substance abuse related activities in which pharmacists should be involved in a variety of patient care, employee health, and community activities
- **Summary:**
  - Pharmacists have the unique knowledge, skills, and responsibilities for assuming an important role in substance abuse prevention, education, and assistance.
  - Examples of responsibilities relevant to the SUD CPS include:
    - Promote substance abuse prevention efforts within healthcare organizations through employee education/awareness, participation in state prescription drug monitoring programs, and evaluation of practices which enable or foster drug abuse behavior.
    - Provide substance abuse education to healthcare professionals, healthcare trainees, and patients by fostering development of substance abuse related curricula for pharmacy students; providing post-graduate training in addictions, pain management, and palliative care to various healthcare disciplines; and conducting research on substance abuse and addiction.
    - Aid through identification and treatment referral for patients who may have signs of substance abuse; collaboration on development of pharmacotherapeutic elements of drug detoxification protocols; and provision of pharmaceutical care to patients treated for substance abuse and dependency.

*Bratberg J. Pharmacy: addressing substance use in the 21<sup>st</sup> century. Substance Abuse Journal. 2019; 40: 421-434.*

- **Resource type:** Association for Multidisciplinary Education and Research in Substance Use and Addition (AMERSA) Core Competencies for Pharmacists
- **Summary:** Key concepts, skills, and attitudes are outlined to optimize, sustain, and expand independent and collaborative pharmacist roles in caring for persons who use and misuse substances and those diagnosed with substance use disorder

[2014 Buprenorphine Summit, Report of Proceedings. U.S. Department of Health and Human Services; Substance Abuse and Mental Health Services Administration \(SAMHSA\). Sep 2014. Rockville, MD.](#)

- **Resource type:** summary of professional meeting proceedings convened by Center for Substance Abuse Treatment (CSAT) and SAMHSA in partnership with National Institute on Drug Abuse (NIDA) with goal of gathering the perspectives of field experts regarding the state of practice and possible strategies for advancement.
- **Key findings:**

- Strategies to increase access to buprenorphine included training pharmacists to take on additional responsibility related to buprenorphine treatment (e.g. medication monitoring and compliance)
- Key work group conclusions related to role of provider in training in improving access included recommendation to “increase educational opportunities and resources for nonphysician stakeholders, especially pharmacists”

### [Geisinger Staffing Model for MAT for Opioid Use Disorder](#)

- **Resource type:** practice model describing outpatient multidisciplinary MAT program within not-for-profit community healthcare system led by board certified addiction physicians with a case management team, an addiction-trained clinical pharmacist, advanced practitioners and administrative support
- **Summary:**
  - Roles and responsibilities of the addiction-trained pharmacist when conducting initial and follow-up visits included education related to SUD diagnosis and appropriate level of care comprising medication and behavioral interventions; monitoring of state controlled substance database; buprenorphine induction and follow-up assessment of efficacy, adherence, and tolerability; ordering and assessment of urine toxicology and other laboratory values; and referral to other medical, psychological, and/or social services as indicated.

### [Indian Health Service \(IHS\) Naltrexone XR Collaborative Practice Agreement Policy](#)

- **Resource type:** single IHS facility protocol for pharmacist management of naltrexone XR injection for alcohol or opioid use disorder in conjunction with outpatient substance use disorder behavioral interventions
- **Summary:**
  - Pharmacist provided comprehensive medication management of naltrexone XR injection upon provider referral including initiation and follow-up face-to-face visits; patient education; assessment of adherence and efficacy; ordering and assessment of urine drug screen, vitals, and other labs/tests; use of measurement-based care (e.g. PHQ-9, COWS)

### [West Virginia Board of Pharmacy Guideline: Pharmacists and Buprenorphine-Assisted Therapy. Sep 2017; Charleston, WV](#)

- **Resource type:** state board of pharmacy practice guideline
- **Summary:** includes standards and responsibilities to guide pharmacists in dispensing buprenorphine for opioid use disorder in accordance with state, local, and federal laws and regulations with an emphasis to expanding access to safe and effective treatment.

