C I T Y O F P H I L A D E L P H I A

DEPARTMENT OF PUBLIC HEALTH
1101 Market Street, Suite 1320
Philadelphia, PA 19107
Tel: (215) 686-5200
Fax: (215) 686-5212

July 2021

Dear Colleague:

In 2020, there were 1,214 drug overdose deaths in Philadelphia. We can prevent these deaths. As part of the city's opioid overdose prevention initiative, the Philadelphia Health Department works with health care providers and communities to expand access to buprenorphine to treat opioid use disorder (OUD).

Buprenorphine decreases overdose deaths, reduces drug use, prevents relapse, and enables patients to reengage in employment, school and family relationships. Like other medications for chronic health conditions, buprenorphine can be integrated into primary care and can help your patients lead healthier lives. Despite these benefits, not enough patients know about or use buprenorphine; many Philadelphians with OUD who could benefit from buprenorphine do not receive it. As a Philadelphia health care provider, you can change this by offering buprenorphine to your patients with OUD.

Make these changes to help improve the health of your patients and the city:

- Educate patients about buprenorphine and that it is one of the most effective treatments for OUD.
- Obtain your waiver to prescribe buprenorphine to up to 30 patients.
- Prescribe buprenorphine to patients to decrease overdose risk and improve quality of life.
- If already prescribing, increase the number of patients with OUD you treat with buprenorphine to expand treatment access in Philadelphia.
- Utilize mentorship program and 24/7 consultation line to use your waiver and prescribe buprenorphine

This Buprenorphine Action Kit includes clinical tools and resources for you and educational materials for your patients. To access the materials online and share with others, visit https://bit.ly/BupeSavesLives

Thank you for your dedication to the health of Philadelphians and for your partnership in reversing this epidemic.

Sincerely,

Jeffrey Hom, MD, MPH
Medical Director, Division of Substance Use Prevention and Harm Reduction
Philadelphia Department of Public Health

Department of Public Health
Cheryl Bettigole, MD MPH
Acting Health Commissioner

CHART

Unintentional Drug Overdose Fatalities in Philadelphia, 2020

In Philadelphia, PA, unintentional drug overdoses contribute to significant premature mortality. In 2020, there were 1,214 drug overdoses in Philadelphia, an increase of 9% and 6% from 2018 and 2019, respectively. Eighty-six percent of overdose fatalities involve opioids, a class of drugs that include pharmaceutical opioids, heroin, and fentanyl, a strong synthetic opioid that is the main driver of fatal overdoses. While fentanyl was involved in less than 10% of drug overdose deaths in Philadelphia in 2010, it was involved in 81% of all drug overdose deaths in 2020.

Prior to 2020, unintentional overdose deaths were highest among non-Hispanic White individuals. However, in 2020 the number of overdoses among non-Hispanic Black individuals increased 29% while the number of overdoses among non-Hispanic White individuals decreased 10%. The shift in demographics first occurred in the second quarter of 2020.

This issue of CHART summarizes trends in unintentional drug overdose fatalities through 2020. The COVID-19 pandemic, and its impact on drugs trends, access to drug treatment, and harm reduction services should be considered when examining the number of fatal overdoses from 2020. All data shown are from the Philadelphia Medical Examiner's Office.

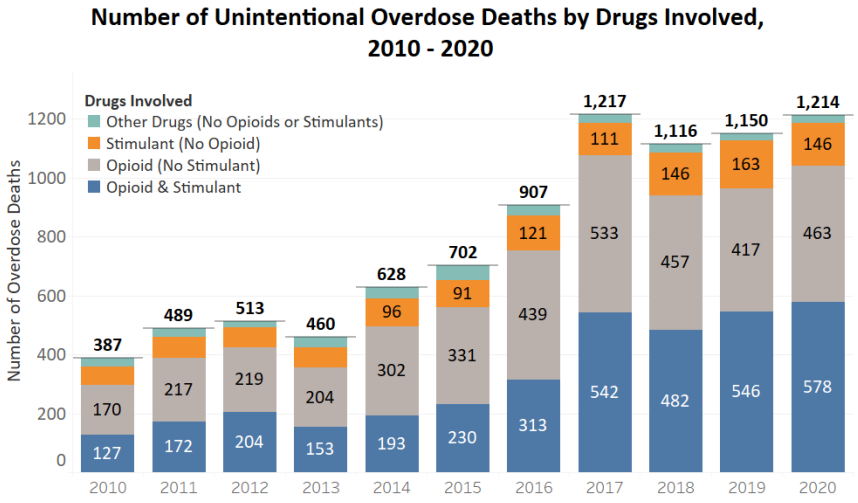
KEY TAKEAWAYS

In 2020, there were 1,214 unintentional drug overdose deaths in Philadelphia

Fentanyl is increasingly present in all drug-related deaths, including those involving pharmaceutical opioids, methamphetamine, and PCP

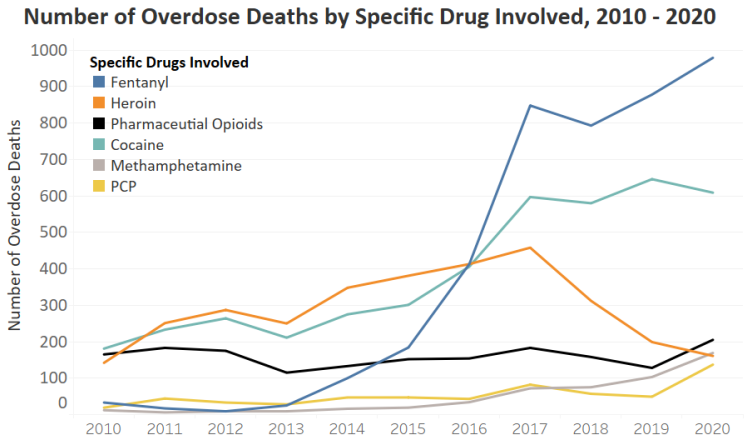
Deaths among non-Hispanic Black individuals increased while deaths among non-Hispanic White individuals declined

Unintentional drug overdose deaths increased by 6% from 2019 to 2020



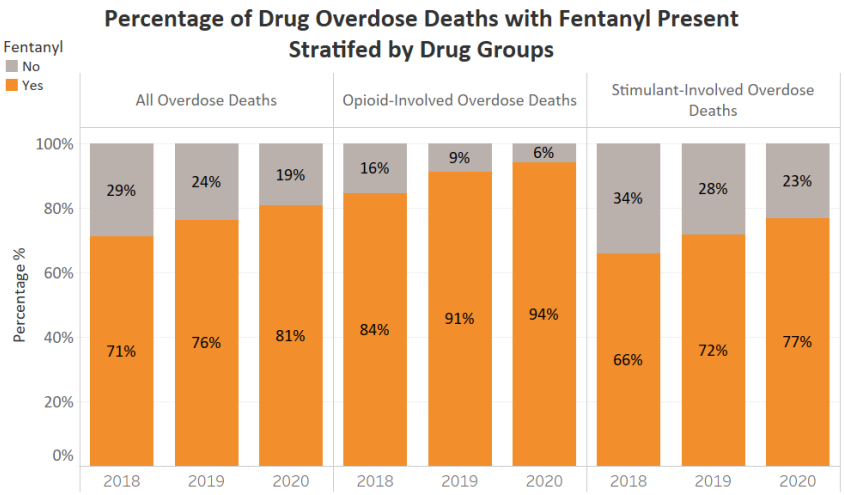
- In 2020, 1,214 people died of an unintentional drug overdose. This represents a 9% and 6% increase in fatal drug overdoses from 2018 and 2019, respectively.
- Opioids, both with and without stimulants, were detected in 86% of deaths in 2020, representing an 8% increase from 2019.
- Stimulants such as cocaine and methamphetamine were detected in 60% of overdose deaths, increasing 2% from 2019. While stimulant-only deaths decreased 10% from 2019, those involving stimulants and opioids together increased 6%, accounting for 48% of the 2020 overdose deaths.

81% of 2020 overdose deaths involved fentanyl



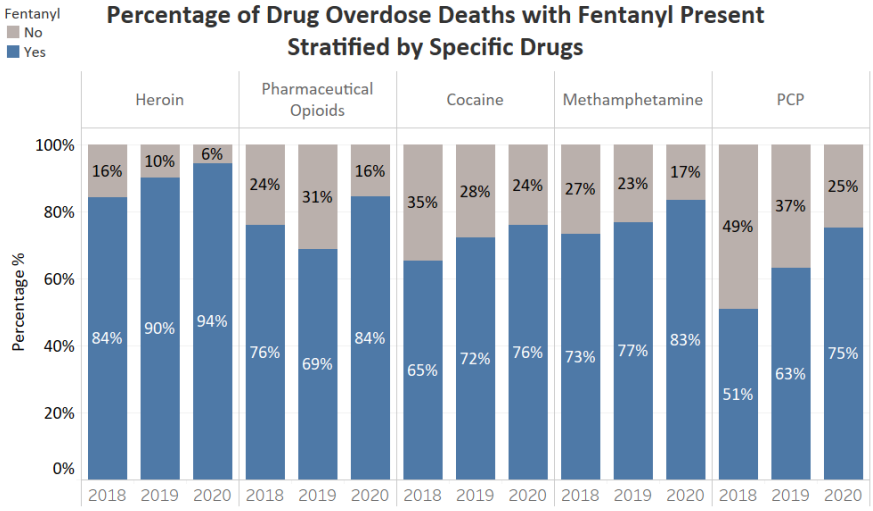
- From 2019 to 2020, the number of deaths involving fentanyl and pharmaceutical opioids increased while the number of deaths involving heroin and cocaine decreased.
- During the same time period, the number of deaths involving methamphetamine and PCP increased 64% and 180%, respectively.

Over time, fentanyl has been detected in a greater proportion of drug overdose deaths



- In 2020, fentanyl was detected in 979 of all unintentional drug deaths. This represents a 12% increase in fentanyl-involved deaths from 2019 to 2020.
- In 2020, 81% of all drug deaths, 94% of all opioid-related drug deaths, and 77% of all stimulant-related drug deaths also involved fentanyl.

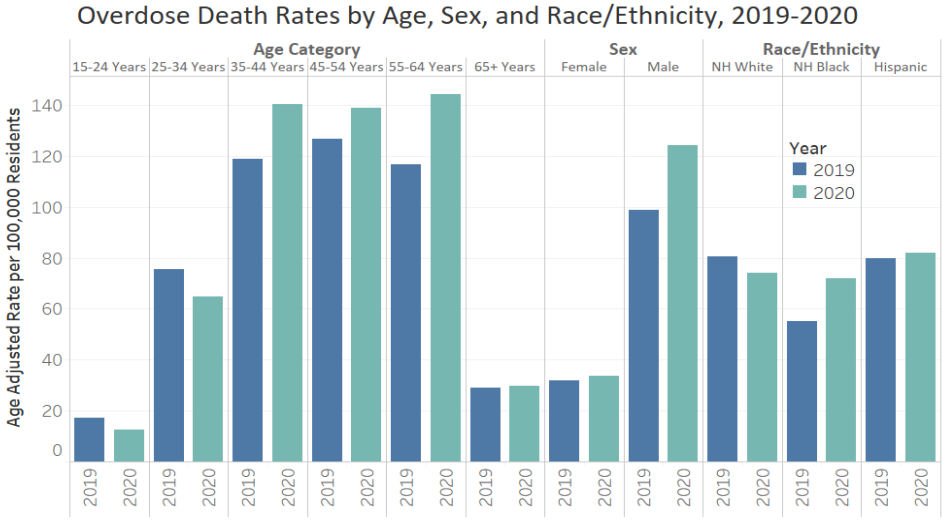
Fentanyl is increasingly being detected in drug deaths involving other specific drugs



- In 2020, fentanyl was detected in 94% of drug overdoses involving heroin, 84% of drug overdoses involving a pharmaceutical opioid, and 76% of drug overdoses involving cocaine.
- The presence of fentanyl increased to 83% and 75% in methamphetamine- and PCP-involved deaths, respectively. This is likely the primary reason for the rise in overdoses involving these drugs.

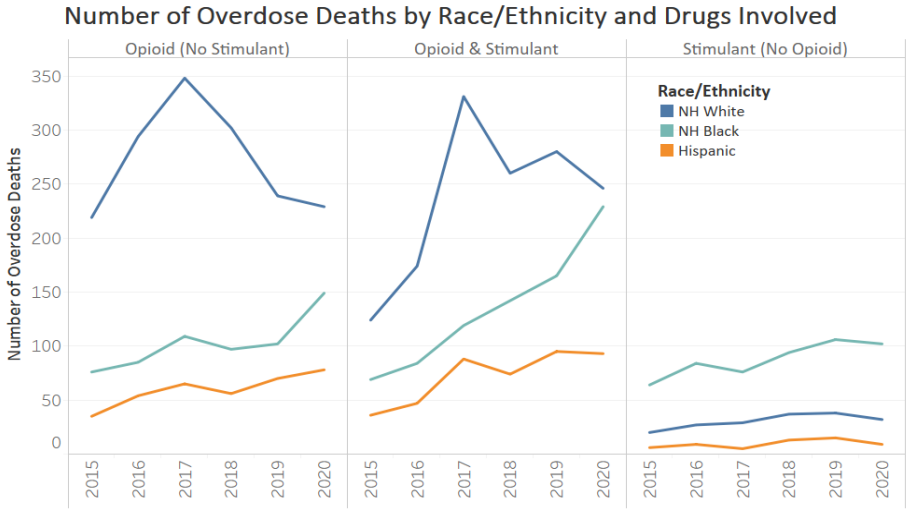
CHART

Overdose death rates increased among those who were aged 35 and older, male, and non-Hispanic Black



- In 2020, drug overdose rates were highest among those aged 55-64 years old, male, and Hispanic.
- From 2019 to 2020, drug overdose rates increased among those aged 35 and older and decreased among those aged less than 35.
- Rates of overdose deaths increased 26% among males and were similar among females from 2019 to 2020.
- Overdose rates increased 31% among non-Hispanic Black individuals and decreased 9% among non-Hispanic White individuals. Rates among Hispanic individuals were similar from 2019 to 2020.

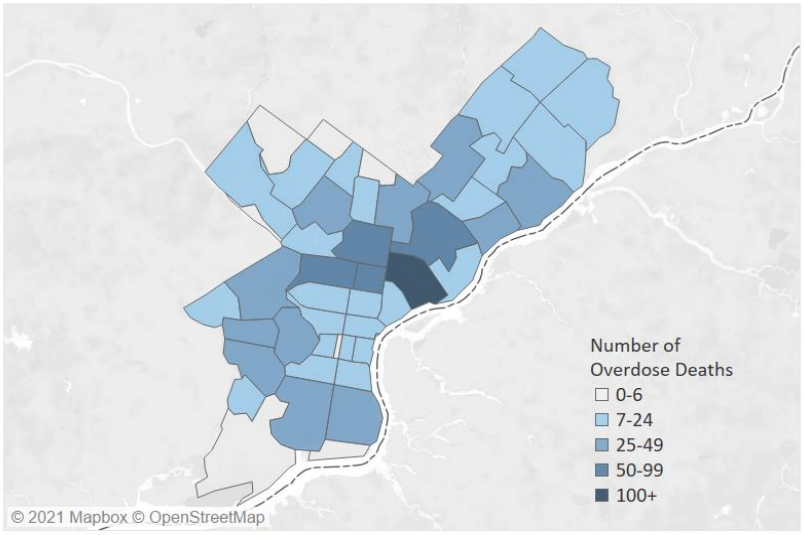
Racial and ethnic disparities exist in drug deaths by drugs involved



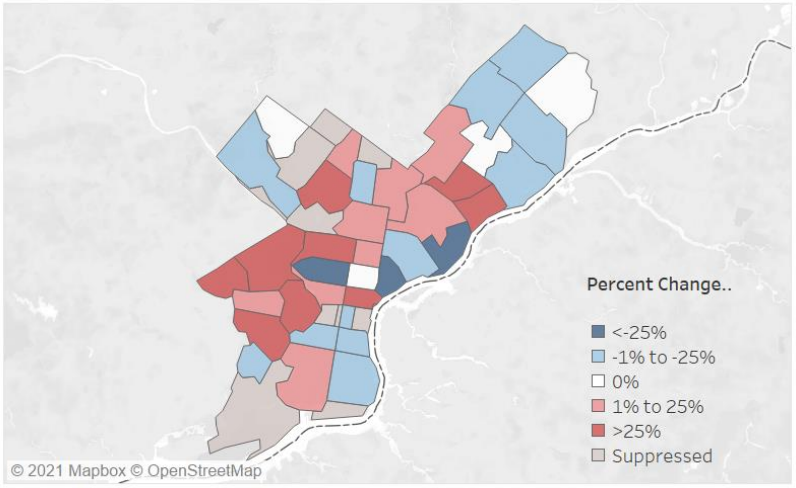
- Deaths involving opioids with and without the presence of stimulants have decreased among non-Hispanic White individuals and increased among non-Hispanic Black individuals.
- Deaths involving stimulants alone primarily impact non-Hispanic Black individuals.

Overdose deaths occur throughout the city

Number of Overdose Deaths by Incident Location, 2020



Percent Change in Overdose Deaths by Zip Code, 2019 to 2020



- The highest number of overdose deaths occurred in the 19134-zip code with 139 deaths; however, deaths in this zip code decreased by 22% from 2019.
- There were increases in drug overdose deaths throughout Southwest, West, and North Philadelphia zip codes.
- From 2019, the greatest percent increases were seen in the zip codes 19151 (116%), 19144 (106%), and 19123 (75%).

WHAT CAN BE DONE

The Health Department is:

- Coordinating a City-wide approach to reduce fatal overdoses among Black and Hispanic individuals, including:
    - soliciting input from and developing partnerships with groups serving these communities,
    - providing mini-grants to seven organizations primarily led by people of color to build harm reduction capacity and provide overdose prevention awareness among the populations they serve,
    - increasing street outreach in Black and Hispanic communities, and
    - launching an awareness campaign about the presence of fentanyl in the stimulant drug supply.
- Increasing overdose prevention approaches by:
    - distributing naloxone, the opioid overdose reversal drug, to organizations serving at-risk populations,
    - educating the public on overdose recognition and naloxone, including through free virtual trainings,
    - distributing fentanyl test strips and education about the presence of fentanyl in non-opioid drugs (https://www.substanceusephilly.com/harmreduction), and
    - providing training on how to test drugs before using.
- Increasing the availability of pharmacologic treatment for opioid addiction through primary care practices, specialized substance use treatment providers, and the Philadelphia jails.
- Providing health care providers with training, mentorship, technical assistance, and a 24/7 clinical consultation line to treat patients with opioid use disorder and answer questions about substance use.
- Supporting 'warm handoffs' to drug treatment from hospitals, jails, and the community.
- Raising awareness and promoting guidelines about safer substance use during the COVID-19 pandemic.

Health care providers should:

- Prescribe opioid painkillers less often, in lower doses, and shorter duration, following PDPH guidelines.
- Co-prescribe naloxone with prescription opioids and buprenorphine, as well as to patients receiving methadone and extended-release naltrexone.
- Prescribe buprenorphine to opioid dependent patients or make referrals to substance use treatment providers.
- Recognize and work to reduce the racial biases and stigma towards people who use drugs that exist in health care.
- Educate patients who continue to use drugs to 1) test their drugs for the presence of fentanyl using fentanyl test strips and 2) carry naloxone, even if they use/prefer non-opioid drugs.
- Refer patients who use stimulants, including cocaine and methamphetamine, to drug treatment programs.
- Provide sterile syringes to patients who continue to inject drugs to reduce the spread of HIV and viral hepatitis.

WHAT CAN BE DONE

People can:

- Avoid taking opioids that are not prescribed for them and ask medical providers who prescribe opioids for pain about alternative, safer forms of pain control.
- Avoid using illicit drugs such as heroin, fentanyl, and cocaine, which are extremely dangerous.
- Seek buprenorphine or methadone treatment if dependent on opioids.
- For those who continue to use illicit drugs, check the drugs for the presence of fentanyl using fentanyl test strips. Cocaine, methamphetamines, synthetic cannabinoids, and pills purchased on the street may contain fentanyl.
- Obtain and get trained on how to use naloxone to prevent opioid overdose fatalities. Naloxone is available at pharmacies in Pennsylvania without a prescription under a standing order signed by the Pennsylvania Physician General.
    - The Philadelphia Department of Public Health regularly offers free, virtual naloxone trainings. Visit www.phillynaloxone.com to learn more and to register for a training.

RESOURCES

For Citywide data related to the opioid and substance use epidemic, visit
https://www.substanceusephilly.com/

For resources for safer substance use during COVID-19:
https://www.phila.gov/2020-04-16-resources-for-safer-substance-use-during-covid-19/

For help on how to obtain and use naloxone:
phillynaloxone.com

For more information on Philadelphia's response to the opioid crisis:
https://www.phila.gov/programs/combating-the-opioid-epidemic/

For information on how to access treatment:
https://dbhids.org/addiction-services/

For harm reduction resources including syringe exchange:
https://ppponline.org/

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Cheryl Bettigole, MD, MPH
Acting Health Commissioner
Philadelphia Department of Public Health
1101 Market Street, 13th floor
Philadelphia, PA 19107

215-686-5200
healthdept@phila.gov
http://www.phila.gov/health
@phlpublichealth

All PDPH charts are available at
http://www.phila.gov/health

CHART

Department of Public Health

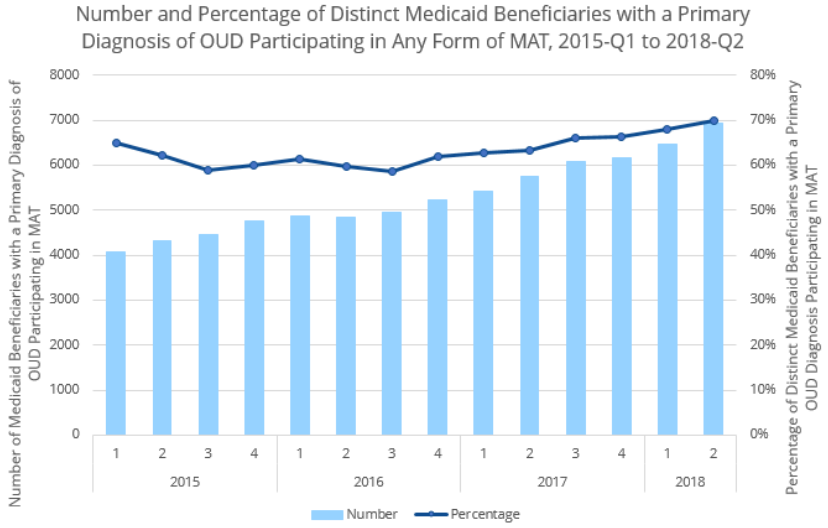
Volume 3, Number 5
December 2018

Philadelphia Department of Public Health
Thomas Farley, MD, MPH, Commissioner

Medication Assisted Treatment among Medicaid Beneficiaries in Philadelphia

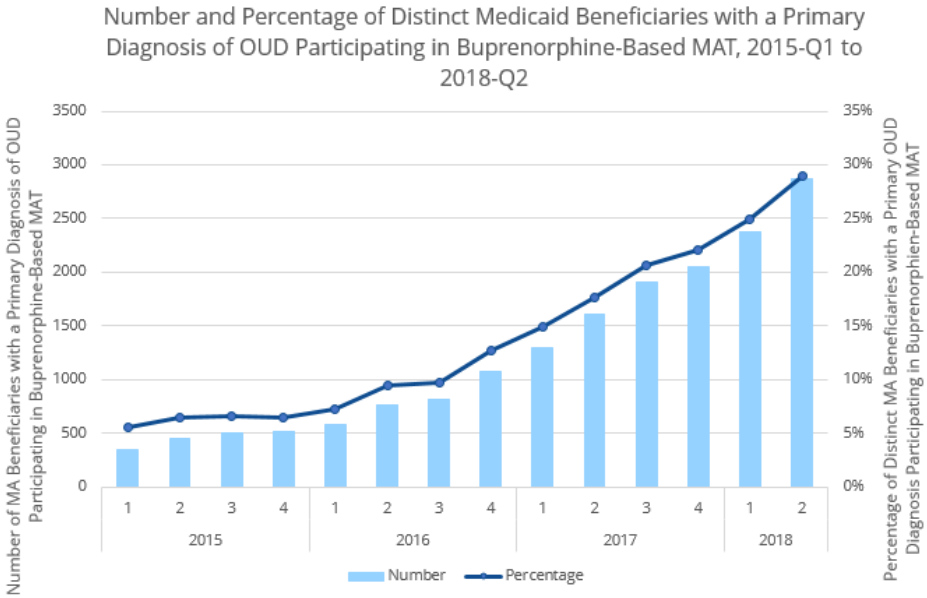
Medication assisted treatment (MAT) is an effective evidence-based strategy to treat opioid use disorder (OUD) and prevent overdose.[1] Currently, there are three FDA-approved medications to treat OUD, which include methadone, buprenorphine, and naltrexone. Methadone is dispensed daily in specialty regulated clinics. It prevents withdrawal for those taking it, but it does not block the effect of other opioids. Buprenorphine can be dispensed in office-based settings and blocks the effects of other opioids while reducing risk of withdrawal. The dosage form can be as a dissolving tablet, a cheek film, an implant under the skin, or a monthly injection. Naltrexone is given as a monthly injection and blocks the effects of other opioids. This issue of CHART examines trends in MAT prescribing with a specific focus on buprenorphine among Medicaid beneficiaries with a primary diagnosis of OUD in Philadelphia between the ages of 18 and 64 years.

The number of Medicaid beneficiaries participating in MAT is increasing



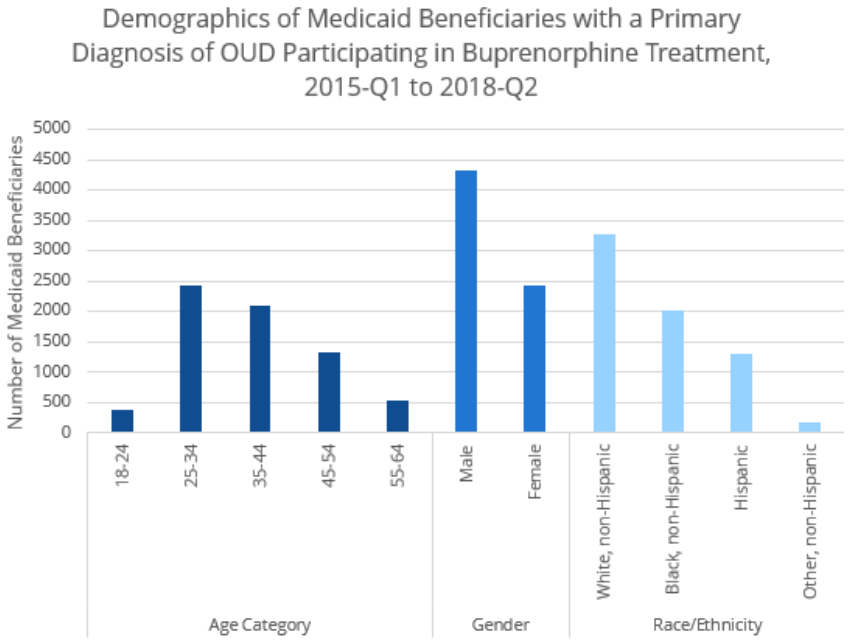
- From January 2015 through June 2018, the number of Medicaid beneficiaries participating in any form of MAT has increased from approximately 4,000 to nearly 7,000 per quarter.
- This rise is in part related to an increased number of people enrolled in Medicaid because of the Affordable Care Act. However, the percentage of Medicaid beneficiaries with OUD getting MAT has also increased, from 65% in the first quarter of 2015 to 70% in the second quarter of 2018.

Most of the increase is in use of buprenorphine



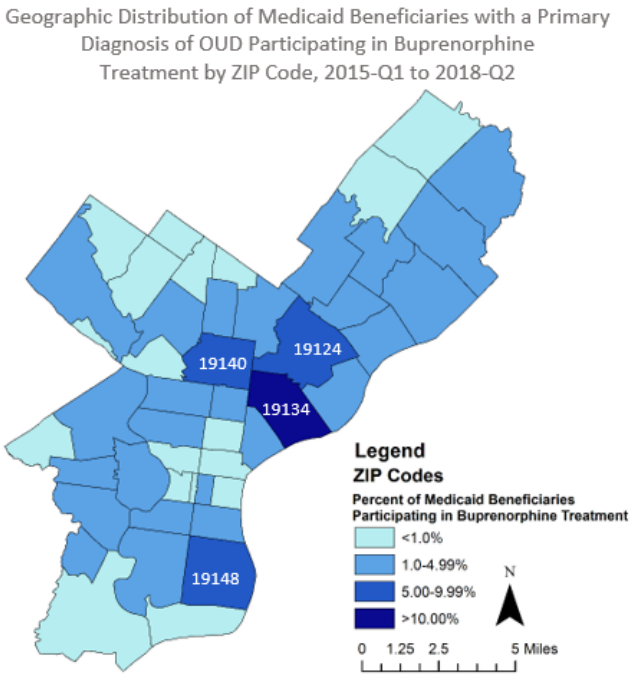
- The number of Medicaid beneficiaries receiving buprenorphine increased eight-fold, from fewer than 350 in the first quarter of 2015 to more than 2,800 in the second quarter of 2018.
- During the same time, the percentage of beneficiaries with OUD receiving buprenorphine increased from 6% to 29%.

Medicaid beneficiaries participating in buprenorphine treatment are diverse



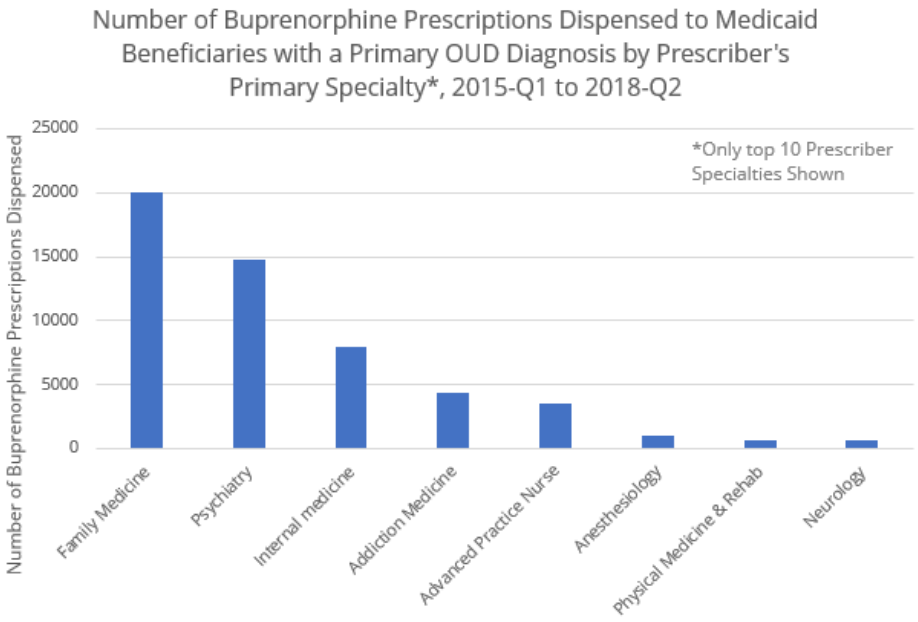
- Medicaid beneficiaries with a primary diagnosis of OUD receiving buprenorphine prescriptions ranged in age, included both men and women, and people of all racial/ethnic groups.

Buprenorphine recipients live throughout Philadelphia



- While Medicaid beneficiaries in nearly every zip code received buprenorphine, the highest proportion lived in the Kensington ZIP codes of 19134 (16%) and 19124 (8%), the Upper North Philadelphia ZIP code of 19140 (6%) and the South Philadelphia ZIP code of 19148 (5%).

Family medicine physicians and psychiatrists prescribe buprenorphine the most



- Prescribers with a primary specialty of family medicine wrote the most buprenorphine prescriptions dispensed to Medicaid beneficiaries, followed by prescribers with a primary specialty of psychiatry.

What can be done

The City of Philadelphia is:

- Expanding buprenorphine prescribing capacity throughout the city.
- Providing technical assistance to providers who are interested in prescribing buprenorphine.
- Providing treatment with buprenorphine to people in the Philadelphia jail system, with referrals to drug treatment programs when they are released.

Health care providers can:

- Recommend that individuals with opioid use disorder begin medication assisted treatment.
- Receive training and obtain a waiver to prescribe buprenorphine in an outpatient setting.
- Begin buprenorphine medication assisted treatment in hospital emergency departments. While a waiver is required for writing outpatient prescriptions, providers working in emergency departments do not need a waiver to administer buprenorphine daily for up to 3 days for the purpose of treating withdrawal and initiating treatment.

People can:

- Begin medication assisted treatment, if you are dependent on opioid pills, heroin, or fentanyl.
- Encourage others who are dependent on opioids to seek medication assisted treatment and help them find treatment providers.

Resources

- Information on medication assisted treatment: https://www.samhsa.gov/medication-assisted-treatment; www.dbhids.org/MAT
- Drug treatment referrals and education: http://dbhids.org/addiction-services/ or 1-888-545-2600

Citations

1. Carroll JJ, Green TC, Noonan RK. Evidence-Based Strategies for Preventing Opioid Overdose: What's Working in the United States. Atlanta, GA: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. https://www.cdc.gov/drugoverdose/pdf/pubs/2018-evidence-based-strategies.pdf

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Thomas Farley, MD, MPH
Commissioner
Philadelphia Department of Public Health
1101 Market Street, 13th floor
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All PDPH CHARTs are available on http://www.phila.gov/health.

YOU CAN PREVENT OVERDOSE IN YOUR PATIENTS.
Offer buprenorphine

For more information about buprenorphine in Philadelphia, visit https://dbhids.org/MAT

City of Philadelphia

Materials adapted with permission from the NYC Department of Health and Mental Hygiene

TREAT ADDICTION. SAVE LIVES.

OFFER BUPRENORPHINE TREATMENT.

Prescribing buprenorphine is easier than you might think. Here's what you need to know + free resources to help you get started.

WHAT IS BUPRENORPHINE?

Buprenorphine is a partial opioid agonist used to treat opioid use disorder. Buprenorphine is effective: it reduces drug use and death from opioids, keeps patients in treatment, and improves various health and social outcomes. Buprenorphine can be prescribed in your practice, just like other medications you prescribe for chronic health conditions. Offer buprenorphine to give your patients access to life-saving treatment they might not otherwise receive.

FAQ

Q: Who can prescribe buprenorphine?

A: Any physician, nurse practitioner (NP) or physician assistant (PA) after obtaining a waiver. Once waivered, providers can treat up to 30 patients with buprenorphine. Additional training is required to treat more than 30 patients at a time.

Q: How do I obtain my waiver to prescribe buprenorphine?

A: Providers interested in prescribing buprenorphine must first submit a Notification of Intent (NOI) to SAMHSA. Instructions can be found here: https://www.samhsa.gov/medication-assisted-treatment/become-buprenorphine-waivered-practitioner

Q: How do I get trained to prescribe buprenorphine to more than 30 patients?

A: There are several options available to complete the required buprenorphine waiver training, including online (visit samhsa.gov and search for "buprenorphine training").

Q: I didn't learn about buprenorphine during my clinical training. Is it complicated?

A: Prescribing buprenorphine for opioid use disorder is like treating many other chronic conditions that you routinely see in primary care. The Philadelphia Department of Public Health can also match you with an experienced prescriber for clinical mentorship and provide technical assistance to prepare you and your office staff.

Q: I am not sure I want to treat people who use drugs in my practice.

A: Individuals with opioid use disorder are likely already part of your practice. There are tens of thousands of Philadelphians who are believed to have this disorder and most do not receive the effective treatment they need. Buprenorphine treatment can prevent overdose and improve your patients' lives

FROM PRIMARY CARE PHYSICIANS WHO PRESCRIBE BUPRENORPHINE:

"There are few areas of primary care where a week or two into treatment many patients report such dramatic changes in their lives."

"It's amazing to see patients' lives change in front of my own eyes. I've had several patients say things like they never dreamed they could go this long without using opioids."

"I have come to realize this is no different than the management of any chronic disease. It's ideally suited for the primary care relationship."

"It's empowering to have this tool and be able to truly help patients struggling with drug use."

MYTHS AND FACTS ABOUT BUPRENORPHINE

MYTH	FACT
1. Prescribing buprenorphine for opioid use disorder (OUD) replaces one addiction for another.	OUD is a chronic condition and medication is the most effective way to prevent worsening symptoms and death.[1] Taking daily medication to maintain health is not substance use disorder.[2,3]
2. A commitment to abstinence will prevent opioid overdose more than buprenorphine will.	OUD is a chronic condition; relapse is common. Abstinence-based treatment reduces tolerance to opioids and is associated with substantial risk for relapse, overdose and death.[4] Buprenorphine limits or blocks the effects of illicit opioids, reducing overdose risk.[5,6]
3. Buprenorphine can be misused and, therefore, prescribers should strictly control access.	Any medication can be misused. However, buprenorphine is not a drug of choice to get high because it limits feelings of euphoria and reward.[5] Buprenorphine misuse is usually associated with self-treatment of withdrawal symptoms and lack of access to buprenorphine treatment.[7,8]
4. Prescribing buprenorphine comes with more legal liability than prescribing other medications, or will make the Drug Enforcement Administration (DEA) target the prescriber or practice.	Like with all medications, protection against liability depends on good patient assessment, provider education and documentation.[5] The DEA conducts routine, unannounced visits to verify that prescribers practice within their patient limits authorized by the Substance Abuse and Mental Health Services Administration (SAMHSA) (the maximum number of active patients that prescribers can treat with buprenorphine at one time).
5. Starting to prescribe buprenorphine will lead to a large number of people asking for prescriptions.	This has generally not been true of primary care practices supported by the Philadelphia Department of Public Health. The DEA limits the number of patients providers can treat with buprenorphine, but providers can choose within those limits how many people to treat. Providers can also decide the level of care they provide.
6. A person must be completely abstinent and have a completely negative urine screen to receive buprenorphine.	People do not need to be completely abstinent to be treated with buprenorphine. People with OUD commonly use multiple drugs, often to maintain a consistent high or reduce withdrawals and cravings. Buprenorphine can stabilize this cycle, reducing the need for additional substances.[9] Imperfect abstinence does not eliminate buprenorphine treatment benefits.[5]
7. The ideal length of treatment with buprenorphine is six months or less. Treatment success means patients will become drug-free, including from buprenorphine and methadone.	Individuals should continue buprenorphine treatment as long as they continue to benefit. This can be for years or even a lifetime.[5,10] Stopping medication for OUD treatment, even after long periods of treatment, can lead to relapse.[5] Treatment success for someone with OUD is measured by improved quality of life, rather than being free of medications.[11]
8. Outpatient therapy or counseling is mandatory for clinical improvement.	The Drug Addiction Treatment Act of 2000 (DATA 2000) mandates that buprenorphine prescribers must be able to refer patients for behavioral health services. Behavioral health support will benefit many patients, but it is not mandatory for the provider to refer all patients, or for patients to attend counseling. In rare cases, health insurance plans may require outpatient counseling for buprenorphine treatment.
9. All Philadelphians have equal access to treatment for OUD.	In Philadelphia, access to treatment for OUD is not equal by demographics or geographically. Together with the Health Department, you can help create equitable access to care and decrease existing treatment disparities by offering buprenorphine to all patients who may need it.

For more information about buprenorphine prescribing resources, visit https://dbhids.org/MAT.

City of Philadelphia

REFERENCES

1. U.S. Department of Health and Human Services (HHS), Office of the Surgeon General. Facing Addiction in America: The Surgeon General's Report on Alcohol, Drugs, and Health. https://addiction.surgeongeneral.gov/sites/default/files/surgeon-generals-report.pdf. Accessed February 22, 2019.
2. American Society of Addiction Medicine. Public Policy Statement: Definition of Addiction. https://www.asam.org/docs/default-source/public-policy-statements/1definition_of_addiction_long_4-11.pdf?sfvrsn=a8f64512_4. Accessed February 22, 2019.
3. Wakeman SE, Barnett ML. Primary care and the opioid-overdose crisis – buprenorphine myths and realities. New England Journal of Medicine. 2018; 379:1-4.
4. Sordo L, Barrio G, Bravo MJ, Indave BI, Degenhardt L, Wiessing L, Ferri M, Pastor-Burriuso R. Mortality risk during and after opioid substitution treatment: systematic review and meta-analysis of cohort studies. BMJ. 2017; 357:j1550.
5. U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Substance Abuse Treatment. Medications for opioid use disorder. Treatment Improvement Protocol (TIP) Series 63. https://store.samhsa.gov/system/files/sma18-5063fulldoc.pdf. Published 2018.
6. New York City Department of Health and Mental Hygiene. Buprenorphine—an office-based treatment for opioid use disorder. City Health Information. 2015;34(1):1-8
7. Lofwall MR, Havens JR. Inability to access buprenorphine treatment as a risk factor for using diverted buprenorphine. Drug and Alcohol Dependence. 2012;126(3):379–383.
8. Bazazi, AR, Yokell M, Fu JJ, Rich JD, Zaller ND. Illicit use of buprenorphine/naloxone among injecting and noninjecting opioid users. Journal of Addiction Medicine. 2011;5(3):175–180.
9. Martin SA, Chiodo LM, Bosse JD, Wilson A. The next stage of buprenorphine care for opioid use disorder. Annals of Internal Medicine. 2018;169:628–635.
10. Federation of State Medical Boards. Model policy on DATA 2000 and treatment of opioid addiction in the medical office. http://www.fsmb.org/siteassets/advocacy/policies/model-policy-on-data-2000-and-treatment-of-opioid-addiction-in-the-medical-office.pdf. Accessed February 22, 2019.
11. Fiellin DA, Schottenfeld RS, Cutter CJ, Moore BA, Barry DT, O'Connor PG. Primary care-based buprenorphine taper vs maintenance therapy for prescription opioid dependence: a randomized clinical trial. JAMA Internal Medicine. 2014;174(12):1947–1954.

Philadelphia Department of Public Health

BUPRENORPHINE PRESCRIBING RESOURCES

ABOUT BUPRENORPHINE

- Buprenorphine is a partial opioid agonist used to treat opioid use disorder.
- Buprenorphine reduces opioid use and overdose deaths, keeps patients in treatment and improves various health and social outcomes.
- Buprenorphine can be prescribed in your practice, just like other medications prescribed for chronic health conditions.
- Any physician, nurse practitioner or physician assistant can prescribe buprenorphine after obtaining a waiver.

The Philadelphia Department of Public Health provides free resources to help health care providers implement buprenorphine in their practice.

The Health Department offers buprenorphine waiver training, clinical mentorship, technical assistance and educational materials.

TRAINING

- Follows "half-and-half" format: four hours of live instruction and four hours of online self-study
- Fulfills training requirement for providers to treat more than 30 patients with buprenorphine in their practice at a time.
- Occurs approximately monthly
- Can be held at your institution for groups of at least 20 prescribers

MENTORSHIP

- Matches new or inexperienced prescribers with experienced buprenorphine prescribers (mentors)
- Is available to any Philadelphia physician, NP or PA who recently received a waiver to prescribe buprenorphine, or has previously received a waiver but never or rarely prescribed buprenorphine
- Occurs via in-person meetings, telephone, email and videoconference

TECHNICAL ASSISTANCE

- Supports the implementation of buprenorphine into practices of any size (including hospitals, clinics and community-based settings)
- Call the Opioid Assistance Resource (OAR) Line at 267-426-5900 for 24/7 for clinical consultation support from medical professionals with expertise in managing opioid toxicity and withdrawal, including buprenorphine dosing

EDUCATIONAL MATERIALS

- Educational pamphlets and posters for patients, available in multiple languages
- Educational materials for providers

For more information about buprenorphine prescribing resources, email dph.opioid@phila.gov.

City of Philadelphia

Materials adapted with permission from the NYC Department of Health and Mental Hygiene

C I T Y O F P H I L A D E L P H I A

DEPARTMENT OF PUBLIC HEALTH
1101 Market Street, Suite 1320
Philadelphia, PA 19107
Tel: (215) 686-5200
Fax: (215) 686-5212

July 2021

Dear Colleague:

In 2020, there were 1,214 drug overdose deaths in Philadelphia. We can prevent these deaths. As part of the city's opioid overdose prevention initiative, the Philadelphia Health Department works with health care providers and communities to expand access to buprenorphine to treat opioid use disorder (OUD).

Buprenorphine decreases overdose deaths, reduces drug use, prevents relapse, and enables patients to reengage in employment, school and family relationships. Like other medications for chronic health conditions, buprenorphine can be integrated into primary care and can help your patients lead healthier lives. Despite these benefits, not enough patients know about or use buprenorphine; many Philadelphians with OUD who could benefit from buprenorphine do not receive it. As a Philadelphia health care provider, you can change this by offering buprenorphine to your patients with OUD.

Make these changes to help improve the health of your patients and the city:

- Educate patients about buprenorphine and that it is one of the most effective treatments for OUD.
- Obtain your waiver to prescribe buprenorphine to up to 30 patients.
- Prescribe buprenorphine to patients to decrease overdose risk and improve quality of life.
- If already prescribing, increase the number of patients with OUD you treat with buprenorphine to expand treatment access in Philadelphia.
- Utilize mentorship program and 24/7 consultation line to use your waiver and prescribe buprenorphine

This Buprenorphine Action Kit includes clinical tools and resources for you and educational materials for your patients. To access the materials online and share with others, visit https://bit.ly/BupeSavesLives

Thank you for your dedication to the health of Philadelphians and for your partnership in reversing this epidemic.

Sincerely,

Jeffrey Hom, MD, MPH
Medical Director, Division of Substance Use Prevention and Harm Reduction
Philadelphia Department of Public Health

Department of Public Health
Cheryl Bettigole, MD MPH
Acting Health Commissioner

CHART

Unintentional Drug Overdose Fatalities in Philadelphia, 2020

In Philadelphia, PA, unintentional drug overdoses contribute to significant premature mortality. In 2020, there were 1,214 drug overdoses in Philadelphia, an increase of 9% and 6% from 2018 and 2019, respectively. Eighty-six percent of overdose fatalities involve opioids, a class of drugs that include pharmaceutical opioids, heroin, and fentanyl, a strong synthetic opioid that is the main driver of fatal overdoses. While fentanyl was involved in less than 10% of drug overdose deaths in Philadelphia in 2010, it was involved in 81% of all drug overdose deaths in 2020.

Prior to 2020, unintentional overdose deaths were highest among non-Hispanic White individuals. However, in 2020 the number of overdoses among non-Hispanic Black individuals increased 29% while the number of overdoses among non-Hispanic White individuals decreased 10%. The shift in demographics first occurred in the second quarter of 2020.

This issue of CHART summarizes trends in unintentional drug overdose fatalities through 2020. The COVID-19 pandemic, and its impact on drugs trends, access to drug treatment, and harm reduction services should be considered when examining the number of fatal overdoses from 2020. All data shown are from the Philadelphia Medical Examiner's Office.

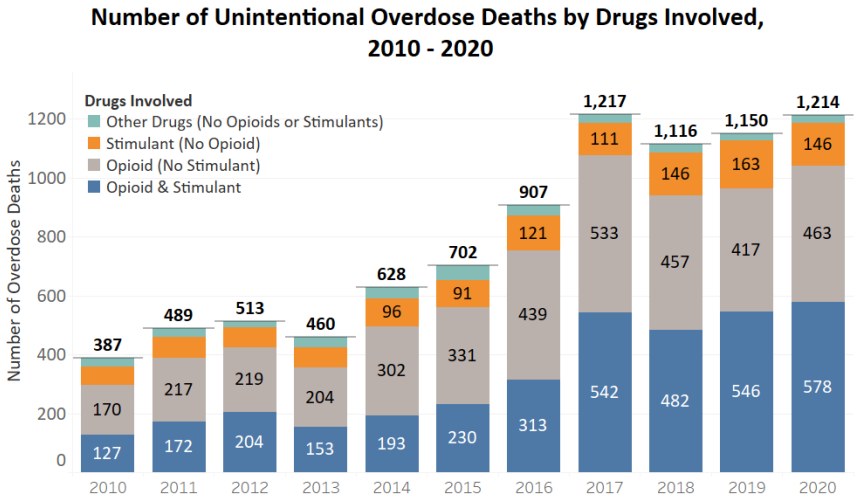
KEY TAKEAWAYS

In 2020, there were 1,214 unintentional drug overdose deaths in Philadelphia

Fentanyl is increasingly present in all drug-related deaths, including those involving pharmaceutical opioids, methamphetamine, and PCP

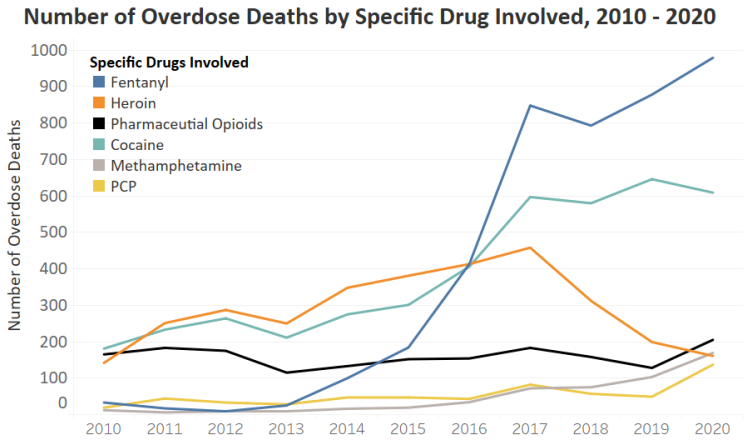
Deaths among non-Hispanic Black individuals increased while deaths among non-Hispanic White individuals declined

Unintentional drug overdose deaths increased by 6% from 2019 to 2020



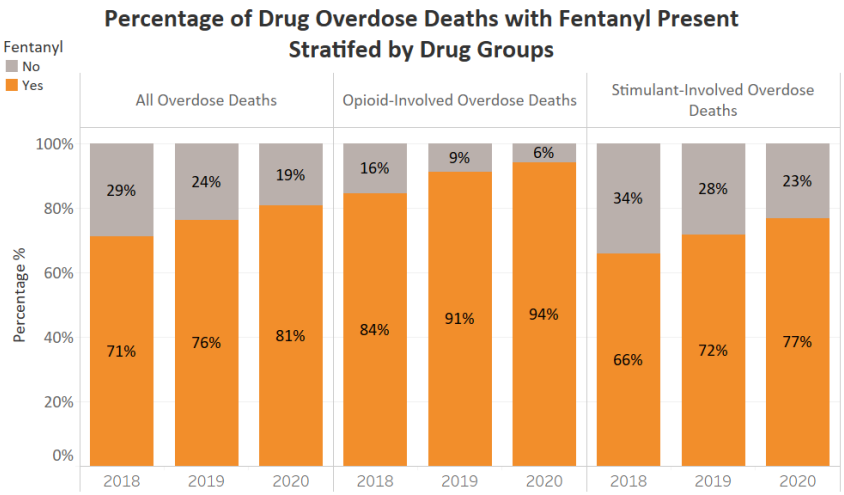
- In 2020, 1,214 people died of an unintentional drug overdose. This represents a 9% and 6% increase in fatal drug overdoses from 2018 and 2019, respectively.
- Opioids, both with and without stimulants, were detected in 86% of deaths in 2020, representing an 8% increase from 2019.
- Stimulants such as cocaine and methamphetamine were detected in 60% of overdose deaths, increasing 2% from 2019. While stimulant-only deaths decreased 10% from 2019, those involving stimulants and opioids together increased 6%, accounting for 48% of the 2020 overdose deaths.

81% of 2020 overdose deaths involved fentanyl



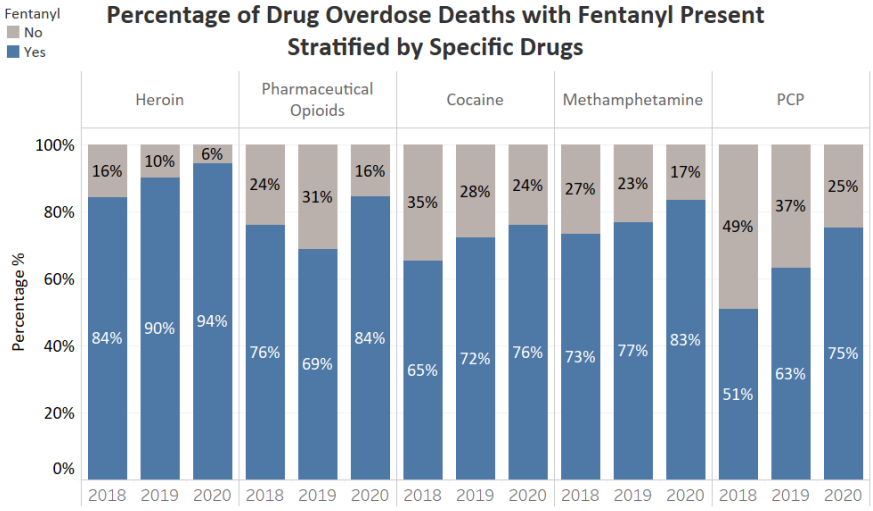
- From 2019 to 2020, the number of deaths involving fentanyl and pharmaceutical opioids increased while the number of deaths involving heroin and cocaine decreased.
- During the same time period, the number of deaths involving methamphetamine and PCP increased 64% and 180%, respectively.