### [Pharmacist role and reimbursement for the prevention of opioid misuse, abuse and diversion: 2017 Report to the Legislature. Vermont Department of Health. Jan 2017; Burlington, VT.](#)

- **Resource type:** state legislative report ordered after pharmacists were granted provider status per state Act 173 (2016)
- **Summary:** outlines existing evidence and uncertainties related to the pharmacist role in prevention of opioid misuse, abuse, and diversion and whether and to what extent pharmacists should be reimbursed for certain clinical services

[Chou R, et al. Medication-Assisted Treatment Models of Care for Opioid Use Disorder in Primary Care Settings. Technical Brief No. 28. \(Prepared by the Pacific Northwest Evidence-based Practice Center under Contract No. 290-2015-00009-I.\) AHRQ Publication](#)

- **Resource type:** technical brief intended to assist healthcare policy makers, providers, and patients in making informed decisions and therefore improving quality of healthcare services
- **Summary:** outlines and promotes integration of pharmacist-based management strategies into MAT models of care in primary care settings

*Additional Resources*

[\*\*Project ECHO: Medication Assisted Treatment Clinic. University of Nevada, Reno School of Medicine\*\*](#)

- **Resource type:** telehealth consultation resource to support healthcare providers in providing care to underserved areas
- **Summary:** multidisciplinary MAT team includes pharmacist, physician, nurse, physician assistant and social worker members focusing on mentoring and supporting providers who are currently or interested in becoming Medication Assisted Therapy (MAT) certified

[Frogner BK, et al. Modernizing Scope-of-Practice Regulations — Time to Prioritize Patients. N Eng J Med. 2020; 382:591-593. DOI: 10.1056/NEJMp1911077.](#)

- **Resource type:** editorial/commentary
- **Summary:**
  - Call to revise antiquated laws and health-systems policies which restrict prescribing for various disciplines and improve approach to regulating health professionals’ scope of practice to better serve needs of patients
  - “Psychiatric pharmacists, for example, could help offset the shortage of psychiatrists by providing medication-management services...many states don’t allow these practitioners to prescribe buprenorphine, despite the need for more trained clinicians to mitigate the opioid epidemic.

[Green T, Bratberg J, Finnell DS. Opioid use disorder and the COVID 19 pandemic: A call to sustain regulatory easements and further expand access to treatment. Substance Abuse. 2020; 41:2, 147-149, DOI: 10.1080/08897077.2020.1752351](#)

- **Resource type:** editorial/commentary
- **Summary:** interprofessional authors “highlight the critical roles that pharmacists have related to sustaining and advancing the changes being made in the face of the current COVID-19 pandemic” and specifically address the impact of the pandemic on persons with substance use disorder, barriers that persist, and considerations for easing regulations which impede care

Peckham AM, Ball J, Colvard MD, Dadiomov D, Hill LG, Nichols SD, Tallian K, Ventricelli DJ, Tran TH.

[\*\*Leveraging pharmacists to maintain and extend buprenorphine supply for opioid use disorder amid COVID-19 pandemic. Am J Health Syst Pharm. 2021 Mar 18;78\(7\):613-618. doi:\*\*](#)

[10.1093/ajhp/zxab003](#)

- **Resource type:** editorial/commentary
- **Summary:** Pharmacist authors highlight the potential role of leveraging pharmacists during the opioid/COVID-19 syndemic to improve medication access and outcomes for OUD. Pharmacists, while both qualified and capable of liberalizing access to all forms of MOUD, may have the strongest impact by increasing access to buprenorphine. Pharmacists can be utilized in a variety of settings to help provide



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strategies for increasing access and use of MOUD within the inpatient, community, as well as the outpatient and transitions of care setting. Strategies should continue to be identified to increase patient access to MOUD, particularly buprenorphine, with increased clinical pharmacist utilization.



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