Over time, fentanyl has been detected in a greater proportion of drug overdose deaths



- In 2020, fentanyl was detected in 979 of all unintentional drug deaths. This represents a 12% increase in fentanyl-involved deaths from 2019 to 2020.
- In 2020, 81% of all drug deaths, 94% of all opioid-related drug deaths, and 77% of all stimulant-related drug deaths also involved fentanyl.

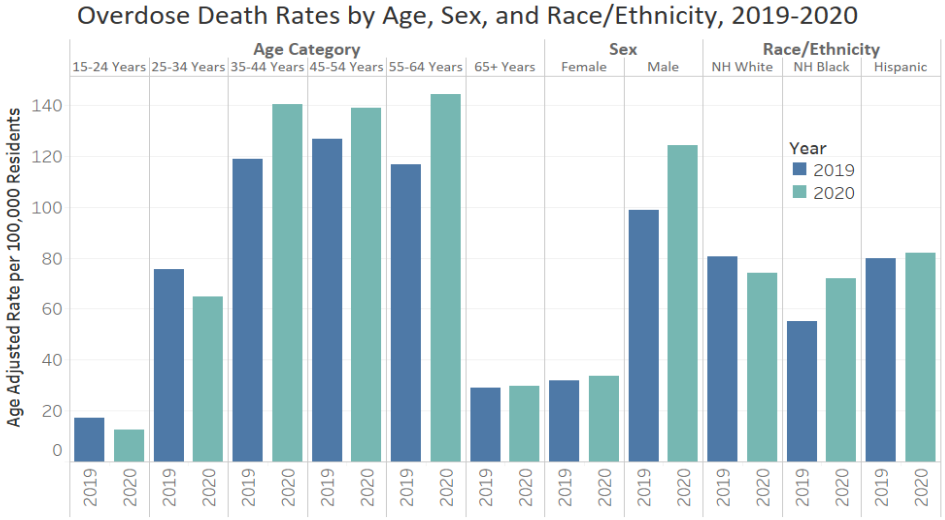
Fentanyl is increasingly being detected in drug deaths involving other specific drugs



- In 2020, fentanyl was detected in 94% of drug overdoses involving heroin, 84% of drug overdoses involving a pharmaceutical opioid, and 76% of drug overdoses involving cocaine.
- The presence of fentanyl increased to 83% and 75% in methamphetamine- and PCP-involved deaths, respectively. This is likely the primary reason for the rise in overdoses involving these drugs.

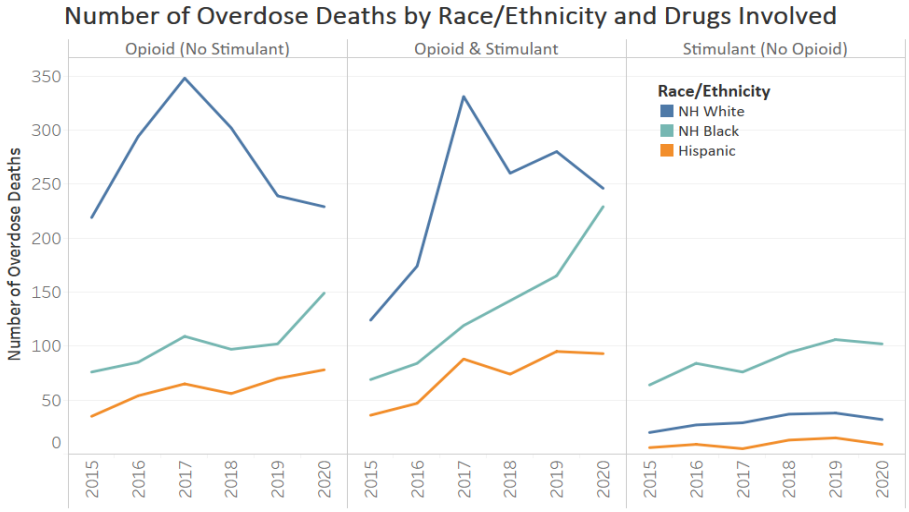
CHART

Overdose death rates increased among those who were aged 35 and older, male, and non-Hispanic Black



- In 2020, drug overdose rates were highest among those aged 55-64 years old, male, and Hispanic.
- From 2019 to 2020, drug overdose rates increased among those aged 35 and older and decreased among those aged less than 35.
- Rates of overdose deaths increased 26% among males and were similar among females from 2019 to 2020.
- Overdose rates increased 31% among non-Hispanic Black individuals and decreased 9% among non-Hispanic White individuals. Rates among Hispanic individuals were similar from 2019 to 2020.

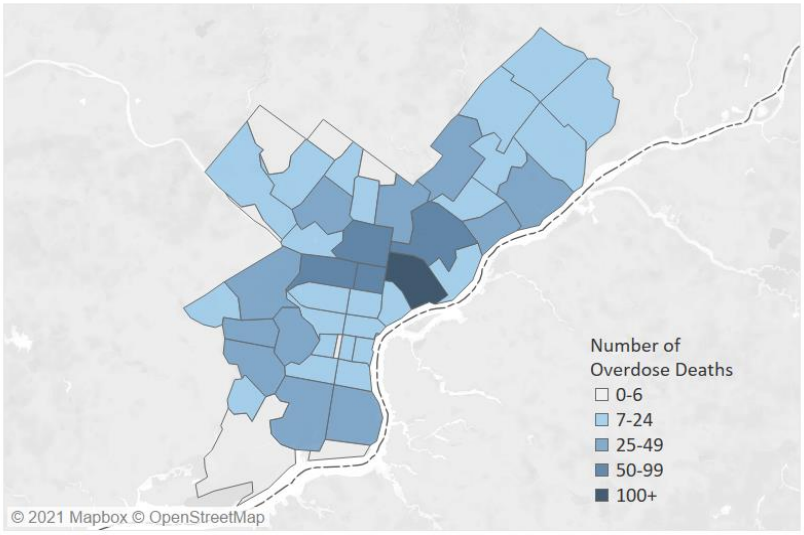
Racial and ethnic disparities exist in drug deaths by drugs involved



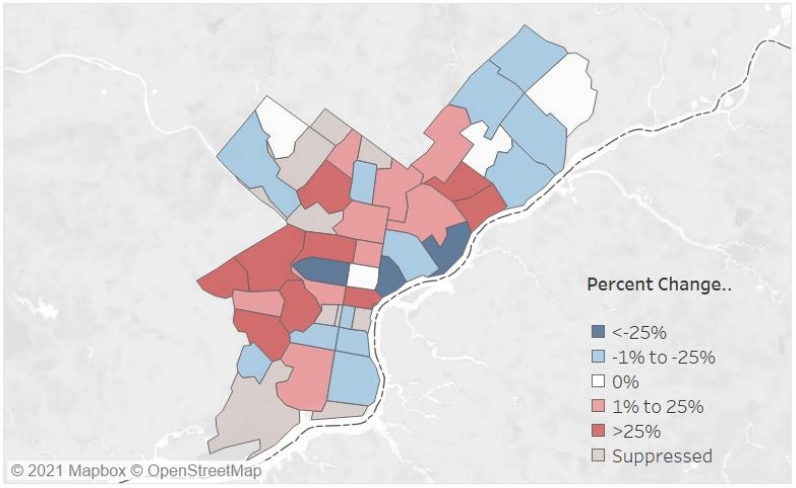
- Deaths involving opioids with and without the presence of stimulants have decreased among non-Hispanic White individuals and increased among non-Hispanic Black individuals.
- Deaths involving stimulants alone primarily impact non-Hispanic Black individuals.

Overdose deaths occur throughout the city

Number of Overdose Deaths by Incident Location, 2020



Percent Change in Overdose Deaths by Zip Code, 2019 to 2020



- The highest number of overdose deaths occurred in the 19134-zip code with 139 deaths; however, deaths in this zip code decreased by 22% from 2019.
- There were increases in drug overdose deaths throughout Southwest, West, and North Philadelphia zip codes.
- From 2019, the greatest percent increases were seen in the zip codes 19151 (116%), 19144 (106%), and 19123 (75%).

WHAT CAN BE DONE

The Health Department is:

- Coordinating a City-wide approach to reduce fatal overdoses among Black and Hispanic individuals, including:
    - soliciting input from and developing partnerships with groups serving these communities,
    - providing mini-grants to seven organizations primarily led by people of color to build harm reduction capacity and provide overdose prevention awareness among the populations they serve,
    - increasing street outreach in Black and Hispanic communities, and
    - launching an awareness campaign about the presence of fentanyl in the stimulant drug supply.
- Increasing overdose prevention approaches by:
    - distributing naloxone, the opioid overdose reversal drug, to organizations serving at-risk populations,
    - educating the public on overdose recognition and naloxone, including through free virtual trainings,
    - distributing fentanyl test strips and education about the presence of fentanyl in non-opioid drugs (https://www.substanceusephilly.com/harmreduction), and
    - providing training on how to test drugs before using.
- Increasing the availability of pharmacologic treatment for opioid addiction through primary care practices, specialized substance use treatment providers, and the Philadelphia jails.
- Providing health care providers with training, mentorship, technical assistance, and a 24/7 clinical consultation line to treat patients with opioid use disorder and answer questions about substance use.
- Supporting 'warm handoffs' to drug treatment from hospitals, jails, and the community.
- Raising awareness and promoting guidelines about safer substance use during the COVID-19 pandemic.

Health care providers should:

- Prescribe opioid painkillers less often, in lower doses, and shorter duration, following PDPH guidelines.
- Co-prescribe naloxone with prescription opioids and buprenorphine, as well as to patients receiving methadone and extended-release naltrexone.
- Prescribe buprenorphine to opioid dependent patients or make referrals to substance use treatment providers.
- Recognize and work to reduce the racial biases and stigma towards people who use drugs that exist in health care.
- Educate patients who continue to use drugs to 1) test their drugs for the presence of fentanyl using fentanyl test strips and 2) carry naloxone, even if they use/prefer non-opioid drugs.
- Refer patients who use stimulants, including cocaine and methamphetamine, to drug treatment programs.
- Provide sterile syringes to patients who continue to inject drugs to reduce the spread of HIV and viral hepatitis.

WHAT CAN BE DONE

People can:

- Avoid taking opioids that are not prescribed for them and ask medical providers who prescribe opioids for pain about alternative, safer forms of pain control.
- Avoid using illicit drugs such as heroin, fentanyl, and cocaine, which are extremely dangerous.
- Seek buprenorphine or methadone treatment if dependent on opioids.
- For those who continue to use illicit drugs, check the drugs for the presence of fentanyl using fentanyl test strips. Cocaine, methamphetamines, synthetic cannabinoids, and pills purchased on the street may contain fentanyl.
- Obtain and get trained on how to use naloxone to prevent opioid overdose fatalities. Naloxone is available at pharmacies in Pennsylvania without a prescription under a standing order signed by the Pennsylvania Physician General.
    - The Philadelphia Department of Public Health regularly offers free, virtual naloxone trainings. Visit www.phillynaloxone.com to learn more and to register for a training.

RESOURCES

For Citywide data related to the opioid and substance use epidemic, visit
https://www.substanceusephilly.com/

For resources for safer substance use during COVID-19:
https://www.phila.gov/2020-04-16-resources-for-safer-substance-use-during-covid-19/

For help on how to obtain and use naloxone:
phillynaloxone.com

For more information on Philadelphia's response to the opioid crisis:
https://www.phila.gov/programs/combating-the-opioid-epidemic/

For information on how to access treatment:
https://dbhids.org/addiction-services/

For harm reduction resources including syringe exchange:
https://ppponline.org/

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CHART

Cheryl Bettigole, MD, MPH
Acting Health Commissioner
Philadelphia Department of Public Health
1101 Market Street, 13th floor
Philadelphia, PA 19107

215-686-5200
healthdept@phila.gov
http://www.phila.gov/health
@phlpublichealth

All PDPH charts are available at
http://www.phila.gov/health

CHART

Department of Public Health

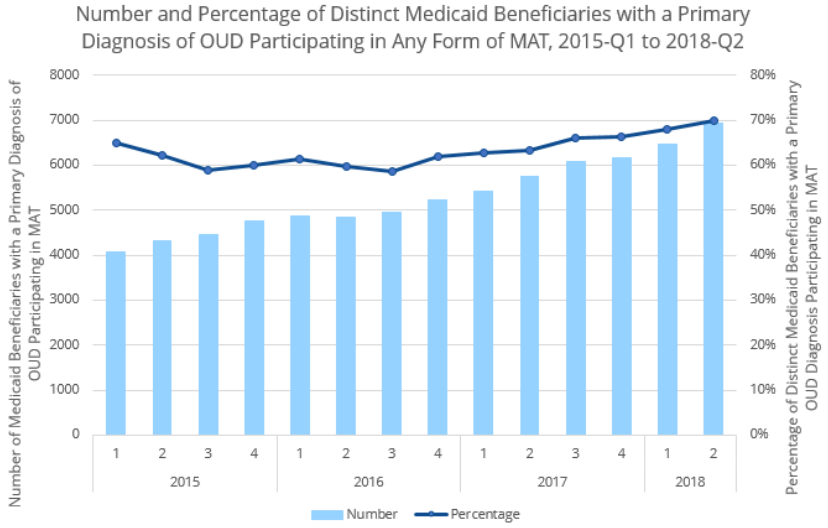
Volume 3, Number 5
December 2018

Philadelphia Department of Public Health
Thomas Farley, MD, MPH, Commissioner

Medication Assisted Treatment among Medicaid Beneficiaries in Philadelphia

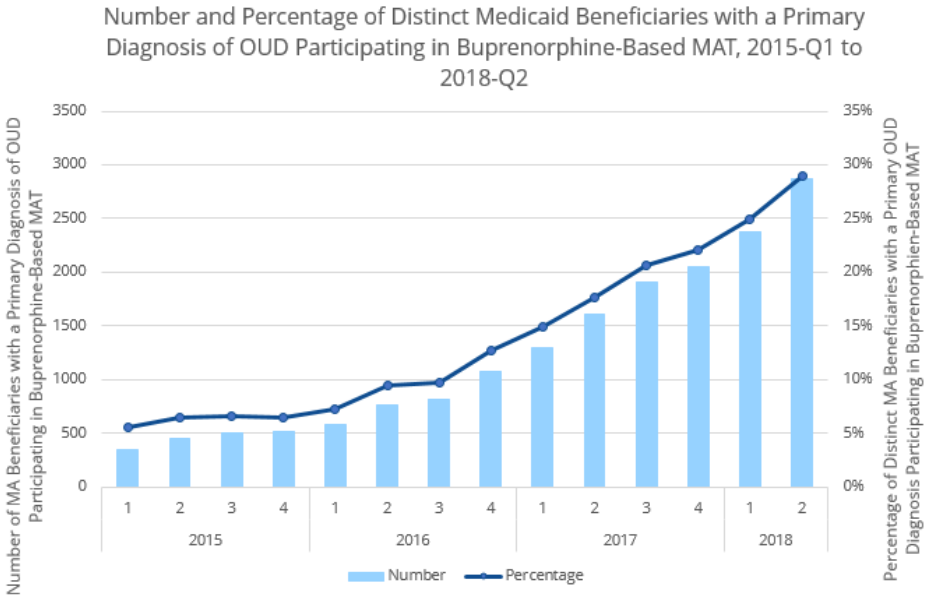
Medication assisted treatment (MAT) is an effective evidence-based strategy to treat opioid use disorder (OUD) and prevent overdose.[1] Currently, there are three FDA-approved medications to treat OUD, which include methadone, buprenorphine, and naltrexone. Methadone is dispensed daily in specialty regulated clinics. It prevents withdrawal for those taking it, but it does not block the effect of other opioids. Buprenorphine can be dispensed in office-based settings and blocks the effects of other opioids while reducing risk of withdrawal. The dosage form can be as a dissolving tablet, a cheek film, an implant under the skin, or a monthly injection. Naltrexone is given as a monthly injection and blocks the effects of other opioids. This issue of CHART examines trends in MAT prescribing with a specific focus on buprenorphine among Medicaid beneficiaries with a primary diagnosis of OUD in Philadelphia between the ages of 18 and 64 years.

The number of Medicaid beneficiaries participating in MAT is increasing



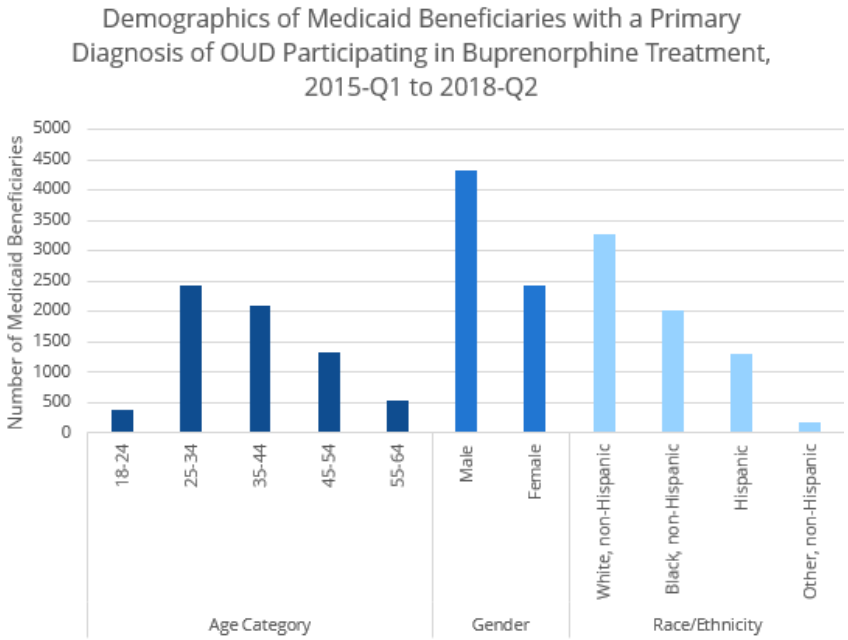
- From January 2015 through June 2018, the number of Medicaid beneficiaries participating in any form of MAT has increased from approximately 4,000 to nearly 7,000 per quarter.
- This rise is in part related to an increased number of people enrolled in Medicaid because of the Affordable Care Act. However, the percentage of Medicaid beneficiaries with OUD getting MAT has also increased, from 65% in the first quarter of 2015 to 70% in the second quarter of 2018.

Most of the increase is in use of buprenorphine



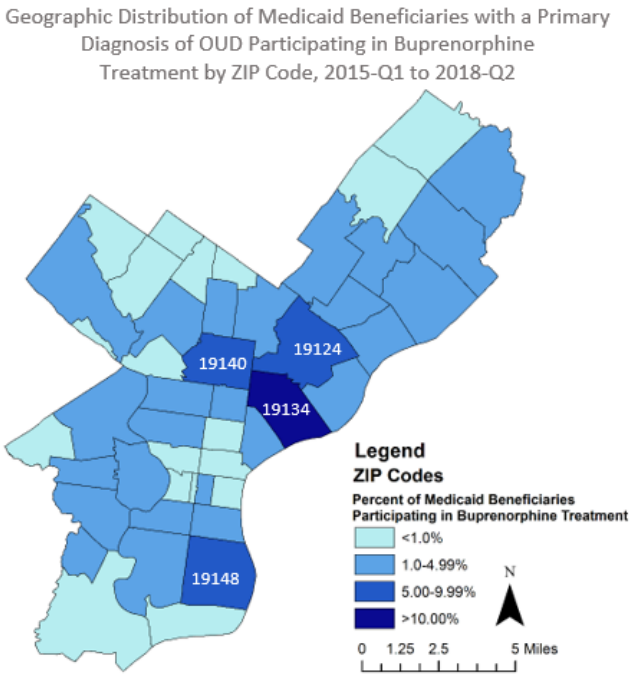
- The number of Medicaid beneficiaries receiving buprenorphine increased eight-fold, from fewer than 350 in the first quarter of 2015 to more than 2,800 in the second quarter of 2018.
- During the same time, the percentage of beneficiaries with OUD receiving buprenorphine increased from 6% to 29%.

Medicaid beneficiaries participating in buprenorphine treatment are diverse



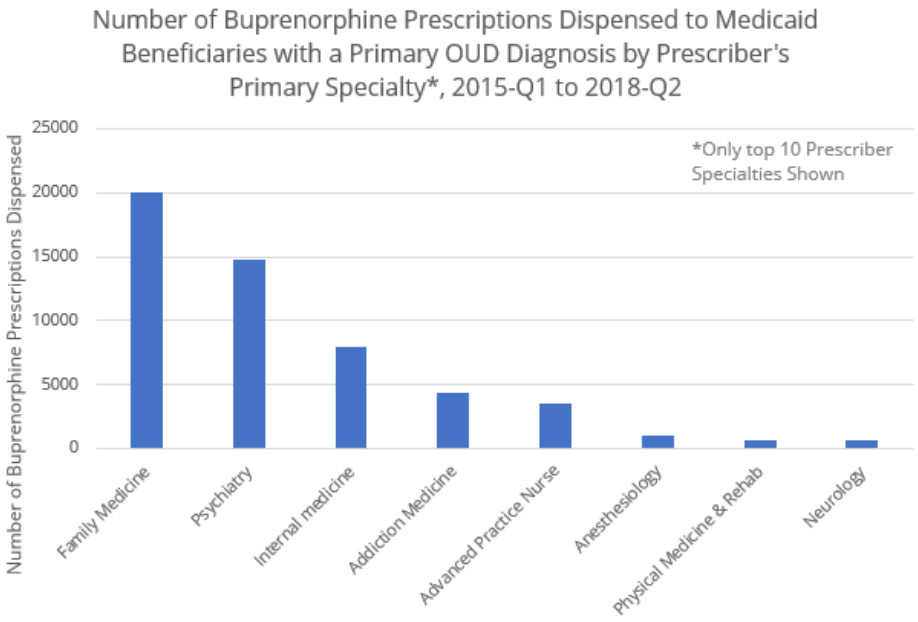
- Medicaid beneficiaries with a primary diagnosis of OUD receiving buprenorphine prescriptions ranged in age, included both men and women, and people of all racial/ethnic groups.

Buprenorphine recipients live throughout Philadelphia



- While Medicaid beneficiaries in nearly every zip code received buprenorphine, the highest proportion lived in the Kensington ZIP codes of 19134 (16%) and 19124 (8%), the Upper North Philadelphia ZIP code of 19140 (6%) and the South Philadelphia ZIP code of 19148 (5%).

Family medicine physicians and psychiatrists prescribe buprenorphine the most



- Prescribers with a primary specialty of family medicine wrote the most buprenorphine prescriptions dispensed to Medicaid beneficiaries, followed by prescribers with a primary specialty of psychiatry.

What can be done

The City of Philadelphia is:

- Expanding buprenorphine prescribing capacity throughout the city.
- Providing technical assistance to providers who are interested in prescribing buprenorphine.
- Providing treatment with buprenorphine to people in the Philadelphia jail system, with referrals to drug treatment programs when they are released.

Health care providers can:

- Recommend that individuals with opioid use disorder begin medication assisted treatment.
- Receive training and obtain a waiver to prescribe buprenorphine in an outpatient setting.
- Begin buprenorphine medication assisted treatment in hospital emergency departments. While a waiver is required for writing outpatient prescriptions, providers working in emergency departments do not need a waiver to administer buprenorphine daily for up to 3 days for the purpose of treating withdrawal and initiating treatment.

People can:

- Begin medication assisted treatment, if you are dependent on opioid pills, heroin, or fentanyl.
- Encourage others who are dependent on opioids to seek medication assisted treatment and help them find treatment providers.

Resources

- Information on medication assisted treatment: https://www.samhsa.gov/medication-assisted-treatment; www.dbhids.org/MAT
- Drug treatment referrals and education: http://dbhids.org/addiction-services/ or 1-888-545-2600

Citations

1. Carroll JJ, Green TC, Noonan RK. Evidence-Based Strategies for Preventing Opioid Overdose: What's Working in the United States. Atlanta, GA: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. https://www.cdc.gov/drugoverdose/pdf/pubs/2018-evidence-based-strategies.pdf

This report was produced in collaboration with the Philadelphia Department of Behavioral Health and Intellectual disAbility Services.

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CHART

Thomas Farley, MD, MPH
Commissioner
Philadelphia Department of Public Health
1101 Market Street, 13th floor
Philadelphia, PA 19107

215-686-5200
healthdept@phila.gov
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All PDPH CHARTs are available on http://www.phila.gov/health.

YOU CAN PREVENT OVERDOSE IN YOUR PATIENTS.
Offer buprenorphine

For more information about buprenorphine in Philadelphia, visit https://dbhids.org/MAT

City of Philadelphia

Materials adapted with permission from the NYC Department of Health and Mental Hygiene

TREAT ADDICTION. SAVE LIVES.

OFFER BUPRENORPHINE TREATMENT.

Prescribing buprenorphine is easier than you might think. Here's what you need to know + free resources to help you get started.

WHAT IS BUPRENORPHINE?

Buprenorphine is a partial opioid agonist used to treat opioid use disorder. Buprenorphine is effective: it reduces drug use and death from opioids, keeps patients in treatment, and improves various health and social outcomes. Buprenorphine can be prescribed in your practice, just like other medications you prescribe for chronic health conditions. Offer buprenorphine to give your patients access to life-saving treatment they might not otherwise receive.

FAQ

Q: Who can prescribe buprenorphine?

A: Any physician, nurse practitioner (NP) or physician assistant (PA) after obtaining a waiver. Once waivered, providers can treat up to 30 patients with buprenorphine. Additional training is required to treat more than 30 patients at a time.

Q: How do I obtain my waiver to prescribe buprenorphine?

A: Providers interested in prescribing buprenorphine must first submit a Notification of Intent (NOI) to SAMHSA. Instructions can be found here: https://www.samhsa.gov/medication-assisted-treatment/become-buprenorphine-waivered-practitioner

Q: How do I get trained to prescribe buprenorphine to more than 30 patients?

A: There are several options available to complete the required buprenorphine waiver training, including online (visit samhsa.gov and search for "buprenorphine training").

Q: I didn't learn about buprenorphine during my clinical training. Is it complicated?

A: Prescribing buprenorphine for opioid use disorder is like treating many other chronic conditions that you routinely see in primary care. The Philadelphia Department of Public Health can also match you with an experienced prescriber for clinical mentorship and provide technical assistance to prepare you and your office staff.

Q: I am not sure I want to treat people who use drugs in my practice.

A: Individuals with opioid use disorder are likely already part of your practice. There are tens of thousands of Philadelphians who are believed to have this disorder and most do not receive the effective treatment they need. Buprenorphine treatment can prevent overdose and improve your patients' lives

FROM PRIMARY CARE PHYSICIANS WHO PRESCRIBE BUPRENORPHINE:

"There are few areas of primary care where a week or two into treatment many patients report such dramatic changes in their lives."

"It's amazing to see patients' lives change in front of my own eyes. I've had several patients say things like they never dreamed they could go this long without using opioids."

"I have come to realize this is no different than the management of any chronic disease. It's ideally suited for the primary care relationship."

"It's empowering to have this tool and be able to truly help patients struggling with drug use."

MYTHS AND FACTS ABOUT BUPRENORPHINE

MYTH	FACT
1. Prescribing buprenorphine for opioid use disorder (OUD) replaces one addiction for another.	OUD is a chronic condition and medication is the most effective way to prevent worsening symptoms and death.[1] Taking daily medication to maintain health is not substance use disorder.[2,3]
2. A commitment to abstinence will prevent opioid overdose more than buprenorphine will.	OUD is a chronic condition; relapse is common. Abstinence-based treatment reduces tolerance to opioids and is associated with substantial risk for relapse, overdose and death.[4] Buprenorphine limits or blocks the effects of illicit opioids, reducing overdose risk.[5,6]
3. Buprenorphine can be misused and, therefore, prescribers should strictly control access.	Any medication can be misused. However, buprenorphine is not a drug of choice to get high because it limits feelings of euphoria and reward.[5] Buprenorphine misuse is usually associated with self-treatment of withdrawal symptoms and lack of access to buprenorphine treatment.[7,8]
4. Prescribing buprenorphine comes with more legal liability than prescribing other medications, or will make the Drug Enforcement Administration (DEA) target the prescriber or practice.	Like with all medications, protection against liability depends on good patient assessment, provider education and documentation.[5] The DEA conducts routine, unannounced visits to verify that prescribers practice within their patient limits authorized by the Substance Abuse and Mental Health Services Administration (SAMHSA) (the maximum number of active patients that prescribers can treat with buprenorphine at one time).
5. Starting to prescribe buprenorphine will lead to a large number of people asking for prescriptions.	This has generally not been true of primary care practices supported by the Philadelphia Department of Public Health. The DEA limits the number of patients providers can treat with buprenorphine, but providers can choose within those limits how many people to treat. Providers can also decide the level of care they provide.
6. A person must be completely abstinent and have a completely negative urine screen to receive buprenorphine.	People do not need to be completely abstinent to be treated with buprenorphine. People with OUD commonly use multiple drugs, often to maintain a consistent high or reduce withdrawals and cravings. Buprenorphine can stabilize this cycle, reducing the need for additional substances.[9] Imperfect abstinence does not eliminate buprenorphine treatment benefits.[5]
7. The ideal length of treatment with buprenorphine is six months or less. Treatment success means patients will become drug-free, including from buprenorphine and methadone.	Individuals should continue buprenorphine treatment as long as they continue to benefit. This can be for years or even a lifetime.[5,10] Stopping medication for OUD treatment, even after long periods of treatment, can lead to relapse.[5] Treatment success for someone with OUD is measured by improved quality of life, rather than being free of medications.[11]
8. Outpatient therapy or counseling is mandatory for clinical improvement.	The Drug Addiction Treatment Act of 2000 (DATA 2000) mandates that buprenorphine prescribers must be able to refer patients for behavioral health services. Behavioral health support will benefit many patients, but it is not mandatory for the provider to refer all patients, or for patients to attend counseling. In rare cases, health insurance plans may require outpatient counseling for buprenorphine treatment.
9. All Philadelphians have equal access to treatment for OUD.	In Philadelphia, access to treatment for OUD is not equal by demographics or geographically. Together with the Health Department, you can help create equitable access to care and decrease existing treatment disparities by offering buprenorphine to all patients who may need it.

For more information about buprenorphine prescribing resources, visit https://dbhids.org/MAT.

City of Philadelphia

REFERENCES

1. U.S. Department of Health and Human Services (HHS), Office of the Surgeon General. Facing Addiction in America: The Surgeon General's Report on Alcohol, Drugs, and Health. https://addiction.surgeongeneral.gov/sites/default/files/surgeon-generals-report.pdf. Accessed February 22, 2019.
2. American Society of Addiction Medicine. Public Policy Statement: Definition of Addiction. https://www.asam.org/docs/default-source/public-policy-statements/1definition_of_addiction_long_4-11.pdf?sfvrsn=a8f64512_4. Accessed February 22, 2019.
3. Wakeman SE, Barnett ML. Primary care and the opioid-overdose crisis – buprenorphine myths and realities. New England Journal of Medicine. 2018; 379:1-4.
4. Sordo L, Barrio G, Bravo MJ, Indave BI, Degenhardt L, Wiessing L, Ferri M, Pastor-Burriuso R. Mortality risk during and after opioid substitution treatment: systematic review and meta-analysis of cohort studies. BMJ. 2017; 357:j1550.
5. U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Substance Abuse Treatment. Medications for opioid use disorder. Treatment Improvement Protocol (TIP) Series 63. https://store.samhsa.gov/system/files/sma18-5063fulldoc.pdf. Published 2018.
6. New York City Department of Health and Mental Hygiene. Buprenorphine—an office-based treatment for opioid use disorder. City Health Information. 2015;34(1):1-8
7. Lofwall MR, Havens JR. Inability to access buprenorphine treatment as a risk factor for using diverted buprenorphine. Drug and Alcohol Dependence. 2012;126(3):379–383.
8. Bazazi, AR, Yokell M, Fu JJ, Rich JD, Zaller ND. Illicit use of buprenorphine/naloxone among injecting and noninjecting opioid users. Journal of Addiction Medicine. 2011;5(3):175–180.
9. Martin SA, Chiodo LM, Bosse JD, Wilson A. The next stage of buprenorphine care for opioid use disorder. Annals of Internal Medicine. 2018;169:628–635.
10. Federation of State Medical Boards. Model policy on DATA 2000 and treatment of opioid addiction in the medical office. http://www.fsmb.org/siteassets/advocacy/policies/model-policy-on-data-2000-and-treatment-of-opioid-addiction-in-the-medical-office.pdf. Accessed February 22, 2019.
11. Fiellin DA, Schottenfeld RS, Cutter CJ, Moore BA, Barry DT, O'Connor PG. Primary care-based buprenorphine taper vs maintenance therapy for prescription opioid dependence: a randomized clinical trial. JAMA Internal Medicine. 2014;174(12):1947–1954.

Philadelphia Department of Public Health

BUPRENORPHINE PRESCRIBING RESOURCES

ABOUT BUPRENORPHINE

- Buprenorphine is a partial opioid agonist used to treat opioid use disorder.
- Buprenorphine reduces opioid use and overdose deaths, keeps patients in treatment and improves various health and social outcomes.
- Buprenorphine can be prescribed in your practice, just like other medications prescribed for chronic health conditions.
- Any physician, nurse practitioner or physician assistant can prescribe buprenorphine after obtaining a waiver.

The Philadelphia Department of Public Health provides free resources to help health care providers implement buprenorphine in their practice.

The Health Department offers buprenorphine waiver training, clinical mentorship, technical assistance and educational materials.

TRAINING

- Follows "half-and-half" format: four hours of live instruction and four hours of online self-study
- Fulfills training requirement for providers to treat more than 30 patients with buprenorphine in their practice at a time.
- Occurs approximately monthly
- Can be held at your institution for groups of at least 20 prescribers

MENTORSHIP

- Matches new or inexperienced prescribers with experienced buprenorphine prescribers (mentors)
- Is available to any Philadelphia physician, NP or PA who recently received a waiver to prescribe buprenorphine, or has previously received a waiver but never or rarely prescribed buprenorphine
- Occurs via in-person meetings, telephone, email and videoconference

TECHNICAL ASSISTANCE

- Supports the implementation of buprenorphine into practices of any size (including hospitals, clinics and community-based settings)
- Call the Opioid Assistance Resource (OAR) Line at 267-426-5900 for 24/7 for clinical consultation support from medical professionals with expertise in managing opioid toxicity and withdrawal, including buprenorphine dosing

EDUCATIONAL MATERIALS

- Educational pamphlets and posters for patients, available in multiple languages
- Educational materials for providers

For more information about buprenorphine prescribing resources, email dph.opioid@phila.gov.

City of Philadelphia

Materials adapted with permission from the NYC Department of Health and Mental Hygiene

The Poison Control Center (PCC) at the Children's Hospital of Philadelphia presents:

Opioid Assistance Resource (OAR) Line

Calling the OAR line

267-426-5900

24/7

Frequently asked questions (FAQ)

What does the OAR provide?

- 24/7 support from medical professionals with expertise in management of opiate toxicity and withdrawal

Who will answer the phone?

- You will be immediately connected to nurses and pharmacists with special training in toxicology.
- If your issue requires additional expertise, our staff will connect you to a medical toxicologist in Philadelphia.

What can I ask about?

- Opiate/opioid withdrawal treatment, including buprenorphine & symptom-controlling therapeutics.
- Buprenorphine dosing and prescribing.
- MAT clinic contact information for follow-up.

The Poison Control Center
1-800-222-1222

For support with problem drug use
and for other resources,

talk to your doctor or call 311.

For more information, visit
https://dbhids.org/MAT or
call 888-545-2600.

Materials adapted with permission from the NYC Department of Health and Mental Hygiene

City of Philadelphia 4.19

BUPE

Do you have a problem with prescription painkillers or heroin?

BUPRENORPHINE can help.

WHAT IS BUPRENORPHINE?

Buprenorphine (or "bupe") is a medication that treats addiction to opioids, such as prescription painkillers (like Vicodin, Oxycontin or Percocet) and heroin. Suboxone is a common brand name for bupe.

HOW DOES BUPE WORK?

Bupe stops withdrawal symptoms and cravings. This makes it easier for you to stop using or cut down, so you can focus on activities that are important to you.

CAN BUPE CAUSE OVERDOSE?

It's hard to overdose on bupe by taking too much. However, it is dangerous to mix bupe with alcohol, benzodiazepines (or "benzos", like Valium, Xanax or Ativan), or other sedating drugs. Mixing bupe with these drugs increases your risk of overdose.

DOES BUPE HAVE SIDE EFFECTS?

Side effects are different for different people. They are usually mild and may include constipation, nausea, headache and insomnia.

HOW LONG DO I NEED TO TAKE BUPE?

Everybody is different. Many people may benefit from long-term treatment; other people may need bupe for a shorter time.

CAN I SWITCH FROM METHADONE TO BUPE?

Yes, but talk to your doctor first to make sure you are on the right methadone dose before switching.

WILL MY HEALTH INSURANCE PAY FOR BUPE?

Yes. Medicaid, Medicare and most other health plans pay for bupe. Check with your health plan to make sure bupe is on the list of approved drugs.

HOW DO I GET BUPE?

Ask your doctor to prescribe bupe. Once you have a prescription, you can get bupe at a pharmacy and take it at home, just like other medications.

If your doctor does not prescribe bupe, call 311, or go to samhsa.gov and search for "buprenorphine" to find other options for getting bupe.

WHAT ELSE SHOULD I KNOW ABOUT STARTING BUPE?

- Your doctor will explain that you must be in some withdrawal from opioids when starting bupe.
- You should tell your doctor about any medications you are taking, since some can interact with bupe.
- You should tell your doctor if you are pregnant or breastfeeding.
- Taking bupe is sometimes enough to help, but many people also benefit from counseling. Your doctor can help you decide whether counseling is right for you.

ACCESSING TREATMENT

CALL CBH MEMBER SERVICES

Call **1-888-545-2600** 24/7 365 days/year for help in receiving services for a drug and/or alcohol addiction. Substance use disorder is the repeated use of a substance and/or alcohol that does harm to your body and mind.

Community Behavioral Health (CBH) is a behavioral health insurance company that pays for mental health and substance use services for everyone that is enrolled in Medicaid in Philadelphia.

Other common Philadelphia insurers:
Medicare: 1-800-MEDICARE (1-800-633-4227)
Magellan Healthcare: 1-800-688-1911
Behavioral Health Special Initiative (BHSI): 215-546-1200

WHAT TO EXPECT

Treatment Begins with an Assessment:

Before going into inpatient treatment, you will need an assessment. An assessment is an in-depth interview led by a behavioral health professional. The Pennsylvania Client Placement Criteria (PCPC) and American Society of Addiction Medicine (ASAM) are two examples of assessments that help professionals determine what kind of substance use services you may need.

Residential and Hospital Treatment:

If your assessment results show you would benefit from an inpatient hospital stay (also known as residential treatment), the behavioral health professionals you met with will contact your insurance to get approval and find a program that will meet your needs.

Community Based and Outpatient Treatment:

Many people can and do recover from substance use disorders with the support of an outpatient treatment program. Outpatient treatment is care that you can participate in without staying in a hospital or medical facility. During outpatient treatment you can visit a behavioral health professional to access the services and medication you may need.

There are three levels of outpatient treatment:

- Traditional outpatient (where you can meet with your therapist at least one time per week)
- Intensive outpatient (where you can meet with your therapist at least three times per week)
- Partial hospitalization programs (where you meet with your therapist daily)

The goal of these programs is to help build coping skills when dealing with cravings.

C·B·H Community Behavioral Health

City of Philadelphia DBHIDS DEPARTMENT of BEHAVIORAL HEALTH and INTELLECTUAL disABILITY SERVICES

If you are uninsured, covered by Medicaid/CBH, or not sure of your insurance coverage, contact CBH Member Services at 1-888-545-2600 24/7, 365 days/year to gain assistance with accessing publicly funded SUD treatment and services.

In the event of a medical emergency, please call 911 and go to the nearest emergency room.

WHERE TO GO FOR AN ASSESSMENT

NET Access Point 844-533-8200 or 215-408-4987
499 North 5th Street, Suite B, Philadelphia, PA 19123
www.netcenters.org
Open 24 hours/day and 7 days/week. Offering Buprenorphine & Vivitrol Induction

Crisis Response Centers

Friends Hospital 4641 Roosevelt Blvd. (215) 831-2600

Einstein Medical Center 5501 Old York Rd. (215) 951-8300

Pennsylvania Hospital (Hall Mercer) 245 S. 8th St. (215) 829-5433

Temple/Episcopal Hospital 100 E. Lehigh Ave. (215) 707-2577

Philadelphia Children's Crisis Response Center
3300 Henry Ave. Falls Two Building, 3rd Floor (215) 878-2600

Pathways to Recovery (PHMC) Partial Hospitalization
2301 East Allegheny Avenue, Philadelphia, PA 19134
215-731-2404 - English/Spanish. Buprenorphine & Vivitrol Induction

Gaudenzia
1306 Spring Garden, Philadelphia, PA 19123
267-315-6907 - Withdrawal Management & Buprenorphine Maintenance

Nearest Substance Use Disorder Treatment Provider
See attached list of community treatment programs

C·B·H Community Behavioral Health

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In the event of a medical emergency, please call 911 and go to the nearest emergency room.

IN-NETWORK ADULT COMMUNITY MEDICATION-ASSISTED TREATMENT (MAT) PROGRAMS

Provider & Contact Info	MAT	Additional Information
ADDICTION MEDICINE AND HEALTH ADVOCATES (AMHA) 928 MARKET ST, 19107 (215) 923-4202	MMT induction	IOP/OP Spanish; Child care on site
ASOCIACION PUERTORRIQUENOS EN MARCHA (APM) 4301 RISING SUN AVE, PHILA, 19140 (267) 296-7200	Buprenorphine induction	IOP/OP; MH Tx on-site Spanish
CASA DE CONSEJERIA Y SALUD INTEGRAL 213 W ALLEGHENY AVE, 19140 (215) 634-3259	Buprenorphine induction	IOP
CHANCES- PHILA HEALTH MGMT CORP (PHMC) 1200 CALLOWHILL ST, SUITE 102, 19123 (215) 825-8220	Buprenorphine induction	OP/IOP
COMHAR 2055 E. ALLEGHENY AVE, 19134 (215) 427-5800 2600 N AMERICAN ST, 19133 (215) 739-2669	Buprenorphine induction	OP; MH Tx on-site Spanish Both locations registration: (267) 861-4382
THE CONSORTIUM 451 S. UNIVERSITY AVE, 19104 (215) 596-8000	MMT induction Vivitrol	IOP/OP; MH Tx on-site Spanish; Child care on site
DREXEL MEDICINE CARING TOGETHER CLINIC 4700 WISSAHICKON AVE, 19144 (215) 967-2130	Buprenorphine/Vivitrol maintenance	OP Females only, Child care on site
GAUDENZIA OUTREACH I 1306 SPRING GARDEN ST, 19123 (215) 238-2150	Vivitrol	IOP/OP; MH Tx on-site Spanish
GAUDENZIA-DRC 3200 HENRY AVE, 19129 (215) 991-9700	Vivitrol	IOP/OP
GREATER PHILA ASIAN SOCIAL SERVICES CENTER 4943 N. 5TH ST, 19120 (215) 456-1662	Vivitrol	IOP/OP; Spanish, Korean, Vietnamese Chinese, Cambodian
INTERIM HOUSE, INC. - PHMC 333 W. UPSAL ST, 19139 (215) 849-4606	Buprenorphine induction Vivitrol	IOP/OP; MH Tx on-site Spanish
JEVS HUMAN SERVICES - ACT I 5820 OLD YORK ROAD, 19141 (215) 276-8400	MMT induction	IOP/OP
JEVS HUMAN SERVICES - ACT II 1745 N. 4TH ST, 19122 (215) 236-0100	MMT induction	IOP/OP Spanish
JOHN F. KENNEDY BEHAVIORAL HEALTH CENTER (JFK) 907 N. BROAD ST, 19123 (215) 235-5520 112 N BROAD ST, 19102 (215) 556-0860	 MMT induction Vivitrol	OP; MH Tx on-site
KENSINGTON HOSPITAL 136 DIAMOND ST, 19122 (215) 426-8100	MMT induction	OP
MERAKEY BEHAVIORAL HEALTH 5000 PARKSIDE AVE, 19131 (215) 879-6116	Buprenorphine induction MMT induction & Vivitrol	IOP/OP; MH Tx on-site; Walk-in: M-F 7a-5:30p; Sa 8a-1:30p; Su 8-11:30a
MERAKEY BEHAVIORAL HEALTH 5429 GERMANTOWN AVE, 19144 (215) 754-0240	Buprenorphine induction MMT induction & Vivitrol	IOP/OP; MH Tx on-site; Walk-in Hours: 7a-5:30p
MERAKEY BEHAVIORAL HEALTH 100 E LEHIGH AVE, 19125 (215) 634-2520	Buprenorphine induction Vivitrol	IOP/OP; MH Tx on-site; Walk-in Hours: M-F 8a-5p
MERAKEY BEHAVIORAL HEALTH 11082 KNIGHTS ROAD, 19154 (215) 632-9040	Buprenorphine induction Vivitrol	IOP/OP; Walk-in: M-F 8a-5p
NORTH PHILA HEALTH SYSTEM - GOLDMAN CLINIC 801 W. GIRARD AVE, 19122 (215) 787-2000	MMT induction Vivitrol	IOP/OP Spanish
NET CENTERS 499 N. 5TH ST, 19123 (215) 451-7100	Buprenorphine induction Vivitrol	IOP/OP; MH Tx on-site

Philadelphia Department of Behavioral Health
and Intellectual disAbility Services

Spring 2020
Fact Sheet 2A

IN-NETWORK ADULT COMMUNITY MEDICATION-ASSISTED TREATMENT (MAT) PROGRAMS

Provider & Contact Info	MAT	Additional Information
NET CENTERS 2205 BRIDGE ST, 19137 (215) 743-6150	Buprenorphine induction MMT induction & Vivitrol	IOP/OP; MH Tx on-site; Walk-in: M-W 7a-5p, Th 7-11a; F 7a-12p
NET CENTERS 7520 STATE ROAD, 19136 (267) 348-3550	Buprenorphine induction MMT induction & Vivitrol	IOP/OP; MH Tx on-site; Child care on site Walk-in hours
NET CENTERS 4625 FRANKFORD AVE, 2ND FL, 19124 (267) 597-3920	Buprenorphine induction	OP; Spanish; MH Tx 1st FL Walk-in: M-F 9a-4p
PATHWAYS TO HOUSING* 5201 OLD YORK ROAD, SUITE 108, 19141 (215) 390-1500	Buprenorphine induction Vivitrol	Spanish Housing Assistance
PATHWAYS TO RECOVERY (PHMC) 2301 EAST ALLEGHENY AVE, 19134 (215) 731-2402	Vivitrol & Buprenorphine MMT clinic coordination	Partial Hospital Program; MH Tx on-site Spanish
PENN MEDICINE MOTHERS MATTER PROGRAM* 3400 SPRUCE ST, 1 WEST GATES, 19103 (267) 593-2969	Buprenorphine induction	Pregnant Women
PENN OUTPATIENT (TOTAL RECOVERY) 8220 CASTOR AVE, 19152 (215) 728-4600	Vivitrol & Suboxone Buprenorphine induction	MAT, IOP/OP, Spanish M-F: 8:30a - 4:30p; 2nd Floor
PEOPLE ACTING TO HELP (PATH) 1200 CALLOWHILL ST, 1st Floor, 19123 (267) 398-0247	Buprenorphine induction Vivitrol	OP
PHMC CARE CLINIC MAT PROGRAM* 1200 CALLOWHILL ST, 1st Floor, 19123 (267) 398-0247	Buprenorphine induction Vivitrol	Health Care Center Spanish; PCP
PREVENTION POINT* 2913-2915 KENSINGTON AVE, 19134 (215) 634-5272	Buprenorphine induction Vivitrol	Harm Reduction Svcs Spanish
PROJECT HOME (STEPHEN KLEIN WELLNESS CENTER)* 2144 CECIL B. MOORE AVE, 19121 (215) 320-6187 x5756	Buprenorphine induction Vivitrol induction	
SOAR CORP 9150 MARSHALL ST, SUITE 2, 19114 (215) 464-4450	MMT induction	IOP/OP
THOMAS JEFFERSON UNIVERSITY FAMILY CENTER* 1233 LOCUST ST, SUITE 201, 19107 (215) 955-8577	MMT induction Bupe maintenance	*MATER; IOP/OP; MH Tx on-site Females only, pregnancy, child care on site
THOMAS JEFFERSON UNIVERSITY (NARP)* 1021 S 21ST ST, 19146 (215) 735-5979	MMT induction Bupe maintenance	IOP/OP; MH Tx on-site Spanish
TEMPLE TWO PROGRAM* 3401 N BROAD ST, 19140 (215) 707-3008	Buprenorphine induction	Partners with the Wedge MC OB- GYN Svcs
WEDGE MEDICAL CENTER* 3609 N. BROAD ST, 19140 (215) 276-3922	Buprenorphine induction Vivitrol	Partners with Temple TWO; Walk-in: M-W 2-3:30p Spanish; IOP/OP; MH Tx on-site
WEDGE MEDICAL CENTER* 2009 S. BROAD ST, 19148 (215) 276-3922	Buprenorphine induction Vivitrol	Partners with Temple TWO: Walk-in: M 2-3:30p IOP/OP; MH Tx on-site
WEDGE MEDICAL CENTER* 4243 FRANKFORD AVE, 19124 (215) 276-3922	Buprenorphine induction Vivitrol	Partners with Temple TWO; IOP/OP MH Tx on-site; Walk-in: T 2-3:30p

Call 1-888-545-2600 to speak to a service representative and access treatment.

Offering same-day inductions during walk-in hours

*Center of Excellence
Intensive Outpatient Program (IOP)
Methadone Maintenance Treatment (MMT)
Outpatient Program (OP)

David T. Jones
Commissioner
215-685-5400

City of Philadelphia
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JAMA Network Open

Original Investigation | Substance Use and Addiction

Comparative Effectiveness of Different Treatment Pathways for Opioid Use Disorder

Sarah E. Wakeman, MD; Marc R. Larochelle, MD, MPH; Omid Ameli, MD, MPH; Christine E. Chaisson, MPH; Jeffrey Thomas McPheeters, BA; William H. Crown, PhD; Francisca Azocar, PhD; Darshak M. Sanghavi, MD

Abstract

IMPORTANCE Although clinical trials demonstrate the superior effectiveness of medication for opioid use disorder (MOUD) compared with nonpharmacologic treatment, national data on the comparative effectiveness of real-world treatment pathways are lacking.

OBJECTIVE To examine associations between opioid use disorder (OUD) treatment pathways and overdose and opioid-related acute care use as proxies for OUD recurrence.

DESIGN, SETTING, AND PARTICIPANTS This retrospective comparative effectiveness research study assessed deidentified claims from the OptumLabs Data Warehouse from individuals aged 16 years or older with OUD and commercial or Medicare Advantage coverage. Opioid use disorder was identified based on 1 or more inpatient or 2 or more outpatient claims for OUD diagnosis codes within 3 months of each other; 1 or more claims for OUD plus diagnosis codes for opioid-related overdose, injection-related infection, or inpatient detoxification or residential services; or MOUD claims between January 1, 2015, and September 30, 2017. Data analysis was performed from April 1, 2018, to June 30, 2019.

EXPOSURES One of 6 mutually exclusive treatment pathways, including (1) no treatment, (2) inpatient detoxification or residential services, (3) intensive behavioral health, (4) buprenorphine or methadone, (5) naltrexone, and (6) nonintensive behavioral health.

MAIN OUTCOMES AND MEASURES Opioid-related overdose or serious acute care use during 3 and 12 months after initial treatment.

RESULTS A total of 40 885 individuals with OUD (mean [SD] age, 47.73 [17.25] years; 22 172 [54.2%] male; 30 332 [74.2%] white) were identified. For OUD treatment, 24 258 (59.3%) received nonintensive behavioral health, 6455 (15.8%) received inpatient detoxification or residential services, 5123 (12.5%) received MOUD treatment with buprenorphine or methadone, 1970 (4.8%) received intensive behavioral health, and 963 (2.4%) received MOUD treatment with naltrexone. During 3-month follow-up, 707 participants (1.7%) experienced an overdose, and 773 (1.9%) had serious opioid-related acute care use. Only treatment with buprenorphine or methadone was associated with a reduced risk of overdose during 3-month (adjusted hazard ratio [AHR], 0.24; 95% CI, 0.14-0.41) and 12-month (AHR, 0.41; 95% CI, 0.31-0.55) follow-up. Treatment with buprenorphine or methadone was also associated with reduction in serious opioid-related acute care use during 3-month (AHR, 0.68; 95% CI, 0.47-0.99) and 12-month (AHR, 0.74; 95% CI, 0.58-0.95) follow-up.

(continued)

Key Points

Question What is the real-world effectiveness of different treatment pathways for opioid use disorder?

Findings In this comparative effectiveness research study of 40 885 adults with opioid use disorder that compared 6 different treatment pathways, only treatment with buprenorphine or methadone was associated with reduced risk of overdose and serious opioid-related acute care use compared with no treatment during 3 and 12 months of follow-up.

Meaning Methadone and buprenorphine were associated with reduced overdose and opioid-related morbidity compared with opioid antagonist therapy, inpatient treatment, or intensive outpatient behavioral interventions and may be used as first-line treatments for opioid use disorder.

+ Supplemental content

Author affiliations and article information are listed at the end of this article.

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Abstract (continued)

CONCLUSIONS AND RELEVANCE Treatment with buprenorphine or methadone was associated with reductions in overdose and serious opioid-related acute care use compared with other treatments. Strategies to address the underuse of MOUD are needed.

JAMA Network Open. 2020;3(2):e1920622. doi:10.1001/jamanetworkopen.2019.20622

Introduction

The increasing burden of opioid use disorder (OUD) has resulted in increased opioid-related morbidity and mortality, with 47 600 overdose deaths in 2017 alone.[1-3] From 2002 to 2012, hospitalization costs attributable to opioid-related overdose increased by more than $700 million annually.[4] Associated health complications, such as hepatitis C infection, HIV infection, and serious injection-related infections, are also increasing.[5-7] In addition, as rates of opioid-related death have increased despite decreases in prescription opioid supply, there is an increasing recognition that greater attention must be paid to improving access to effective OUD treatment.[8,9]

Medication for opioid use disorder (MOUD) is effective and improves mortality, treatment retention, and remission, but most people with OUD remain untreated.[10-15] Many parts of the United States lack access to buprenorphine prescribers, and only a few addiction treatment programs offer all forms of MOUD.[16-18] This lack of access has resulted in a treatment gap of an estimated 1 million people with OUD untreated with MOUD annually.[19]

Nationally representative, comparative effectiveness studies of MOUD compared with nonpharmacologic treatment are limited. One prior study[12] compared MOUD with psychosocial treatments but was limited to a Massachusetts Medicaid population. Studies[20-23] examining OUD treatment among nationally representative populations have examined trends in MOUD initiation, patterns of OUD treatment, and effectiveness of different types of MOUD at reducing overdose using Medicaid and commercial claims data. However, none of those studies[20-23] compared the effectiveness of MOUD with nonpharmacologic treatments in a national sample. Despite better access to medical care, only a few commercially insured patients are treated with MOUD, and psychosocial-only treatments continue to be common, suggesting that greater understanding of the comparative effectiveness of these different treatments is needed.[21]

In this study, we used a large, nationally representative database of commercially insured and Medicare Advantage (MA) individuals to evaluate the effectiveness of MOUD compared with nonpharmacologic treatment. This retrospective comparative effectiveness study was designed to inform treatment decisions made by policy makers, insurers, practitioners, and patients.

Methods

We conducted a comparative effectiveness research study using the OptumLabs Data Warehouse, which includes medical, behavioral health, and pharmacy claims for commercial and MA enrollees.[24] The database represents a diverse mixture of ages, races/ethnicities, and geographic regions across the United States. Our analysis used deidentified administrative claims data. The window for identification of OUD for this study was January 1, 2015, to September 30, 2017. The study used claims data from October 3, 2014, to December 31, 2017, to allow for a 90-day period to ensure a nonopioid clean period and a minimum of 90 days of follow-up for all individuals with diagnosed OUD. Data analysis was performed from April 1, 2018, to June 30, 2019. Because this study involved analysis of preexisting, deidentified data, the Chesapeake Institutional Review Board deemed it exempt from institutional review board approval. This study followed the International Society for Pharmacoeconomics and Outcomes Research (ISPOR) reporting guideline.[25]

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Cohort Selection

We defined OUD as 1 or more inpatient or 2 or more outpatient claims for *International Classification of Diseases, Ninth Revision (ICD-9)* or *International Statistical Classification of Diseases and Related Health Problems, Tenth Revision (ICD-10)* diagnosis codes for opioid dependence that occurred within 3 months of each other; 1 or more claims for diagnosis codes for opioid dependence, opioid use, or opioid abuse plus diagnosis codes for an encounter related to opioid overdose or an injection-related infection, opioid-related inpatient detoxification or residential services; or claims for MOUD or detoxification (eFigure 1 in the Supplement). Cohort inclusion required presence of OUD and age of 16 years or older; commercial or MA medical, pharmacy, and behavioral coverage; and continuous enrollment for 3 months before and after OUD treatment initiation date. For those in the no treatment group, a treatment initiation index date was selected at random that matched the treated groups (eAppendix 1 in the Supplement).

Treatment Pathways

We examined treatments received in the 3 months after OUD diagnosis during the first 90 days after cohort entry to identify patterns of treatment (eFigure 2 in the Supplement). We categorized individuals into 1 of 6 mutually exclusive pathway designations based on initial treatment: (1) no treatment, (2) inpatient detoxification or residential services, (3) intensive behavioral health (intensive outpatient or partial hospitalization), (4) buprenorphine or methadone, (5) naltrexone, and (6) only nonintensive behavioral health (outpatient counseling) (eAppendix 2 in the Supplement). In addition, we examined mean duration of MOUD treatment in days.

Classification of treatment pathways was informed by detailed exploration of the sequence of treatment modalities provided to patients using medical and pharmacy claims (eFigure 3 in the Supplement). For this study, consistent with an intent-to-treat design, patients were assigned to the initial treatment received.

Outcomes

Our primary outcomes were overdose or serious opioid-related acute care use, defined as an emergency department or hospitalization with a primary opioid diagnosis code. Overdose was identified based on diagnosis codes from claims for health care encounters. These encounters may include both fatal and nonfatal overdose (lack of mortality data preclude that determination). For actively treated individuals, the index date was the date of first treatment. For untreated individuals, the index date was set randomly based on the distribution of time to first treatment among actively treated individuals. Risk for adverse outcomes started 1 day after the index date; however, because the time sequence for adverse events that occurred during an initial inpatient treatment could not be reliably established, risk of adverse outcomes started 1 day after inpatient discharge. Time to event was calculated as (event date – index date + 1), which is consistent with an intent-to-treat analysis for all treatment pathways. Individuals were censored at the earlier outcome, health plan disenrollment, or 12 months. We selected overdose and opioid-related acute care use as negative clinical outcomes, which likely indicate recurrence of OUD. These outcomes may underestimate the prevalence of OUD recurrence because they represent severe consequences of ongoing use.

A secondary outcome was admission to inpatient detoxification or readmission for those who initiated treatment with inpatient detoxification or residential services. All outcomes were evaluated for 3 months and 12 months after treatment initiation. In the absence of an event, patients were followed up until the earliest date of health plan disenrollment or end of the respective period.

Statistical Analysis

We used Cox proportional hazards regression models to estimate the hazard ratios (HRs) for primary and secondary outcomes, adjusting for age, sex, race/ethnicity, insurance type, baseline cost rank, mental health and medical comorbidities, and injection-related infections or overdose at study inclusion. For medical comorbidities, we used a modified Elixhauser index that excluded mental

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health subcomponents because they were classified separately.[26] All analyses were conducted using an intent-to-treat approach that attributed patient outcomes to their initial treatment category. We conducted a subanalysis of patients who received methadone or buprenorphine, stratifying by duration of MOUD treatment as 1 to 30 days, 31 to 180 days, or more than 180 days.

For the secondary outcome of admission to inpatient detoxification, we conducted a subanalysis in which patients in the no treatment and nonintensive behavioral health groups were removed from the sample. These 2 treatment pathways were, by definition, required to not have any treatment (no treatment group) or any treatment other than outpatient behavioral health treatment (nonintensive behavioral health group) in the first 3 months of follow-up, which made them systematically different from the other pathways evaluated for this outcome.

Analysis of survival for all outcomes was performed using unadjusted Kaplan-Meier curves and adjusted Cox proportional hazards regression (PHREG procedure, SAS Enterprise Guide, version 7.13 [SAS Institute Inc]) under both 3-month and 12-month time windows to examine potential survivorship bias and informative censoring. For the unadjusted analysis, the log-rank test is reported; 95% Wald CIs are reported for the adjusted HRs (AHRs). The proportionality assumption was assessed visually and tested by including treatment pathway as a time-dependent covariate in the Cox proportional hazards regression model. Hazards appeared to be proportional during 3 months, but there was evidence of nonproportionality for the behavioral health outpatient pathway during the 12-month time window.

Results

Cohort Characteristics

A total of 40 885 individuals with OUD (mean [SD] age, 47.73 [17.25] years; 22 172 [54.2%] male; 30 332 [74.2%] white) were identified. A total of 23 636 (57.8%) were commercially insured, and 17 249 (42.2%) were enrolled in MA plans. Of those with MA, 10 322 (25.2%) were younger than 65 years. Non–substance use disorder mental health comorbidities in the 3 months before the index date were found in 10 942 individuals (45.1%) in the cohort. Depression (9733 [23.8%]) and anxiety (10 704 [26.2%]) were most common (**Table 1**).

The most common treatment pathway was nonintensive behavioral health (24 258 [59.3%]), followed by inpatient detoxification or residential services (6455 [15.8%]) and buprenorphine or methadone (5123 [12.5%]). Not receiving any treatment was more common (2116 [5.2%]) than naltrexone (963 [2.4%]) or intensive behavioral health (1970 [4.8%]). Mean (SD) length of stay in inpatient detoxification or residential services was 7.47 (10.35) days. For the 5048 in that group who had at least 6 months of continuous enrollment, mean (SD) length of stay was 7.56 (10.99) days. For the 3098 in that group who had at least 12 months of continuous enrollment, mean (SD) length of stay was 7.64 (12.24) days.

Maintaining continuous commercial health insurance was challenging in this cohort; 19 685 (48.1%) were disenrolled by 12 months after the index date. Individuals receiving nonintensive behavioral health had the lowest disenrollment (11 037 [45.5%]), and those receiving MOUD treatment with buprenorphine or methadone (2755 [53.8%]) and MOUD treatment with naltrexone (520 [54.0%]) had the highest disenrollment rates. No differences were found between those who maintained enrollment and those who were disenrolled with regard to race/ethnicity, comorbidities, or markers of severity of OUD, including those with a history of an injection-related infection, hepatitis C infection, or overdose. It was not possible to distinguish disenrollment attributable to death from disenrollment for other reasons (eg, health insurance options offered by employers). Details on demographic characteristics and comorbidities by treatment group for individuals who were disenrolled are provided in the eTable in the Supplement.

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Recurrence Outcomes

During the 3-month follow-up period, 707 participants (1.7%) experienced an overdose, and 773 (1.9%) had a serious opioid-related acute care use episode. Only individuals receiving MOUD treatment with buprenorphine or methadone were less likely to experience an overdose compared with those receiving no treatment (AHR, 0.24; 95% CI, 0.14-0.41) (**Table 2** and **Figure 1**A). Inpatient detoxification or residential services (AHR, 0.82; 95% CI, 0.57-1.19), naltrexone (AHR, 0.59; 95% CI, 0.29-1.20), nonintensive behavioral health services (AHR, 0.92; 95% CI, 0.67-1.27), or intensive

Table 1. Patient Characteristics[a]

Characteristic	Total	No Treatment	Inpatient Detoxification or Residential Services	BH IOP	MOUD		BH Other
					Buprenorphine or Methadone	Naltrexone	
Total sample	40 885 (100)	2116 (5.2)	6455 (15.8)	1970 (4.8)	5123 (12.5)	963 (2.4)	24 258 (59.3)
Age, mean (SD), y	47.73 (17.25)	44.85 (18.66)	39.22 (15.38)	31.28 (12.19)	42.58 (13.93)	38.10 (14.01)	53.05 (16.36)
Follow-up duration, mean (SD), d	293.2 (91.3)	285.0 (93.9)	284.3 (96.1)	291.1 (93.2)	281.8 (94.7)	282.5 (94.5)	299.3 (88.1)
Age group, y							
16-25	5978 (14.6)	437 (20.7)	1837 (28.5)	948 (48.1)	578 (11.3)	247 (25.6)	1931 (8.0)
26-34	5350 (13.1)	354 (16.7)	1124 (17.4)	404 (20.5)	1194 (23.3)	197 (20.5)	2077 (8.6)
35-44	6070 (14.8)	332 (15.7)	1089 (16.9)	290 (14.7)	1172 (22.9)	206 (21.4)	2981 (12.3)
45-54	7208 (17.6)	300 (14.2)	1059 (16.4)	188 (9.5)	995 (19.4)	167 (17.3)	4499 (18.5)
54-64	8897 (21.8)	318 (15.0)	983 (15.2)	117 (5.9)	817 (15.9)	108 (11.2)	6554 (27)
≥65	7382 (18.1)	375 (17.7)	363 (5.6)	23 (1.2)	367 (7.2)	38 (3.9)	6216 (25.6)
Sex							
Female	18 713 (45.8)	797 (37.7)	2482 (38.5)	662 (33.6)	1971 (38.5)	387 (40.2)	12 414 (51.2)
Male	22 172 (54.2)	1319 (62.3)	3973 (61.5)	1308 (66.4)	3152 (61.5)	576 (59.8)	11 844 (48.8)
Insurance type							
Commercial	23 636 (57.8)	1299 (61.4)	5062 (78.4)	1889 (95.9)	3630 (70.9)	841 (87.3)	10 915 (45)
Medicare Advantage							
Age <65 y	10 322 (25.2)	457 (21.6)	1067 (16.5)	63 (3.2)	1147 (22.4)	91 (9.4)	7497 (30.9)
Age ≥65 y	6927 (16.9)	360 (17.0)	326 (5.1)	18 (0.9)	346 (6.8)	31 (3.2)	5846 (24.1)
Race/ethnicity							
White	30 332 (74.2)	1485 (70.2)	4976 (16.4)	1552 (78.8)	4044 (78.9)	791 (82.1)	17 484 (72.1)
Hispanic	3388 (8.3)	192 (9.1)	511 (15.1)	158 (8.0)	338 (6.6)	47 (4.9)	2142 (8.8)
Black	4991 (12.2)	317 (15.0)	628 (12.6)	161 (8.2)	468 (9.1)	68 (7.1)	3349 (13.8)
Other or unknown	2174 (5.3)	122 (5.8)	340 (15.6)	99 (5.0)	273 (5.3)	57 (5.9)	1283 (5.3)
Elixhauser index score excluding mental health, mean (SD)	1.75 (2.35)	1.25 (2.15)	1.00 (1.67)	0.51 (1.15)	0.88 (1.49)	0.94 (1.41)	2.30 (2.60)
Any mental health diagnosis	18 218 (44.6)	585 (27.6)	3078 (47.7)	933 (47.4)	2060 (40.2)	620 (64.4)	10 942 (45.1)
Depression	9733 (23.8)	270 (12.8)	1670 (25.9)	552 (28.0)	965 (18.8)	398 (41.3)	5878 (24.2)
Anxiety	10 704 (26.2)	274 (12.9)	1921 (29.8)	554 (28.1)	1329 (25.9)	391 (40.6)	6235 (25.7)
ADHD	1774 (4.3)	33 (1.6)	402 (6.2)	159 (8.1)	272 (5.3)	77 (8.0)	831 (3.4)
PTSD	1462 (3.6)	41 (1.9)	245 (3.8)	104 (5.3)	153 (3.0)	69 (7.2)	850 (3.5)
Alcohol	4166 (10.2)	174 (8.2)	961 (14.9)	471 (23.9)	225 (4.4)	496 (51.5)	1839 (7.6)
Bipolar disorder	3138 (7.7)	102 (4.8)	556 (8.6)	183 (9.3)	290 (5.7)	146 (15.2)	1861 (7.7)
Psychosis	1526 (3.7)	76 (3.6)	268 (4.2)	76 (3.9)	87 (1.7)	40 (4.2)	979 (4)
IDU infection	5556 (13.6)	249 (11.8)	330 (5.1)	66 (3.4)	151 (2.9)	31 (3.2)	4729 (19.5)
Hepatitis C	2018 (4.9)	64 (3.0)	181 (2.8)	<29 (<1.7)	121 (2.4)	<11 (<1.1)	1623 (6.7)
Opioid overdose	2135 (5.2)	249 (11.8)	267 (4.1)	84 (4.3)	86 (1.7)	27 (2.8)	1422 (5.9)

Abbreviations: ADHD, attention-deficit/hyperactivity disorder; BH IOP, intensive behavioral health (intensive outpatient or partial hospitalization); BH other, only nonintensive behavioral health (outpatient counseling); IDU, injection drug use; MOUD, medication for opioid use disorder; PTSD, posttraumatic stress disorder.

[a] Data are presented as number (percentage) of patients unless otherwise indicated.

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behavioral health services (AHR, 0.81; 95% CI, 0.50-1.32) were not significantly associated with overdose.

MOUD treatment with buprenorphine or methadone was also protective against serious opioid-related acute care use during the 3-month follow-up period (AHR, 0.68; 95% CI, 0.47-0.99) (Table 2 and Figure 1B). Inpatient detoxification or residential services treatment, naltrexone, and intensive behavioral health services were not significantly associated with serious opioid-related acute care use during 3 months (inpatient detoxification or residential services: AHR, 1.05; 95% CI, 0.76-1.45; naltrexone: AHR, 1.15; 95% CI, 0.69-1.92; intensive behavioral health: AHR, 0.84; 95% CI, 0.54-1.30).

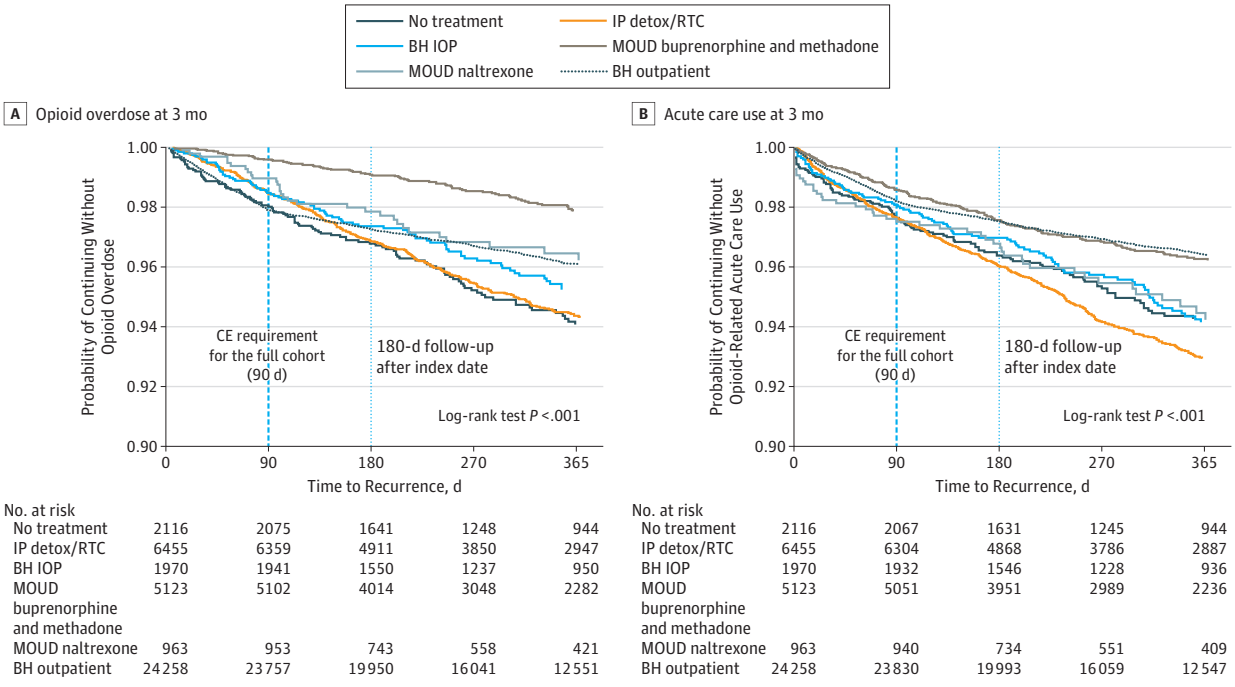
Table 2. Adjusted Hazard Ratios for Overdose and Serious Opioid-Related Acute Care Use by Initial Treatment Group Compared With No Treatment[a]

Variable	Adjusted Hazard Ratio (95% CI)	
	3 Months	12 Months
Overdose		
No treatment	1 [Reference]	1 [Reference]
Inpatient detoxification or residential services	0.82 (0.57-1.19)	1 (0.79-1.25)
BH IOP	0.81 (0.50-1.32)	0.75 (0.56-1.02)
MOUD treatment with buprenorphine or methadone	0.24 (0.14-0.41)	0.41 (0.31-0.55)
MOUD treatment with naltrexone	0.59 (0.29-1.20)	0.73 (0.48-1.11)
BH other	0.92 (0.67-1.27)	0.69 (0.56-0.85)
ED or inpatient stay		
No treatment	1 [Reference]	1 [Reference]
Inpatient detoxification or residential services	1.05 (0.76-1.45)	1.20 (0.96-1.50)
BH IOP	0.84 (0.54-1.30)	0.90 (0.67-1.20)
MOUD treatment with buprenorphine or methadone	0.68 (0.47-0.99)	0.74 (0.58-0.95)
MOUD treatment with naltrexone	1.15 (0.69-1.92)	1.07 (0.75-1.54)
BH other	0.59 (0.44-0.80)	0.60 (0.48-0.74)

Abbreviations: BH IOP, intensive behavioral health (intensive outpatient or partial hospitalization); BH other, only nonintensive behavioral health (outpatient counseling); ED, emergency department; MOUD, medication for opioid use disorder.

[a] The hazard ratios were adjusted for age, sex, race/ethnicity, insurance type, baseline medical (modified Elixhauser index score) and mental health comorbidities (depression, anxiety, posttraumatic stress disorder, and attention-deficit/hyperactivity disorder), evidence of overdose or infections related to intravenous drug use, and cost rank.

Figure 1. Probability of Opioid Overdose and Acute Care Use During the 3-Month Follow-up Period



BH indicates behavioral health; CE, continuing education; BH IOP, intensive behavioral health (intensive outpatient or partial hospitalization); IP detox/RTC, inpatient detoxification or residential services; and MOUD, medication for opioid use disorder.

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Nonintensive behavioral health services were associated with a reduction in serious opioid-related acute care use (AHR, 0.59; 95% CI, 0.44-0.80). Receiving MOUD treatment with buprenorphine or methadone continued to be protective against overdose (AHR, 0.41; 95% CI, 0.31-0.55) and serious opioid-related acute care use (AHR, 0.74; 95% CI, 0.58-0.95) at 12 months.

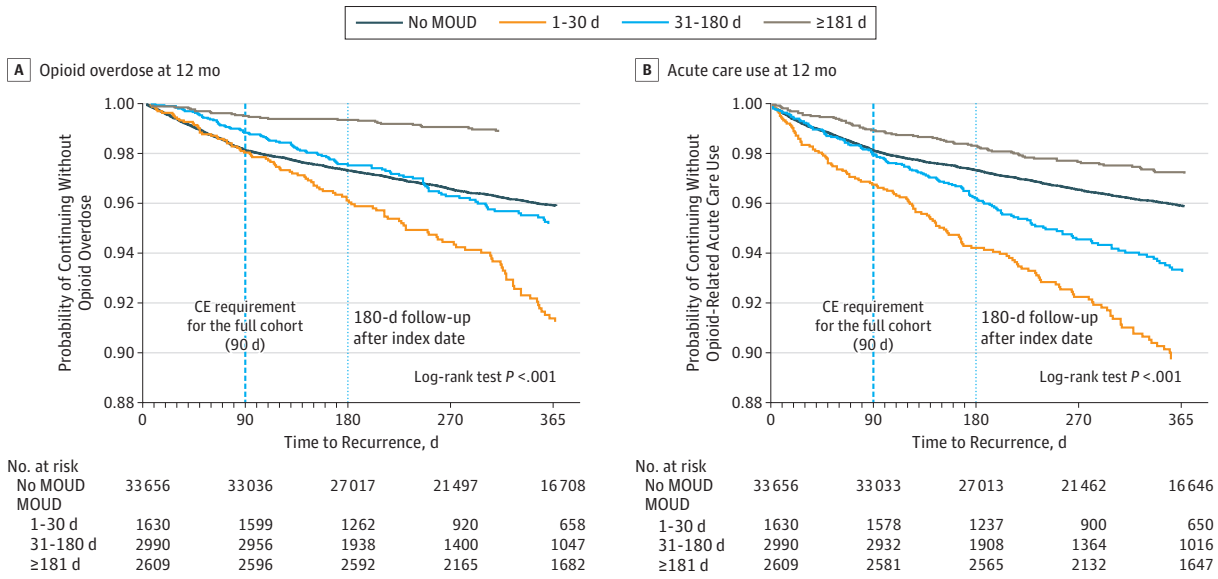
Compared with MOUD treatment with buprenorphine or methadone, all treatment groups were more likely to have a posttreatment admission to inpatient detoxification. Patients who initiated treatment with inpatient detoxification or residential services were most likely to return within 3 months (AHR, 3.76; 95% CI, 2.98-4.74) and 12 months (AHR, 3.48; 95% CI, 3.02-4.01). However, treatment with naltrexone or intensive behavioral health services was also associated with a higher risk of subsequent detoxification admission during the 3-month (naltrexone: AHR, 2.64; 95% CI, 1.84-3.78; intensive behavioral health: AHR, 2.19; 95% CI, 1.63-2.96) and 12-month (naltrexone: AHR, 1.98; 95% CI, 1.55-2.52; intensive behavioral health: AHR, 2.08; 95% CI, 1.73-2.50) follow-up periods.

MOUD Treatment Duration

Treatment duration for MOUD was relatively short. During 12 months, the mean (SD) treatment duration for naltrexone was 74.41 (70.15) days and 149.65 (119.37) days for buprenorphine or methadone. Individuals who received longer-duration MOUD treatment with buprenorphine or methadone had lower rates of overdose (**Figure 2**A) or serious opioid-related acute care use (Figure 2B).

At the end of 12 months, 1198 (3.6%) of those who received no MOUD had an overdose, and 1204 (3.6%) had serious opioid-related acute care use; 105 (6.4%) of those who received MOUD treatment with buprenorphine or methadone for 1 to 30 days had an overdose, and 133 (8.2%) had serious opioid-related acute care use; 101 (3.4%) of those who received MOUD treatment with buprenorphine or methadone for 31 to 180 days had an overdose, and 148 (5.0%) had serious opioid-related acute care use; and 28 (1.1%) of those who received MOUD treatment with buprenorphine or methadone for more than 180 days had an overdose, and 69 (2.6%) had serious opioid-related acute care use.

Figure 2. Probability of Opioid Overdose and Acute Care Use During the 12-Month Follow-up Period



CE indicates continuing education; MOUD, medication for opioid use disorder.

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Discussion

In a national cohort of 40 885 insured individuals between 2015 and 2017, MOUD treatment with buprenorphine or methadone was associated with a 76% reduction in overdose at 3 months and a 59% reduction in overdose at 12 months. To our knowledge, this was the largest cohort of commercially insured or MA individuals with OUD studied in a real-world environment with complete medical, pharmacy, and behavioral health administrative claims.

Treatment with buprenorphine or methadone was associated with a 32% relative rate of reduction in serious opioid-related acute care use at 3 months and a 26% relative rate of reduction at 12 months compared with no treatment. In contrast, detoxification, intensive behavioral health, and naltrexone treatment were not associated with reduced overdose or serious opioid-related acute care use at 3 or 12 months.

Despite the known benefit of MOUD treatment with buprenorphine or methadone, only 12.5% initiated these evidence-based treatments. Most individuals in this cohort initiated treatment with psychosocial services alone or inpatient detoxification, both of which are less effective than MOUD. It is possible that individuals accessed public sector treatments that were not captured in our data, particularly for methadone, which was not covered by Medicare and may not have been covered without co-payment for all commercial plans during this time. Low rates of MOUD use among an insured population highlight the need for strategies to improve access to and coverage for MOUD treatment.

Our results demonstrate the importance of treatment retention with MOUD. Individuals who received methadone or buprenorphine for longer than 6 months experienced fewer overdose events and serious opioid-related acute care use compared with those who received shorter durations of treatment or no treatment. These findings are consistent with prior research[11,15,27-29] demonstrating high rates of recurrent opioid use if MOUD treatment is discontinued prematurely. Despite the benefit of MOUD in our study, treatment duration was relatively short. Given the chronic nature of OUD and the evidence that longer treatment duration may be associated with improved outcomes, patient-centered MOUD treatment models explicitly focused on engagement and retention are needed. Low-threshold treatment, which aims to reduce barriers to entry and is tailored to the needs of high-risk populations,[30] may be a strategy to improve retention; however, to our knowledge, no rigorous studies have evaluated these models to date.[31,32] In addition, patient-centered MOUD care, which allows participants to determine the services they need rather than requirements, such as mandatory counseling, are noninferior to traditional treatment.[32]

Numerous barriers limit sustained engagement in MOUD, including a lack of access to waivered practitioners, high co-payments, prior authorization requirements, and other restrictions on use. Previous studies[33,34] have demonstrated that restrictions on use for MOUD are associated with limited access and harm. Addiction treatment programs in states that require Medicaid prior authorizations for buprenorphine are less likely to offer buprenorphine, and the more restrictions on use in state Medicaid programs, the fewer treatment programs that offer buprenorphine.[33] Requiring prior authorization for higher doses of buprenorphine may also result in increased recurrence rates among patients.[34] Our finding that MOUD treatment with buprenorphine or methadone was associated with lower overdose and serious opioid-related acute care use supports expanded coverage of these medications without restrictions on use.

Our findings are also consistent with analyses showing that MOUD treatment with buprenorphine or methadone is significantly associated with reduced overdose and recurrence of opioid use compared with no treatment or non-MOUD treatment. A previous cohort study[15] of individuals in Massachusetts demonstrated a reduction in overdose-related mortality associated with treatment with buprenorphine (AHR, 0.62; 95% CI, 0.41-0.92) or methadone (AHR, 0.41; 95% CI, 0.24-0.70), results that are similar to our finding of an AHR of 0.41 (95% CI, 0.31-0.55) for overdose at 12 months for methadone or buprenorphine. A large meta-analysis[11] examining mortality when individuals were in or out of treatment with buprenorphine or methadone similarly showed

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decreased overdose mortality during treatment. A study[12] examining proxies for recurrent OUD among Massachusetts Medicaid enrollees found that treatment with buprenorphine or methadone was associated with lower recurrence rates and costs. No studies, to our knowledge, have examined the effect of different OUD treatment pathways on overdose and serious opioid-related acute care use among a national sample of commercially insured and MA enrollees.

Our finding that MOUD treatment with naltrexone was not protective against overdose or serious opioid-related acute care use is consistent with other studies[15,35] that found naltrexone to be less effective than MOUD treatment with buprenorphine. The mean (SD) treatment duration for naltrexone in this cohort was longer than prior observational studies at 74.41 (70.15) days.

The findings that nonintensive behavioral health treatment was associated with a reduced risk of overdose at 12 months but not 3 months and a reduced risk of opioid-related acute care use was surprising. Although we attempted to control for differences among various treatment groups, individuals referred to nonintensive behavioral health may represent a less complex patient population than those who receive MOUD treatment or are referred to intensive behavioral health or inpatient treatment.

Strengths and Limitations

Specifically, we identified a research question a priori that was meaningful, had clinical and policy implications, and was concise and unambiguous. Our study design's strengths are the large, nationally representative sample and complete claims data, which allowed us to adequately identify appropriate patients and interventions. In addition, we used a conservative definition of OUD and of proxies for OUD recurrence to limit inclusion of individuals who did not have OUD or of outcomes that did not represent clinically significant recurrence.

This study has limitations. The limitations of our study design include the lack of clinical information in claims data or outcomes that occurred outside a health care encounter (eg, fatal overdoses or active use without medical complication). As with any observational study, there is the possibility that unmeasured patient characteristics were associated with treatment assignment and outcomes, possibly biasing estimates of outcomes associated with MOUD treatment groups. It is also possible that individuals selected for different treatments differed by characteristics that were also associated with the outcomes. We were able to control for many patient characteristics, such as race/ethnicity, sex, insurance type, and comorbidities, but selection bias is possible. Another limitation is the degree of sample attrition during the 12-month follow-up period. However, we attempted to assess potential bias from informative censoring in 2 ways.[36] First, we compared the baseline characteristics of censored and uncensored cases. These distributions were similar, suggesting that, at least on the basis of observable characteristics, censored cases were not statistically different from uncensored cases. Second, we examined the proportionality of HRs. Visual inspection of the HRs indicated that they were proportional for the 3-month period but could not be assumed to be proportional for the 12-month period. Another limitation is the risk of immortal time bias by requiring 3-month enrollment for inclusion; however, we believed it was important to require 3 months of follow-up to adequately measure outcomes. In addition, assessment of community mortality with claims data is characterized by high degrees of measurement error. Traditional instrumental variable methods for addressing immortal time bias cannot be applied to survival models because of their nonlinear functional form.

Conclusions

In a national sample of commercial insurance and MA enrollees with OUD, treatment with buprenorphine or methadone was associated with reductions in overdose and serious opioid-related acute care use, but only a few individuals were treated with these medications. These findings suggest that opportunities exist for health plans to reduce restrictions on use for MOUD and the need for treatment models that prioritize access to and retention of MOUD treatment.

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Corresponding Author: Sarah E. Wakeman, MD, Division of General Internal Medicine, Department of Medicine, Massachusetts General Hospital, 55 Fruit St, Founders 880, Boston, MA 02114 (swakeman@partners.org).

Author Affiliations: Division of General Internal Medicine, Department of Medicine, Massachusetts General Hospital, Boston (Wakeman); Department of Medicine, Harvard Medical School, Boston, Massachusetts (Wakeman); Clinical Addiction Research and Education Unit, Boston Medical Center, Boston, Massachusetts (Larochelle); Department of Medicine, Boston University School of Medicine, Boston, Massachusetts (Larochelle); Integrated Programs, OptumLabs Inc, Cambridge, Massachusetts (Ameli, Chaisson); Department of Research, OptumLabs, Minnetonka, Minnesota (McPheeters); Department of Research, OptumLabs, Cambridge, Massachusetts (Crown); Department of Research, Optum Behavioral Health, Cambridge, Massachusetts (Azocar); Department of Medicare and Retirement, United Healthcare, Minnetonka, Minnesota (Sanghavi).

Author Contributions: Drs Wakeman and Sanghavi had full access to all the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis.

Concept and design: Wakeman, Larochelle, Ameli, Chaisson, Crown, Azocar, Sanghavi.

Acquisition, analysis, or interpretation of data: Wakeman, Larochelle, Ameli, Chaisson, McPheeters, Crown, Azocar.

Drafting of the manuscript: Wakeman, Ameli, Crown, Azocar.

Critical revision of the manuscript for important intellectual content: Wakeman, Larochelle, Ameli, Chaisson, McPheeters, Crown, Sanghavi.

Statistical analysis: Ameli, McPheeters, Crown.

Administrative, technical, or material support: Chaisson, McPheeters, Azocar.

Supervision: Chaisson, Sanghavi.

Conflict of Interest Disclosures: Dr Wakeman reported receiving personal fees from OptumLabs during the conduct of the study. Dr Ameli reported receiving grants from OptumLabs during the conduct of the study. Ms Chaisson, Mr McPheeters, and Dr Azocar reported receiving salary support from OptumLabs during the conduct of the study. Dr Azocar also reported receiving salary support from United Health Group outside the submitted work. Dr Sanghavi reported being an employee of United Health Group. No other disclosures were reported.

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REFERENCES

1. Scholl L, Seth P, Kariisa M, Wilson N, Baldwin G. Drug and opioid-involved overdose deaths–United States, 2013-2017. *MMWR Morb Mortal Wkly Rep*. 2018;67(5152):1419-1427. doi:10.15585/mmwr.mm675152e1

2. Robinson WT, Kazbour C, Nassau T, et al. Brief report: nonfatal overdose events among persons who inject drugs: findings from seven national HIV behavioral surveillance cities 2009 & 2012. *J Acquir Immune Defic Syndr*. 2017;75(suppl 3):S341-S345. doi:10.1097/QAI.0000000000001426

3. Burnett JC, Broz D, Spiller MW, Wejnert C, Paz-Bailey G. HIV infection and HIV-associated behaviors among persons who inject drugs—20 cities, United States, 2015. *MMWR Morb Mortal Wkly Rep*. 2018;67(1):23-28. doi:10.15585/mmwr.mm6701a5

4. Hsu DJ, McCarthy EP, Stevens JP, Mukamal KJ. Hospitalizations, costs and outcomes associated with heroin and prescription opioid overdoses in the United States 2001-12. *Addiction*. 2017;112(9):1558-1564. doi:10.1111/add.13795

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5. Zibbell JE, Asher AK, Patel RC, et al. Increases in acute hepatitis C virus infection related to a growing opioid epidemic and associated injection drug use, United States, 2004 to 2014. *Am J Public Health*. 2018;108(2):175-181. doi:10.2105/AJPH.2017.304132

6. Cranston K, Alpren C, John B, et al; Amy Board. Notes from the field: HIV diagnoses among persons who inject drugs–Northeastern Massachusetts, 2015-2018. *MMWR Morb Mortal Wkly Rep*. 2019;68(10):253-254. doi:10.15585/mmwr.mm6810a6

7. Weir MA, Slater J, Jandoc R, Koivu S, Garg AX, Silverman M. The risk of infective endocarditis among people who inject drugs: a retrospective, population-based time series analysis. *CMAJ*. 2019;191(4):E93-E99. doi:10.1503/cmaj.180694

8. Chen Q, Larochelle MR, Weaver DT, et al. Prevention of prescription opioid misuse and projected overdose deaths in the United States. *JAMA Netw Open*. 2019;2(2):e187621. doi:10.1001/jamanetworkopen.2018.7621

9. Ciccarone D. The triple wave epidemic: supply and demand drivers of the US opioid overdose crisis. *Int J Drug Policy*. 2019;71:183-188. doi:10.1016/j.drugpo.2019.01.010

10. The National Academies of Science, Engineering, and Medicine. Medications for opioid use disorder save lives. March 20, 2019. http://www.nationalacademies.org/hmd/Reports/2019/medications-for-opioid-use-disorder-save-lives.aspx. Accessed March 26, 2019.

11. Sordo L, Barrio G, Bravo MJ, et al. Mortality risk during and after opioid substitution treatment: systematic review and meta-analysis of cohort studies. *BMJ*. 2017;357:j1550. doi:10.1136/bmj.j1550

12. Clark RE, Baxter JD, Aweh G, O'Connell E, Fisher WH, Barton BA. Risk factors for relapse and higher costs among Medicaid members with opioid dependence or abuse: opioid agonists, comorbidities, and treatment history. *J Subst Abuse Treat*. 2015;57:75-80. doi:10.1016/j.jsat.2015.05.001

13. Hser YI, Evans E, Huang D, et al. Long-term outcomes after randomization to buprenorphine/naloxone versus methadone in a multi-site trial. *Addiction*. 2016;111(4):695-705. doi:10.1111/add.13238

14. Weiss RD, Potter JS, Griffin ML, et al. Long-term outcomes from the National Drug Abuse Treatment Clinical Trials Network Prescription Opioid Addiction Treatment Study. *Drug Alcohol Depend*. 2015;150:112-119. doi:10.1016/j.drugalcdep.2015.02.030

15. Larochelle MR, Bernson D, Land T, et al. Medication for opioid use disorder after nonfatal opioid overdose and association with mortality: a cohort study. *Ann Intern Med*. 2018;169(3):137-145. doi:10.7326/M17-3107

16. Abraham AJ, Adams GB, Bradford AC, Bradford WD. County-level access to opioid use disorder medications in Medicare Part D (2010-2015). *Health Serv Res*. 2019;54(2):390-398. doi:10.1111/1475-6773.13113

17. Andrilla CHA, Moore TE, Patterson DG, Larson EH. Geographic distribution of providers with a DEA waiver to prescribe buprenorphine for the treatment of opioid use disorder: a 5-year update. *J Rural Health*. 2019;35(1):108-112. doi:10.1111/jrh.12307

18. Mojtabai R, Mauro C, Wall MM, Barry CL, Olfson M. Medication treatment for opioid use disorders in substance use treatment facilities. *Health Aff (Millwood)*. 2019;38(1):14-23. doi:10.1377/hlthaff.2018.05162

19. Jones CM, Campopiano M, Baldwin G, McCance-Katz E. National and state treatment need and capacity for opioid agonist medication-assisted treatment. *Am J Public Health*. 2015;105(8):e55-e63. doi:10.2105/AJPH.2015.302664

20. Hadland SE, Wharam JF, Schuster MA, Zhang F, Samet JH, Larochelle MR. Trends in receipt of buprenorphine and naltrexone for opioid use disorder among adolescents and young adults, 2001-2014. *JAMA Pediatr*. 2017;171(8):747-755. doi:10.1001/jamapediatrics.2017.0745

21. Morgan JR, Schackman BR, Leff JA, Linas BP, Walley AY. Injectable naltrexone, oral naltrexone, and buprenorphine utilization and discontinuation among individuals treated for opioid use disorder in a United States commercially insured population. *J Subst Abuse Treat*. 2018;85:90-96. doi:10.1016/j.jsat.2017.07.001

22. Wollschlaeger BA, Willson TM, Montejano LB, Ronquest NA, Nadipelli VR. Characteristics and treatment patterns of US commercially insured and Medicaid patients with opioid dependence or abuse. *J Opioid Manag*. 2017;13(4):207-220. doi:10.5055/jom.2017.0389

23. Morgan JR, Schackman BR, Weinstein ZM, Walley AY, Linas BP. Overdose following initiation of naltrexone and buprenorphine medication treatment for opioid use disorder in a United States commercially insured cohort. *Drug Alcohol Depend*. 2019;200:34-39. doi:10.1016/j.drugalcdep.2019.02.031

24. OptumLabs. *OptumLabs and OptumLabs Data Warehouse (OLDW) Descriptions and Citation*. Cambridge, MA: OptumLabs; May 2019.

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25. Berger ML, Mamdani M, Atkins D, Johnson ML. Good research practices for comparative effectiveness research: defining, reporting and interpreting nonrandomized studies of treatment effects using secondary data sources: the ISPOR Good Research Practices for Retrospective Database Analysis Task Force Report, part I. *Value Health*. 2009;12(8):1044-1052. doi:10.1111/j.1524-4733.2009.00600.x

26. Quan H, Sundararajan V, Halfon P, et al. Coding algorithms for defining comorbidities in *ICD-9-CM* and *ICD-10* administrative data. *Med Care*. 2005;43(11):1130-1139. doi:10.1097/01.mlr.0000182534.19832.83

27. Sees KL, Delucchi KL, Masson C, et al. Methadone maintenance vs 180-day psychosocially enriched detoxification for treatment of opioid dependence: a randomized controlled trial. *JAMA*. 2000;283(10):1303-1310. doi:10.1001/jama.283.10.1303

28. Weiss RD, Potter JS, Fiellin DA, et al. Adjunctive counseling during brief and extended buprenorphine-naloxone treatment for prescription opioid dependence: a 2-phase randomized controlled trial. *Arch Gen Psychiatry*. 2011;68(12):1238-1246. doi:10.1001/archgenpsychiatry.2011.121

29. Fiellin DA, Schottenfeld RS, Cutter CJ, Moore BA, Barry DT, O'Connor PG. Primary care–based buprenorphine taper vs maintenance therapy for prescription opioid dependence: a randomized clinical trial. *JAMA Intern Med*. 2014;174(12):1947-1954. doi:10.1001/jamainternmed.2014.5302

30. Mofizul Islam M, Topp L, Conigrave KM, Day CA. Defining a service for people who use drugs as 'low-threshold': what should be the criteria? *Int J Drug Policy*. 2013;24(3):220-222. doi:10.1016/j.drugpo.2013.03.005

31. Edland-Gryt M, Skatvedt AH. Thresholds in a low-threshold setting: an empirical study of barriers in a centre for people with drug problems and mental health disorders. *Int J Drug Policy*. 2013;24(3):257-264. doi:10.1016/j.drugpo.2012.08.002

32. Schwartz RP, Kelly SM, Mitchell SG, et al. Patient-centered methadone treatment: a randomized clinical trial. *Addiction*. 2017;112(3):454-464. doi:10.1111/add.13622

33. Andrews CM, Abraham AJ, Grogan CM, Westlake MA, Pollack HA, Friedmann PD. Impact of Medicaid restrictions on availability of buprenorphine in addiction treatment programs. *Am J Public Health*. 2019;109(3):434-436. doi:10.2105/AJPH.2018.304856

34. Clark RE, Baxter JD, Barton BA, Aweh G, O'Connell E, Fisher WH. The impact of prior authorization on buprenorphine dose, relapse rates, and cost for Massachusetts Medicaid beneficiaries with opioid dependence. *Health Serv Res*. 2014;49(6):1964-1979. doi:10.1111/1475-6773.12201

35. Lee JD, Nunes EV Jr, Novo P, et al. Comparative effectiveness of extended-release naltrexone versus buprenorphine-naloxone for opioid relapse prevention (X:BOT): a multicentre, open-label, randomised controlled trial. *Lancet*. 2018;391(10118):309-318. doi:10.1016/S0140-6736(17)32812-X

36. Siannis F, Copas J, Lu G. Sensitivity analysis for informative censoring in parametric survival models. *Biostatistics*. 2005;6(1):77-91. doi:10.1093/biostatistics/kxh019

SUPPLEMENT.

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Screening for Unhealthy Drug Use in Adults and Adolescents

The US Preventive Services Task Force (USPSTF) has recently published recommendations on screening for unhealthy drug use in adults and adolescents.

What Is Unhealthy Drug Use?

Unhealthy drug use refers to using illegal drugs or misusing prescription medications or household products. Illegal drugs include cocaine, heroin, and hallucinogens (such as LSD). Prescription medications include sedatives (such as benzodiazepines), opioids, and stimulants. Household products include glues, solvents, and gasoline. Alcohol and tobacco are not considered drugs for the purposes of this recommendation statement but are illegal for underage persons.

Drug use is linked to risk-taking behaviors that cause injury and death, violence, unsafe sexual behaviors, and long-term mental health problems. There is also a risk of death due to overdose. Treatment for drug use disorders includes both medications as well as behavioral therapy and counseling.

How Is Screening for Unhealthy Drug Use Done?

Often, a primary care practitioner asks a simple yes/no question about drug use during wellness visits. For the purposes of clinical studies, more detailed questionnaires are used. Examples include the BSTAD (Brief Screener for Tobacco, Alcohol, and Other Drugs), ASSIST (Alcohol, Smoking and Substance Involvement Screening Test), and TAPS (Tobacco, Alcohol, Prescription Medication, and Other Substance Use). These questionnaires are not meant to diagnose a drug use disorder, and people who report unhealthy drug use should be referred for further evaluation.

What Is the Population Under Consideration for Screening for Unhealthy Drug Use?

This recommendation applies to adults aged 18 years or older and adolescents aged 12 to 17 years who do not have a current diagnosis of any drug use disorders.

What Are the Potential Benefits and Harms of Screening for Unhealthy Drug Use?

The potential benefit of screening for unhealthy drug use is reducing negative health, social, or legal outcomes related to drug use. No studies have directly looked at the effects of screening on these outcomes. For adults, there is adequate evidence that screening questionnaires are able to accurately detect drug use disorders and that treatment of these disorders with medications and/or psychotherapy can reduce drug use as well as relapse. There are little data available for adolescents. Potential harms include stigma from being labeled a drug user as well as side effects from medications used to treat drug use disorders. For adolescents, there is uncertainty about how some of these medications may affect brain development.

Screening for Unhealthy Drug Use in Adults and Adolescents

Unhealthy drug use can include illegal drugs, prescription medications, or household substances.

Population

Adults aged 18 years and older and adolescents aged 12 to 17 years who do not have a current diagnosis of any drug use disorders

USPSTF recommendation

The USPSTF recommends screening by asking questions about unhealthy drug use in adults age 18 years or older when services for accurate diagnosis, effective treatment, and appropriate care can be offered or referred.

For adolescents, the USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for unhealthy drug use.

How Strong Is the Recommendation to Screen for Unhealthy Drug Use?

The USPSTF concludes with moderate certainty that screening for unhealthy drug use in adults has moderate net benefit when services for further care and treatment can be offered. For adolescents, the balance of benefits and harms cannot be determined.

FOR MORE INFORMATION

US Preventive Services Task Force
https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/drug-use-in-adolescents-and-adults-including-pregnant-women-screening

To find this and other JAMA Patient Pages, go to the For Patients collection at *jamanetworkpatientpages.com*.

Author: Jill Jin, MD, MPH

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Caring for Ms. L. — Overcoming My Fear of Treating Opioid Use Disorder

Audrey M. Provenzano, M.D., M.P.H.

Ms. L. always showed up 10 minutes early for her appointments, even though I always ran late. Her granddaughter would rest her cheek against Ms. L.'s chest, squishing one eye shut, and scroll through Ms. L.'s phone while they waited. After reviewing her blood sugars, which Ms. L. recorded assiduously in a dog-eared blue diary, we'd talk about smoking cessation. That was a work in progress. "There's just nothing like a cigarette," she'd sigh. "Don't you ever start," she'd admonish her granddaughter, kissing the top of her head.

One day, I knew something was wrong the moment I opened the door. Ms. L. was alone. Sweat dotted her lip and forehead. She closed her eyes and looked away, and tears fell onto her lap. "I need help," she whispered, and it all came out: she had taken a few of the oxycodone pills prescribed for her husband after a leg injury, then a few more from a friend. And like a swimmer pulled into the undertow, she was dragged back into the cold, dark brine of addiction. I tried to hide my shock. I'd known she was in recovery from opioid use disorder (OUD), but it had simply never come up. She hadn't used in decades.

"No one can know that I relapsed," she said. "If my kids find out, they won't let me see my granddaughter." She wanted to try buprenorphine and was frustrated to hear that I could not prescribe it. "Why not?" Annoyed, she rocked in her chair. "I just want to feel normal again, and I know you. I don't want to tell anyone else."

I evaded her question: "I don't have the right kind of license to prescribe it," I said. "Let me refer you to a colleague."

But my incomplete answer gnawed at me. In truth, the reason I didn't have a waiver to prescribe buprenorphine was that I didn't want one. As a new primary care physician, I spent every evening finishing notes and preparing for the next day. Every Friday I left the office utterly depleted, devoid of the energy or motivation it would take to spend a weekend clicking through the required online training.

But more than not wanting to take on the extra work of prescribing a medication for OUD, I did not want to deal with patients who needed it. I knew that for some people with substance use disorders, the relationship with the drug can eclipse all other relationships, leading them to push away family, friends, and caregivers. I had witnessed patients waiting for prescriptions antagonize secretaries and nurses, seen patients try to manipulate toxicology screenings, and heard voices raised in exasperation at colleagues through thin clinic walls. Addiction, according to the American Society of Addiction Medicine, "is characterized by . . . impairment in behavioral control, craving, diminished recognition of significant problems with one's behaviors and interpersonal relationships, and a dysfunctional emotional response."[1] Already overwhelmed, I did not want to take on patients with needs that I did not know how to meet.

One of my colleagues started Ms. L. on buprenorphine treatment. When I saw her again for her diabetes, a space had opened between us. Then she didn't show up to her next appointment. I called her and sent a letter, but she didn't show up to the next one either. Months passed, and then a year.

The night I found out that Ms. L. had died of an overdose, a heavy, wet snow was falling throughout the city, dampening the sound of traffic. In the quiet,

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I was clicking through the usual computer screens, preparing for clinic in the morning. I saw Ms. L.'s name and stopped. I read the text twice, three times, and then again: "brought in by ambulance . . . unable to revive her." At first I felt horror and revulsion at the thought of her lifeless body on a gurney. Then, profound sadness. I thought about her husband, her children, and especially her granddaughter. I wondered how silent their house must be that snowy night, without Ms. L.'s brassy laugh floating through the hallways.

But it was the shame that kept me awake, listening to the plows pass through the streets. This shame didn't just burn red and hot in my face — it burrowed thick and leaden into my chest and stomach. What if I had treated her myself, instead of referring her? I don't flatter myself that I could have provided her better care — I had complete confidence in my colleague. But Ms. L. and I had had a relationship. She had trusted me. And I'd turned her away.

In the ensuing months, I earned my waiver to prescribe buprenorphine. I still harbored apprehensions about caring for patients with addiction, but I also knew that I could not turn away another Ms. L. I now care for a small panel of patients with OUD. It has not been easy, and I could not provide this care without the support of colleagues with expertise in addiction and social work. I quickly grasped the pharmacology of buprenorphine therapy, but learning how to manage other aspects of addiction care, particularly for patients in early recovery, has been formidable.

One patient, Ms. J., has coexisting alcohol use disorder, chronic pain, and severe anxiety. I have practiced harm reduction for years — maximizing oral therapies in a patient with diabetes who declines to take insulin, for example. But navigating the gray shades of harm reduction in caring for Ms. J., who uses alcohol on an almost daily basis and takes several sedating psychiatric medications in addition to buprenorphine, is an entirely new calculus for me.

Beyond these difficult therapeutic questions, many of my patients with OUD have complex social needs. Before Ms. J., I had never cared for a patient whose visitation rights with her children were predicated on her continuing therapy with me. A few of my patients have had difficulties following clinic guidelines; implementing behavior contracts had not previously been a common part of my practice, and learning how to use them with kindness and respect remains challenging.

Colleagues with years of experience managing substance use often advocate: "Everyone should get waivered. OUD is a chronic disease just like any other — when a patient comes in with hypertension, you don't say, 'Oh, I don't treat that.'" This comparison does not capture the whole picture. Of course OUD is a chronic disease and should be managed in primary care as such. But it's also true that patients with addiction often have acute psychosocial needs. OUD can utterly shatter a life; I have never seen hypertension have such an effect. If we do not recognize, name, and talk about the social issues that must be addressed when caring for patients with OUD, we do a disservice to both patients and caregivers and create a significant barrier to more providers getting waivers. I know, because I was one of them. Everyone in primary care should get a waiver, but that is not enough. We must also advocate for team-based behavioral health and social work resources in every primary care setting to support patients and providers in managing all aspects of OUD, just as we have developed team-based protocols for managing hypertension.

Caring for these patients has become the most meaningful part of my practice. Ms. J., who has tested my clinical judgment almost weekly, has also inspired me with her persistence and courage through a grueling recovery. Buprenorphine has allowed her to feel "normal" — at least most days — and to focus on her sons. Providing some sense of normalcy for patients whose lives are roiled by overdose and estrangement is the most profound therapeutic intervention I've engaged in as a caregiver. I did not know what Ms. L. meant all those years ago when she said that she only wished to feel normal again. I wish that I'd listened more closely. I wish that I had not been afraid.

Patients' initials and identifying characteristics have been changed to protect their privacy.

Disclosure forms provided by the author are available at NEJM.org.

From the MGH Chelsea Health Center, Chelsea, and Harvard Medical School, Boston — both in Massachusetts.

1. Definition of addiction. Rockville, MD: American Society of Addiction Medicine, April 19, 2011 (https://www.asam.org/resources/definition-of-addiction).

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Health Federation of Philadelphia

Opioid Response Program

The Health Federation of Philadelphia in collaboration with the Philadelphia Department of Public Health offers a range of free, CME accredited, virtual programs to help you treat patients who have substance use disorder:

Medications for Opioid Use Disorder (MOUD) Preceptor Program

Recent federal guideline changes have made it easier for providers to prescribe buprenoprhine. This preceptorship program offers professional development tools to help X-waivered providers treat opioid use disorder (OUD):

- Interactive didactic live virtual training
- Practice telehealth session with a standardized patient
- Facilitated by experienced MOUD prescribers

12-Month Series: Treating and Understanding Health Outcomes for People Who Use Drugs

A series to support primary care providers to screen for and treat comorbidities associated with substance use:

- Monthly case review discussions on concurrent treatment of OUD and comorbidities
- Special programs on timely topics related to substance use and infectious disease treatment
- Learn trauma informed best practices to support compassionate primary care for people who use drugs

For more information, dates, and registration, please visit our website at https://healthfederation.org/training/opioid-epidemic-response-training

MOUD Provider Collaborative

The MOUD Provider Collaborative is offered to X-waivered primary care providers who want to learn from and network with their peers. Most sessions offer a brief presentation on timely issues led by local practitioners followed by open discussion. These are currently scheduled online for the 4th Thursday of the month from 8:00 am to 9:00 am.

HEALTH FEDERATION OF PHILADELPHIA

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Questions? Contact Caroline Drob (she/hers)
Opioid Response Program Assistant
e: cdrob@healthfederation.org
p: 215.977.7262
123 S. Broad Street | Suite 650
Philadelphia, Pennsylvania 19109

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City of Philadelphia

PCSS Providers Clinical Support System

8 Hour Live Online Waiver Training

Waiver trainings are offered periodically for MD/DOs, Nurse Practitioners, and Physician Assistants in Pennsylvania to prescribe buprenorphine to patients for the treatment of opioid use disorder. AAAP is the Data Sponsor for this waiver training. pcss@aaap.org in coordination with the Philadelphia Department of Public Health and the Health Federation of Philadelphia. Visit https://healthfederation.org/training/opioid-epidemic-response-training or scan the above QR code for upcoming waiver training dates.

At the conclusion of this activity participants should be able to:

- Screen and identify patients with OUD and define evidence-based treatments.
- Discuss the pharmacology of opioids as it relates to treatment of opioid use disorder (OUD) patients.
- Describe the fundamentals of office-based opioid treatment including the treatment of the co-morbid patient.
- Explain the process of buprenorphine induction as well as stabilization and maintenance.
- Discuss all FDA approved antagonist and agonist medications to treat OUD.
- Discuss basic office protocols including medical record documentation and confidentiality.
- Utilize evidence-based resources to ensure providers have the confidence to prescribe buprenorphine for patients with OUD.
- Recognize the importance of obtaining a waiver to begin treating patients with OUD.

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DOES YOUR OPIOID USE CAUSE PROBLEMS FOR YOU?
BUPRENORPHINE (BUPE) COULD BE RIGHT FOR YOU.

HOW CAN BUPE IMPROVE MY HEALTH?

Bupe stops withdrawal symptoms and cravings. This makes it easier for you to stop using opioids, cut down opioid use and lower your risk of death.

DOES BUPE HAVE SIDE EFFECTS?

Not everyone experiences side effects, but bupe can cause constipation, nausea, headache or insomnia.

WILL MY HEALTH INSURANCE PAY FOR BUPE?

Medicaid, Medicare and most other health insurance plans pay for bupe. Check your health insurance plan to make sure bupe is on the list of approved drugs.

HOW DO I GET BUPE?

Ask your doctor to prescribe bupe. Once you have a prescription, you can get bupe at a pharmacy and take it at home, just like other medications.

For more information about buprenorphine in Philadelphia, visit https://dhbids.org/MAT

3.19

ASK YOUR HEALTH CARE PROVIDER IF BUPE IS RIGHT FOR YOU.

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BUPE

(e.g., Suboxone, Zubsolv, Bunavail)

Does your opioid use cause problems for you?

(e.g., Percocet, Vicodin, OxyContin, heroin)

We offer bupe (buprenorphine),
a safe medication to treat opioid dependence.

WE CAN HELP.

Ask your doctor or nurse for more information.

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SAMHSA
Substance Abuse and Mental Health Services Administration

BUPRENORPHINE
QUICK START GUIDE

Important Points to Review With the Patient

Specifically discuss safety concerns:

- **Understand that discontinuing buprenorphine increases risk of overdose death upon return to illicit opioid use.**
- **Know that use of alcohol or benzodiazepines with buprenorphine increases the risk of overdose and death.**
- **Understand the importance of informing providers if they become pregnant.**
- **Tell providers if they are having a procedure that may require pain medication.**

Facts About Buprenorphine

- FDA approved for Opioid Use Disorder treatment in an office-based setting.
- For those with tolerance to opioids as a result of OUD, buprenorphine is often a safe choice.
- Buprenorphine acts as a partial mixed opioid agonist at the μ-receptor and as an antagonist at the κ-receptor. It has a higher affinity for the μ-receptor than other opioids, and it can precipitate withdrawal symptoms in those actively using other opioids.
- It is dosed daily, has a long half-life, and prevents withdrawal in opioid dependent patients.
- Can be in tablet, sublingual film, or injectable formulations.
- Many formulations contain naloxone to prevent injection diversion. This formulation is the preferred treatment medication. The buprenorphine only version is often used with pregnant women to decrease potential fetal exposure to naloxone.
- There is a "ceiling effect" in which further increases above 24mg in dosage does not increase the effects on respiratory or cardiovascular function.
- Buprenorphine should be part of a comprehensive management program that includes psychosocial support. Treatment should not be withheld in the absence of psychosocial support.
- Overdose with buprenorphine in adults is less common, and most likely occurs in individuals without tolerance, or who are using co-occurring substances like alcohol or benzodiazepines.

Checklist for Prescribing Medication for the Treatment of Opioid Use Disorder

1

Assess the need for treatment

For persons diagnosed with an opioid use disorder,* first determine the severity of patient's substance use disorder. Then identify any underlying or co-occurring diseases or conditions, the effect of opioid use on the patient's physical and psychological functioning, and the outcomes of past treatment episodes.

Your assessment should include:

- A patient history
- Ensure that the assessment includes a medical and psychiatric history, a substance use history, and an evaluation of family and psychosocial supports.
- Access the patient's prescription drug use history through the state's Prescription Drug Monitoring Program (PDMP), where available,

to detect unreported use of other medications, such as sedative-hypnotics or alcohol, that may interact adversely with the treatment medications.
- A physical examination that focuses on physical findings related to addiction and its complications.
- Laboratory testing to assess recent opioid use and to screen for use of other drugs. Useful tests include a urine drug screen or other toxicology screen, urine test for alcohol (ethyl glucuronide), liver enzymes, serum bilirubin, serum creatinine, as well as tests for hepatitis B and C and HIV. Providers should not delay treatment initiation while awaiting lab results.

2

Educate the patient about how the medication works and the associated risks and benefits; obtain informed consent; and educate on overdose prevention.

There is potential for relapse & overdose on discontinuation of the medication. Patients should be educated about the effects of using opioids and other drugs while taking the prescribed medication and the potential for overdose if opioid use is resumed after tolerance is lost.

3

Evaluate the need for medically managed withdrawal from opioids

Those starting buprenorphine must be in a state of withdrawal.

4

Address co-occurring disorders

Have an integrated treatment approach to meet the substance use, medical and mental health, and social needs of a patient.

5

Integrate pharmacologic and nonpharmacologic therapies

All medications for the treatment of the opioid use disorder may be prescribed as part of a comprehensive individualized treatment plan that includes counseling and other psychosocial therapies, as well as social support through participation in mutual-help programs.

6

Refer patients for higher levels of care, if necessary

Refer the patient for more intensive or specialized services if office-based treatment with buprenorphine or naltrexone is not effective, or the clinician does not have the resources to meet a particular patient's needs. Providers can find programs in their areas or throughout the United States by using SAMHSA's Behavioral Health Treatment Services Locator at www.findtreatment.samhsa.gov.

*See The Criteria from American Psychiatric Association (2013). Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition,. Washington, DC, American Psychiatric Association, page 541.

Induction Considerations

The dose of buprenorphine depends on the severity of withdrawal symptoms, and the history of last opioid use (see flowchart in appendix for dosing advice).

- **Long acting opioids, such as methadone, require at least 48-72 hours since last use before initiating buprenorphine.**
- **Short acting opioids (for example, heroin) require approximately 12 hours since last use for sufficient withdrawal to occur in order to safely initiate treatment. Some opioid such as fentanyl may require greater than 12 hours.**
- **Clinical presentation should guide this decision as individual presentations will vary.**

Determine Withdrawal

Objective withdrawal signs help establish physical dependence

The risk with initiating buprenorphine too soon is that buprenorphine has a very high affinity for the mu receptor and will displace any other opioid on the receptor, thereby causing precipitated opioid withdrawal.

COWS Clinical Opiate Withdrawal Scale

Wesson & Ling, J Psychoactive Drugs. 2003 Apr-Jun;35(2):253-9.

Resting Pulse Rate: _____beats/minute *Measured after patient is sitting or lying for one minute* 0 Pulse rate 80 or below 1 Pulse rate 81-100 2 Pulse rate 101-120 4 Pulse rate greater than 120	GI Upset: *over last 1/2 hour* 0 No GI symptoms 1 Stomach cramps 2 Nausea or loose stool 3 Vomiting or diarrhea *5* Multiple episodes of diarrhea or vomiting
Sweating: *over past 1/2 hour not accounted for by room temperature or patient activity.* 0 No report of chills or flushing 1 Subjective report of chills or flushing 2 Flushed or observable moistness on face 3 Beads of sweat *on* brow or face 4 Sweat streaming off face	Tremor *observation of outstretched hands* 0 No tremor 1 Tremor can be felt, but not observed 2 Slight tremor observable 4 Gross tremor or muscle twitching
Restlessness *Observation during assessment* 0 Able to sit still 1 Reports difficulty sifting still, but is able to do so 3 Frequent shifting or extraneous movements of legs/arms 5 Unable to sit still for more than a few seconds	Yawning *Observation during assessment* 0 No yawning 1 Yawning once or twice during assessment 2 Yawning three or more times during assessment 4 Yawning several times/minute
Pupil size 0 Pupils pinned or normal size for room light 1 Pupils possibly larger than normal for room light 2 Pupils moderately dilated *5* Pupils so dilated that only the rim of the iris is visible	Anxiety or irritability 0 None 1 Patient reports increasing irritability or anxiousness 2 Patient obviously irritable anxious 4 Patient so irritable or anxious that participation in the assessment is difficult
Bone or Joint aches *If patient was having pain previously, only the additional component attributed to opiates withdrawal is scored* 0 Not present 1 Mild diffuse discomfort 2 Patient reports severe diffuse aching of joints/ muscles 4 Patient is rubbing joints or muscles and is unable to sit still because of discomfort	Gooseflesh skin 0 Skin is smooth 3 Piloerrection of skin can be felt or hairs standing up on arms *5* Prominent piloerrection
Runny nose or tearing *Not accounted for by cold symptoms or allergies* 0 Not present 1 Nasal stuffiness or unusually moist eyes 2 Nose running or tearing 4 Nose constantly running or tears streaming down cheeks	Total Score _____ The total score is the sum of all 11 items Initials of person completing Assessment:_____

Score: 5-12 mild; 13-24 moderate; 25-36 moderately severe; more than 36 = severe withdrawal

Information on Precipitated Withdrawal

- Precipitated withdrawal can occur due to replacement of full opioid receptor agonist (heroin, fentanyl, or morphine) with a partial agonist that binds with a higher affinity (Buprenorphine).
- Symptoms are similar to opiate withdrawal.
- Avoid by ensuring adequate withdrawal before induction (COWS > 12; Fentanyl may require higher COWS score and lower initial dosing), starting Buprenorphine at a lower dose (2.0mg/0.5 mg), and reassessing more frequently.
- Should precipitated withdrawal occur, treatment includes:
  - Providing support and information to the patient
  - Management of acute symptoms
  - Avoid the use of benzodiazepines
  - Encourage the patient to try induction again soon

Buprenorphine Side Effects

- **Buprenorphine's side effects may be less intense than those of full agonists. Otherwise, they resemble those of other mu-opioid agonists.**
- **Possible side effects include: Oral numbness, constipation, tongue pain, oral mucosal erythema, vomiting, intoxication, disturbance in attention, palpitations, insomnia, opioid withdrawal syndrome, sweating, and blurred vision**
- **Buprenorphine FDA labels list all potential side effects**

Co-prescribing of overdose reversal agents such as Naloxone is also recommended

Maintenance Therapy

Goal = once-daily dosing, no withdrawal between doses. Ideally, average dosing does not exceed 16 mg/4 mg (See flowchart in appendix)

- **Check PDMP regularly to ensure prescriptions are filled, and to check other prescriptions.**
- **Order urine drug testing (UDT) and consider confirmatory testing for unexpected results. UDT can facilitate open communication to change behavior.**
- **Assess for readiness for extended take-home dosing**

Psychosocial Therapies

- **Although people often focus on the role of medications in MAT, counseling and behavioral therapies that address psychological and social needs may also be included in treatment. To find treatment, please consult www.findtreatment.gov.**

Diversion

Diversion is defined as the unauthorized rerouting or misappropriation of prescription medication to someone other than for whom it was intended (including sharing or selling a prescribed medication); misuse includes taking medication in a manner, by route or by dose, other than prescribed.

How can providers minimize diversion risk?

1. Early in treatment patients should be seen often, and less frequently only when the provider determines they are doing well.
2. Providers should inquire about safe and locked storage of medications to avoid theft or inadvertent use, especially by children. Patients must agree to safe storage of their medication. Counsel patients about acquiring locked devices and avoiding storage in parts of the home frequented by visitors.
3. Limit medication supply. Prescribe an appropriate amount of medications until the next visit. Do not routinely provide an additional supply "just in case."
4. Use buprenorphine/naloxone combination products when medically indicated. Reserve daily buprenorphine monoproducts for pregnant patients and/or patients who could not afford treatment if the combination product were required.
5. Counsel patients on taking their medication as instructed and not sharing medication.
6. Ensure that the patient understands the practice's treatment agreement and prescription policies. Providers can utilize the sample treatment agreement in SAMHSA's TIP 63, Page 3-78. A treatment agreement and other documentation are clear about policies regarding number of doses in each prescription, refills, and rules on "lost" prescriptions.
7. Directly observe ingestion randomly when diversion is suspected.
8. Providers should order random urine drug testing to check for other drugs and for metabolites of buprenorphine. Providers should also consider periodic point of care testing.
9. Doctors should schedule unannounced pill/film counts. Periodically ask patients to bring in their medication containers for a pill/film count.
10. Providers should make inquiries with the Prescription Drug Monitoring program in their state to ensure that prescriptions are filled appropriately and to detect prescriptions from other providers.
11. Early in treatment, providers can ask the patient to sign a release of information for a trusted community support individual, such as a family member or spouse, for the purpose of communicating treatment concerns including diversion.

What should I do if a patient diverts or misuses the medication?

- Misuse or diversion doesn't mean automatic discharge from the practice.
- Document and describe the misuse and diversion incident. Also document the clinical thinking that supports the clinical response, which should be aimed at minimizing future risk of diversion while still supporting the use of MAT.
- Strongly consider smaller supplies of medication and supervised dosing.
- Treatment structure may need to be altered, including more frequent appointments, supervised administration, and increased psychosocial support.
- When directly observed doses in the office are not practical, short prescription time spans can be considered.
- In situations where diversion is detected, open communication with the patient is critical. Providers may consider injectable and implantable buprenorphine to reduce diversion, once verified.

DSM-5 Criteria for Diagnosis of Opioid Use Disorder

Diagnostic Criteria*
These criteria not considered to be met for those individuals taking opioids solely under appropriate medical supervision.

Check all that apply

	Opioids are often taken in larger amounts or over a longer period of time than intended.
	There is a persistent desire or unsuccessful efforts to cut down or control opioid use.
	A great deal of time is spent in activities necessary to obtain the opioid, use the opioid, or recover from its effects.
	Craving, or a strong desire to use opioids.
	Recurrent opioid use resulting in failure to fulfill major role obligations at work, school or home.
	Continued opioid use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of opioids.
	Important social, occupational or recreational activities are given up or reduced because of opioid use.
	Recurrent opioid use in situations in which it is physically hazardous
	Continued use despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by opioids.
	*Tolerance, as defined by either of the following: (a) a need for markedly increased amounts of opioids to achieve intoxication or desired effect (b) markedly diminished effect with continued use of the same amount of an opioid
	*Withdrawal, as manifested by either of the following: (a) the characteristic opioid withdrawal syndrome (b) the same (or a closely related) substance are taken to relieve or avoid withdrawal symptoms

Total Number Boxes Checked: _____

Severity: **Mild**: 2-3 symptoms. **Moderate**: 4-5 symptoms. **Severe**: 6 or more symptoms

*Criteria from American Psychiatric Association (2013). Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition,. Washington, DC, American Psychiatric Association page 541. For use outside of IT MATTTRs Colorado, please contact ITMATTTRsColorado@ucdenver.edu

Disclaimer: Nothing in this document constitutes an indirect or direct endorsement by the Substance Abuse and Mental Health Services Administration (SAMHSA) or the U.S. Department of Health and Human Services (HHS) of any non-federal entity's products, services, or policies and any reference to a non-federal entity's products, services, or policies should not be construed as such. No official support of or endorsement by SAMHSA or HHS for the opinions, resources, and medications described is intended to be or should be inferred. The information presented in this document should not be considered medical advice and is not a substitute for individualized patient or client care and treatment decisions.

Important Considerations: Buprenorphine/Naloxone Dosing

- Tablets/film may be split if necessary
- May take up to 10 min to dissolve completely (no talking, smoking, or swallowing at this time)
- Absorption better with moistened mouth

SUBOXONE sublingual tablets, including generic equivalents	Corresponding dosage strength of ZUBSOLV sublingual tablets
One 2 mg/0.5 mg buprenorphine/naloxone sublingual tablet	One 1.4 mg/0.36 mg ZUBSOLV sublingual tablet
One 8 mg/2 mg buprenorphine/naloxone sublingual tablet	One 5.7 mg/1.4 mg ZUBSOLV sublingual tablet
12 mg/3 mg buprenorphine/naloxone taken as: • One 8 mg/2 mg sublingual buprenorphine/naloxone tablet AND • Two 2 mg/0.5 mg sublingual buprenorphine/naloxone tablets	One 8.6 mg/2.1 mg ZUBSOLV sublingual tablet
16 mg/4 mg buprenorphine/naloxone taken as: • Two 8 mg/2 mg sublingual buprenorphine/naloxone tablets	One 11.4 mg/2.9 mg ZUBSOLV sublingual tablet

Algorithm for In-Office Induction (for home induction prescriptions may be given)

Initial Assessment

History and Physical
Concurrent medical issues and substance use
Medication history (with review of the PDMP)
Allergies
Mental health status and social history
Social history

Lab Workup
CBC, CMP, HIV, hepatitis A, B & C
Urine drug testing, and
consider pregnancy & STD screen

Referral
Refer to specialists as indicated
Refer to counseling
Refer to case management

Provide Patient Education
Treatment goals and medication education
Side-effects
How to store medication at home
Patient should update provider with new medications or other changes
Establish open communication

Discuss Safety Concerns
Altered tolerance to opioids on buprenorphine/suboxone
No co-administration of alcohol or benzodiazepines
Alert provider if planning pregnancy or pregnant
Planned procedures that may require opiate analgesia

Day One (Induction)

Last opioid use >6-12 hours ago → Moderate Withdrawal (COWS >12) → **Give First Dose of Buprenorphine/Naloxone (2 – 4mg)** → After 1 Hour: Monitor for precipitated withdrawal; If present, treat symptoms; Attempt induction 24 hours later

2 – 4 Hours Later: Withdrawal Symptoms Relieved?
- No → Give further 2 – 4mg dose
- Yes → Prescribe one dose; Return to clinic on day two for observation and review

2 – 4 Hours Later: Withdrawal Symptoms Relieved?
- No → Give further 2 – 4mg dose, up to 8mg total
- Yes → Prescribe one dose; Return to clinic on day two for observation and review

Day Two

Adequate symptom relief achieved After induction?
- No → Give day 1 dose and additional 2 – 4mg up to 16mg total
- Yes → Induction Complete - Give induction dose as ongoing dose, and review in 1 day

2 – 4 Hours Later: Withdrawal Symptoms Relieved?
- No → Give further 2 – 4mg dose, up to 16mg
- Yes → Induction Complete - Give induction dose as ongoing dose, and review in 1 day

Maintenance

Patient Stable On Current Dose?
- No → Consider further 2 – 4mg dose, up to 16mg
- Yes → Continue once daily dosing with regular review

Perform monthly urinary drug screens, and check PDMP regularly. Ensure on-going attendance at counseling and support groups. When patient stable on medication, assess readiness for take-home dosing

The Poison Control Center (PCC) at the Children's Hospital of Philadelphia presents:

Opioid Assistance Resource (OAR) Line

Calling the OAR line

267-426-5900

24/7

Frequently asked questions (FAQ)

What does the OAR provide?

- 24/7 support from medical professionals with expertise in management of opiate toxicity and withdrawal

Who will answer the phone?

- You will be immediately connected to nurses and pharmacists with special training in toxicology.
- If your issue requires additional expertise, our staff will connect you to a medical toxicologist in Philadelphia.

What can I ask about?

- Opiate/opioid withdrawal treatment, including buprenorphine & symptom-controlling therapeutics.
- Buprenorphine dosing and prescribing.
- MAT clinic contact information for follow-up.

The Poison Control Center
1-800-222-1222

For support with problem drug use
and for other resources,

talk to your doctor or call 311.

For more information, visit
https://dbhids.org/MAT or
call 888-545-2600.

Materials adapted with permission from the NYC Department of Health and Mental Hygiene

City of Philadelphia 4.19

BUPE

Do you have a problem with prescription painkillers or heroin?

BUPRENORPHINE can help.

WHAT IS BUPRENORPHINE?

Buprenorphine (or "bupe") is a medication that treats addiction to opioids, such as prescription painkillers (like Vicodin, Oxycontin or Percocet) and heroin. Suboxone is a common brand name for bupe.

HOW DOES BUPE WORK?

Bupe stops withdrawal symptoms and cravings. This makes it easier for you to stop using or cut down, so you can focus on activities that are important to you.

CAN BUPE CAUSE OVERDOSE?

It's hard to overdose on bupe by taking too much. However, it is dangerous to mix bupe with alcohol, benzodiazepines (or "benzos", like Valium, Xanax or Ativan), or other sedating drugs. Mixing bupe with these drugs increases your risk of overdose.

DOES BUPE HAVE SIDE EFFECTS?

Side effects are different for different people. They are usually mild and may include constipation, nausea, headache and insomnia.

HOW LONG DO I NEED TO TAKE BUPE?

Everybody is different. Many people may benefit from long-term treatment; other people may need bupe for a shorter time.

CAN I SWITCH FROM METHADONE TO BUPE?

Yes, but talk to your doctor first to make sure you are on the right methadone dose before switching.

WILL MY HEALTH INSURANCE PAY FOR BUPE?

Yes. Medicaid, Medicare and most other health plans pay for bupe. Check with your health plan to make sure bupe is on the list of approved drugs.

HOW DO I GET BUPE?

Ask your doctor to prescribe bupe. Once you have a prescription, you can get bupe at a pharmacy and take it at home, just like other medications.

If your doctor does not prescribe bupe, call 311, or go to samhsa.gov and search for "buprenorphine" to find other options for getting bupe.

WHAT ELSE SHOULD I KNOW ABOUT STARTING BUPE?

- Your doctor will explain that you must be in some withdrawal from opioids when starting bupe.
- You should tell your doctor about any medications you are taking, since some can interact with bupe.
- You should tell your doctor if you are pregnant or breastfeeding.
- Taking bupe is sometimes enough to help, but many people also benefit from counseling. Your doctor can help you decide whether counseling is right for you.

ACCESSING TREATMENT

CALL CBH MEMBER SERVICES

Call **1-888-545-2600** 24/7 365 days/year for help in receiving services for a drug and/or alcohol addiction. Substance use disorder is the repeated use of a substance and/or alcohol that does harm to your body and mind.

Community Behavioral Health (CBH) is a behavioral health insurance company that pays for mental health and substance use services for everyone that is enrolled in Medicaid in Philadelphia.

Other common Philadelphia insurers:
Medicare: 1-800-MEDICARE (1-800-633-4227)
Magellan Healthcare: 1-800-688-1911
Behavioral Health Special Initiative (BHSI): 215-546-1200

WHAT TO EXPECT

Treatment Begins with an Assessment:

Before going into inpatient treatment, you will need an assessment. An assessment is an in-depth interview led by a behavioral health professional. The Pennsylvania Client Placement Criteria (PCPC) and American Society of Addiction Medicine (ASAM) are two examples of assessments that help professionals determine what kind of substance use services you may need.

Residential and Hospital Treatment:

If your assessment results show you would benefit from an inpatient hospital stay (also known as residential treatment), the behavioral health professionals you met with will contact your insurance to get approval and find a program that will meet your needs.

Community Based and Outpatient Treatment:

Many people can and do recover from substance use disorders with the support of an outpatient treatment program. Outpatient treatment is care that you can participate in without staying in a hospital or medical facility. During outpatient treatment you can visit a behavioral health professional to access the services and medication you may need.

There are three levels of outpatient treatment:

- Traditional outpatient (where you can meet with your therapist at least one time per week)
- Intensive outpatient (where you can meet with your therapist at least three times per week)
- Partial hospitalization programs (where you meet with your therapist daily)

The goal of these programs is to help build coping skills when dealing with cravings.

C·B·H Community Behavioral Health

City of Philadelphia DBHIDS DEPARTMENT of BEHAVIORAL HEALTH and INTELLECTUAL disABILITY SERVICES

If you are uninsured, covered by Medicaid/CBH, or not sure of your insurance coverage, contact CBH Member Services at 1-888-545-2600 24/7, 365 days/year to gain assistance with accessing publicly funded SUD treatment and services.

In the event of a medical emergency, please call 911 and go to the nearest emergency room.

WHERE TO GO FOR AN ASSESSMENT

NET Access Point 844-533-8200 or 215-408-4987
499 North 5th Street, Suite B, Philadelphia, PA 19123
www.netcenters.org
Open 24 hours/day and 7 days/week. Offering Buprenorphine & Vivitrol Induction

Crisis Response Centers

Friends Hospital 4641 Roosevelt Blvd. (215) 831-2600

Einstein Medical Center 5501 Old York Rd. (215) 951-8300

Pennsylvania Hospital (Hall Mercer) 245 S. 8th St. (215) 829-5433

Temple/Episcopal Hospital 100 E. Lehigh Ave. (215) 707-2577

Philadelphia Children's Crisis Response Center
3300 Henry Ave. Falls Two Building, 3rd Floor (215) 878-2600

Pathways to Recovery (PHMC) Partial Hospitalization
2301 East Allegheny Avenue, Philadelphia, PA 19134
215-731-2404 - English/Spanish. Buprenorphine & Vivitrol Induction

Gaudenzia
1306 Spring Garden, Philadelphia, PA 19123
267-315-6907 - Withdrawal Management & Buprenorphine Maintenance

Nearest Substance Use Disorder Treatment Provider
See attached list of community treatment programs

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In the event of a medical emergency, please call 911 and go to the nearest emergency room.

IN-NETWORK ADULT COMMUNITY MEDICATION-ASSISTED TREATMENT (MAT) PROGRAMS

Provider & Contact Info	MAT	Additional Information
ADDICTION MEDICINE AND HEALTH ADVOCATES (AMHA) 928 MARKET ST, 19107 (215) 923-4202	MMT induction	IOP/OP Spanish; Child care on site
ASOCIACION PUERTORRIQUENOS EN MARCHA (APM) 4301 RISING SUN AVE, PHILA, 19140 (267) 296-7200	Buprenorphine induction	IOP/OP; MH Tx on-site Spanish
CASA DE CONSEJERIA Y SALUD INTEGRAL 213 W ALLEGHENY AVE, 19140 (215) 634-3259	Buprenorphine induction	IOP
CHANCES- PHILA HEALTH MGMT CORP (PHMC) 1200 CALLOWHILL ST, SUITE 102, 19123 (215) 825-8220	Buprenorphine induction	OP/IOP
COMHAR 2055 E. ALLEGHENY AVE, 19134 (215) 427-5800 2600 N AMERICAN ST, 19133 (215) 739-2669	Buprenorphine induction	OP; MH Tx on-site Spanish Both locations registration: (267) 861-4382
THE CONSORTIUM 451 S. UNIVERSITY AVE, 19104 (215) 596-8000	MMT induction Vivitrol	IOP/OP; MH Tx on-site Spanish; Child care on site
DREXEL MEDICINE CARING TOGETHER CLINIC 4700 WISSAHICKON AVE, 19144 (215) 967-2130	Buprenorphine/Vivitrol maintenance	OP Females only, Child care on site
GAUDENZIA OUTREACH I 1306 SPRING GARDEN ST, 19123 (215) 238-2150	Vivitrol	IOP/OP; MH Tx on-site Spanish
GAUDENZIA-DRC 3200 HENRY AVE, 19129 (215) 991-9700	Vivitrol	IOP/OP
GREATER PHILA ASIAN SOCIAL SERVICES CENTER 4943 N. 5TH ST, 19120 (215) 456-1662	Vivitrol	IOP/OP; Spanish, Korean, Vietnamese Chinese, Cambodian
INTERIM HOUSE, INC. - PHMC 333 W. UPSAL ST, 19139 (215) 849-4606	Buprenorphine induction Vivitrol	IOP/OP; MH Tx on-site Spanish
JEVS HUMAN SERVICES - ACT I 5820 OLD YORK ROAD, 19141 (215) 276-8400	MMT induction	IOP/OP
JEVS HUMAN SERVICES - ACT II 1745 N. 4TH ST, 19122 (215) 236-0100	MMT induction	IOP/OP Spanish
JOHN F. KENNEDY BEHAVIORAL HEALTH CENTER (JFK) 907 N. BROAD ST, 19123 (215) 235-5520 112 N BROAD ST, 19102 (215) 556-0860	 MMT induction Vivitrol	OP; MH Tx on-site
KENSINGTON HOSPITAL 136 DIAMOND ST, 19122 (215) 426-8100	MMT induction	OP
MERAKEY BEHAVIORAL HEALTH 5000 PARKSIDE AVE, 19131 (215) 879-6116	Buprenorphine induction MMT induction & Vivitrol	IOP/OP; MH Tx on-site; Walk-in: M-F 7a-5:30p; Sa 8a-1:30p; Su 8-11:30a
MERAKEY BEHAVIORAL HEALTH 5429 GERMANTOWN AVE, 19144 (215) 754-0240	Buprenorphine induction MMT induction & Vivitrol	IOP/OP; MH Tx on-site; Walk-in Hours: 7a-5:30p
MERAKEY BEHAVIORAL HEALTH 100 E LEHIGH AVE, 19125 (215) 634-2520	Buprenorphine induction Vivitrol	IOP/OP; MH Tx on-site; Walk-in Hours: M-F 8a-5p
MERAKEY BEHAVIORAL HEALTH 11082 KNIGHTS ROAD, 19154 (215) 632-9040	Buprenorphine induction Vivitrol	IOP/OP; Walk-in: M-F 8a-5p
NORTH PHILA HEALTH SYSTEM - GOLDMAN CLINIC 801 W. GIRARD AVE, 19122 (215) 787-2000	MMT induction Vivitrol	IOP/OP Spanish
NET CENTERS 499 N. 5TH ST, 19123 (215) 451-7100	Buprenorphine induction Vivitrol	IOP/OP; MH Tx on-site

Philadelphia Department of Behavioral Health
and Intellectual disAbility Services

Spring 2020
Fact Sheet 2A

IN-NETWORK ADULT COMMUNITY MEDICATION-ASSISTED TREATMENT (MAT) PROGRAMS

Provider & Contact Info	MAT	Additional Information
NET CENTERS 2205 BRIDGE ST, 19137 (215) 743-6150	Buprenorphine induction MMT induction & Vivitrol	IOP/OP; MH Tx on-site; Walk-in: M-W 7a-5p, Th 7-11a; F 7a-12p
NET CENTERS 7520 STATE ROAD, 19136 (267) 348-3550	Buprenorphine induction MMT induction & Vivitrol	IOP/OP; MH Tx on-site; Child care on site Walk-in hours
NET CENTERS 4625 FRANKFORD AVE, 2ND FL, 19124 (267) 597-3920	Buprenorphine induction	OP; Spanish; MH Tx 1st FL Walk-in: M-F 9a-4p
PATHWAYS TO HOUSING* 5201 OLD YORK ROAD, SUITE 108, 19141 (215) 390-1500	Buprenorphine induction Vivitrol	Spanish Housing Assistance
PATHWAYS TO RECOVERY (PHMC) 2301 EAST ALLEGHENY AVE, 19134 (215) 731-2402	Vivitrol & Buprenorphine MMT clinic coordination	Partial Hospital Program; MH Tx on-site Spanish
PENN MEDICINE MOTHERS MATTER PROGRAM* 3400 SPRUCE ST, 1 WEST GATES, 19103 (267) 593-2969	Buprenorphine induction	Pregnant Women
PENN OUTPATIENT (TOTAL RECOVERY) 8220 CASTOR AVE, 19152 (215) 728-4600	Vivitrol & Suboxone Buprenorphine induction	MAT, IOP/OP, Spanish M-F: 8:30a - 4:30p; 2nd Floor
PEOPLE ACTING TO HELP (PATH) 1200 CALLOWHILL ST, 1st Floor, 19123 (267) 398-0247	Buprenorphine induction Vivitrol	OP
PHMC CARE CLINIC MAT PROGRAM* 1200 CALLOWHILL ST, 1st Floor, 19123 (267) 398-0247	Buprenorphine induction Vivitrol	Health Care Center Spanish; PCP
PREVENTION POINT* 2913-2915 KENSINGTON AVE, 19134 (215) 634-5272	Buprenorphine induction Vivitrol	Harm Reduction Svcs Spanish
PROJECT HOME (STEPHEN KLEIN WELLNESS CENTER)* 2144 CECIL B. MOORE AVE, 19121 (215) 320-6187 x5756	Buprenorphine induction Vivitrol induction	
SOAR CORP 9150 MARSHALL ST, SUITE 2, 19114 (215) 464-4450	MMT induction	IOP/OP
THOMAS JEFFERSON UNIVERSITY FAMILY CENTER* 1233 LOCUST ST, SUITE 201, 19107 (215) 955-8577	MMT induction Bupe maintenance	*MATER; IOP/OP; MH Tx on-site Females only, pregnancy, child care on site
THOMAS JEFFERSON UNIVERSITY (NARP)* 1021 S 21ST ST, 19146 (215) 735-5979	MMT induction Bupe maintenance	IOP/OP; MH Tx on-site Spanish
TEMPLE TWO PROGRAM* 3401 N BROAD ST, 19140 (215) 707-3008	Buprenorphine induction	Partners with the Wedge MC OB- GYN Svcs
WEDGE MEDICAL CENTER* 3609 N. BROAD ST, 19140 (215) 276-3922	Buprenorphine induction Vivitrol	Partners with Temple TWO; Walk-in: M-W 2-3:30p Spanish; IOP/OP; MH Tx on-site
WEDGE MEDICAL CENTER* 2009 S. BROAD ST, 19148 (215) 276-3922	Buprenorphine induction Vivitrol	Partners with Temple TWO: Walk-in: M 2-3:30p IOP/OP; MH Tx on-site
WEDGE MEDICAL CENTER* 4243 FRANKFORD AVE, 19124 (215) 276-3922	Buprenorphine induction Vivitrol	Partners with Temple TWO; IOP/OP MH Tx on-site; Walk-in: T 2-3:30p

Call 1-888-545-2600 to speak to a service representative and access treatment.

Offering same-day inductions during walk-in hours

*Center of Excellence
Intensive Outpatient Program (IOP)
Methadone Maintenance Treatment (MMT)
Outpatient Program (OP)

David T. Jones
Commissioner
215-685-5400

City of Philadelphia
DBHIDS
DEPARTMENT of BEHAVIORAL HEALTH and INTELLECTUAL disABILITY SERVICES

JAMA Network Open

Original Investigation | Substance Use and Addiction

Comparative Effectiveness of Different Treatment Pathways for Opioid Use Disorder

Sarah E. Wakeman, MD; Marc R. Larochelle, MD, MPH; Omid Ameli, MD, MPH; Christine E. Chaisson, MPH; Jeffrey Thomas McPheeters, BA; William H. Crown, PhD; Francisca Azocar, PhD; Darshak M. Sanghavi, MD

Abstract

IMPORTANCE Although clinical trials demonstrate the superior effectiveness of medication for opioid use disorder (MOUD) compared with nonpharmacologic treatment, national data on the comparative effectiveness of real-world treatment pathways are lacking.

OBJECTIVE To examine associations between opioid use disorder (OUD) treatment pathways and overdose and opioid-related acute care use as proxies for OUD recurrence.

DESIGN, SETTING, AND PARTICIPANTS This retrospective comparative effectiveness research study assessed deidentified claims from the OptumLabs Data Warehouse from individuals aged 16 years or older with OUD and commercial or Medicare Advantage coverage. Opioid use disorder was identified based on 1 or more inpatient or 2 or more outpatient claims for OUD diagnosis codes within 3 months of each other; 1 or more claims for OUD plus diagnosis codes for opioid-related overdose, injection-related infection, or inpatient detoxification or residential services; or MOUD claims between January 1, 2015, and September 30, 2017. Data analysis was performed from April 1, 2018, to June 30, 2019.

EXPOSURES One of 6 mutually exclusive treatment pathways, including (1) no treatment, (2) inpatient detoxification or residential services, (3) intensive behavioral health, (4) buprenorphine or methadone, (5) naltrexone, and (6) nonintensive behavioral health.

MAIN OUTCOMES AND MEASURES Opioid-related overdose or serious acute care use during 3 and 12 months after initial treatment.

RESULTS A total of 40 885 individuals with OUD (mean [SD] age, 47.73 [17.25] years; 22 172 [54.2%] male; 30 332 [74.2%] white) were identified. For OUD treatment, 24 258 (59.3%) received nonintensive behavioral health, 6455 (15.8%) received inpatient detoxification or residential services, 5123 (12.5%) received MOUD treatment with buprenorphine or methadone, 1970 (4.8%) received intensive behavioral health, and 963 (2.4%) received MOUD treatment with naltrexone. During 3-month follow-up, 707 participants (1.7%) experienced an overdose, and 773 (1.9%) had serious opioid-related acute care use. Only treatment with buprenorphine or methadone was associated with a reduced risk of overdose during 3-month (adjusted hazard ratio [AHR], 0.24; 95% CI, 0.14-0.41) and 12-month (AHR, 0.41; 95% CI, 0.31-0.55) follow-up. Treatment with buprenorphine or methadone was also associated with reduction in serious opioid-related acute care use during 3-month (AHR, 0.68; 95% CI, 0.47-0.99) and 12-month (AHR, 0.74; 95% CI, 0.58-0.95) follow-up.

(continued)

Key Points

Question What is the real-world effectiveness of different treatment pathways for opioid use disorder?

Findings In this comparative effectiveness research study of 40 885 adults with opioid use disorder that compared 6 different treatment pathways, only treatment with buprenorphine or methadone was associated with reduced risk of overdose and serious opioid-related acute care use compared with no treatment during 3 and 12 months of follow-up.

Meaning Methadone and buprenorphine were associated with reduced overdose and opioid-related morbidity compared with opioid antagonist therapy, inpatient treatment, or intensive outpatient behavioral interventions and may be used as first-line treatments for opioid use disorder.

+ Supplemental content

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Abstract (continued)

CONCLUSIONS AND RELEVANCE Treatment with buprenorphine or methadone was associated with reductions in overdose and serious opioid-related acute care use compared with other treatments. Strategies to address the underuse of MOUD are needed.

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Introduction

The increasing burden of opioid use disorder (OUD) has resulted in increased opioid-related morbidity and mortality, with 47 600 overdose deaths in 2017 alone.[1-3] From 2002 to 2012, hospitalization costs attributable to opioid-related overdose increased by more than $700 million annually.[4] Associated health complications, such as hepatitis C infection, HIV infection, and serious injection-related infections, are also increasing.[5-7] In addition, as rates of opioid-related death have increased despite decreases in prescription opioid supply, there is an increasing recognition that greater attention must be paid to improving access to effective OUD treatment.[8,9]

Medication for opioid use disorder (MOUD) is effective and improves mortality, treatment retention, and remission, but most people with OUD remain untreated.[10-15] Many parts of the United States lack access to buprenorphine prescribers, and only a few addiction treatment programs offer all forms of MOUD.[16-18] This lack of access has resulted in a treatment gap of an estimated 1 million people with OUD untreated with MOUD annually.[19]

Nationally representative, comparative effectiveness studies of MOUD compared with nonpharmacologic treatment are limited. One prior study[12] compared MOUD with psychosocial treatments but was limited to a Massachusetts Medicaid population. Studies[20-23] examining OUD treatment among nationally representative populations have examined trends in MOUD initiation, patterns of OUD treatment, and effectiveness of different types of MOUD at reducing overdose using Medicaid and commercial claims data. However, none of those studies[20-23] compared the effectiveness of MOUD with nonpharmacologic treatments in a national sample. Despite better access to medical care, only a few commercially insured patients are treated with MOUD, and psychosocial-only treatments continue to be common, suggesting that greater understanding of the comparative effectiveness of these different treatments is needed.[21]

In this study, we used a large, nationally representative database of commercially insured and Medicare Advantage (MA) individuals to evaluate the effectiveness of MOUD compared with nonpharmacologic treatment. This retrospective comparative effectiveness study was designed to inform treatment decisions made by policy makers, insurers, practitioners, and patients.

Methods

We conducted a comparative effectiveness research study using the OptumLabs Data Warehouse, which includes medical, behavioral health, and pharmacy claims for commercial and MA enrollees.[24] The database represents a diverse mixture of ages, races/ethnicities, and geographic regions across the United States. Our analysis used deidentified administrative claims data. The window for identification of OUD for this study was January 1, 2015, to September 30, 2017. The study used claims data from October 3, 2014, to December 31, 2017, to allow for a 90-day period to ensure a nonopioid clean period and a minimum of 90 days of follow-up for all individuals with diagnosed OUD. Data analysis was performed from April 1, 2018, to June 30, 2019. Because this study involved analysis of preexisting, deidentified data, the Chesapeake Institutional Review Board deemed it exempt from institutional review board approval. This study followed the International Society for Pharmacoeconomics and Outcomes Research (ISPOR) reporting guideline.[25]

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Cohort Selection

We defined OUD as 1 or more inpatient or 2 or more outpatient claims for *International Classification of Diseases, Ninth Revision (ICD-9)* or *International Statistical Classification of Diseases and Related Health Problems, Tenth Revision (ICD-10)* diagnosis codes for opioid dependence that occurred within 3 months of each other; 1 or more claims for diagnosis codes for opioid dependence, opioid use, or opioid abuse plus diagnosis codes for an encounter related to opioid overdose or an injection-related infection, opioid-related inpatient detoxification or residential services; or claims for MOUD or detoxification (eFigure 1 in the Supplement). Cohort inclusion required presence of OUD and age of 16 years or older; commercial or MA medical, pharmacy, and behavioral coverage; and continuous enrollment for 3 months before and after OUD treatment initiation date. For those in the no treatment group, a treatment initiation index date was selected at random that matched the treated groups (eAppendix 1 in the Supplement).

Treatment Pathways

We examined treatments received in the 3 months after OUD diagnosis during the first 90 days after cohort entry to identify patterns of treatment (eFigure 2 in the Supplement). We categorized individuals into 1 of 6 mutually exclusive pathway designations based on initial treatment: (1) no treatment, (2) inpatient detoxification or residential services, (3) intensive behavioral health (intensive outpatient or partial hospitalization), (4) buprenorphine or methadone, (5) naltrexone, and (6) only nonintensive behavioral health (outpatient counseling) (eAppendix 2 in the Supplement). In addition, we examined mean duration of MOUD treatment in days.

Classification of treatment pathways was informed by detailed exploration of the sequence of treatment modalities provided to patients using medical and pharmacy claims (eFigure 3 in the Supplement). For this study, consistent with an intent-to-treat design, patients were assigned to the initial treatment received.

Outcomes

Our primary outcomes were overdose or serious opioid-related acute care use, defined as an emergency department or hospitalization with a primary opioid diagnosis code. Overdose was identified based on diagnosis codes from claims for health care encounters. These encounters may include both fatal and nonfatal overdose (lack of mortality data preclude that determination). For actively treated individuals, the index date was the date of first treatment. For untreated individuals, the index date was set randomly based on the distribution of time to first treatment among actively treated individuals. Risk for adverse outcomes started 1 day after the index date; however, because the time sequence for adverse events that occurred during an initial inpatient treatment could not be reliably established, risk of adverse outcomes started 1 day after inpatient discharge. Time to event was calculated as (event date – index date + 1), which is consistent with an intent-to-treat analysis for all treatment pathways. Individuals were censored at the earlier outcome, health plan disenrollment, or 12 months. We selected overdose and opioid-related acute care use as negative clinical outcomes, which likely indicate recurrence of OUD. These outcomes may underestimate the prevalence of OUD recurrence because they represent severe consequences of ongoing use.

A secondary outcome was admission to inpatient detoxification or readmission for those who initiated treatment with inpatient detoxification or residential services. All outcomes were evaluated for 3 months and 12 months after treatment initiation. In the absence of an event, patients were followed up until the earliest date of health plan disenrollment or end of the respective period.

Statistical Analysis

We used Cox proportional hazards regression models to estimate the hazard ratios (HRs) for primary and secondary outcomes, adjusting for age, sex, race/ethnicity, insurance type, baseline cost rank, mental health and medical comorbidities, and injection-related infections or overdose at study inclusion. For medical comorbidities, we used a modified Elixhauser index that excluded mental

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health subcomponents because they were classified separately.[26] All analyses were conducted using an intent-to-treat approach that attributed patient outcomes to their initial treatment category. We conducted a subanalysis of patients who received methadone or buprenorphine, stratifying by duration of MOUD treatment as 1 to 30 days, 31 to 180 days, or more than 180 days.

For the secondary outcome of admission to inpatient detoxification, we conducted a subanalysis in which patients in the no treatment and nonintensive behavioral health groups were removed from the sample. These 2 treatment pathways were, by definition, required to not have any treatment (no treatment group) or any treatment other than outpatient behavioral health treatment (nonintensive behavioral health group) in the first 3 months of follow-up, which made them systematically different from the other pathways evaluated for this outcome.

Analysis of survival for all outcomes was performed using unadjusted Kaplan-Meier curves and adjusted Cox proportional hazards regression (PHREG procedure, SAS Enterprise Guide, version 7.13 [SAS Institute Inc]) under both 3-month and 12-month time windows to examine potential survivorship bias and informative censoring. For the unadjusted analysis, the log-rank test is reported; 95% Wald CIs are reported for the adjusted HRs (AHRs). The proportionality assumption was assessed visually and tested by including treatment pathway as a time-dependent covariate in the Cox proportional hazards regression model. Hazards appeared to be proportional during 3 months, but there was evidence of nonproportionality for the behavioral health outpatient pathway during the 12-month time window.

Results

Cohort Characteristics

A total of 40 885 individuals with OUD (mean [SD] age, 47.73 [17.25] years; 22 172 [54.2%] male; 30 332 [74.2%] white) were identified. A total of 23 636 (57.8%) were commercially insured, and 17 249 (42.2%) were enrolled in MA plans. Of those with MA, 10 322 (25.2%) were younger than 65 years. Non–substance use disorder mental health comorbidities in the 3 months before the index date were found in 10 942 individuals (45.1%) in the cohort. Depression (9733 [23.8%]) and anxiety (10 704 [26.2%]) were most common (**Table 1**).

The most common treatment pathway was nonintensive behavioral health (24 258 [59.3%]), followed by inpatient detoxification or residential services (6455 [15.8%]) and buprenorphine or methadone (5123 [12.5%]). Not receiving any treatment was more common (2116 [5.2%]) than naltrexone (963 [2.4%]) or intensive behavioral health (1970 [4.8%]). Mean (SD) length of stay in inpatient detoxification or residential services was 7.47 (10.35) days. For the 5048 in that group who had at least 6 months of continuous enrollment, mean (SD) length of stay was 7.56 (10.99) days. For the 3098 in that group who had at least 12 months of continuous enrollment, mean (SD) length of stay was 7.64 (12.24) days.

Maintaining continuous commercial health insurance was challenging in this cohort; 19 685 (48.1%) were disenrolled by 12 months after the index date. Individuals receiving nonintensive behavioral health had the lowest disenrollment (11 037 [45.5%]), and those receiving MOUD treatment with buprenorphine or methadone (2755 [53.8%]) and MOUD treatment with naltrexone (520 [54.0%]) had the highest disenrollment rates. No differences were found between those who maintained enrollment and those who were disenrolled with regard to race/ethnicity, comorbidities, or markers of severity of OUD, including those with a history of an injection-related infection, hepatitis C infection, or overdose. It was not possible to distinguish disenrollment attributable to death from disenrollment for other reasons (eg, health insurance options offered by employers). Details on demographic characteristics and comorbidities by treatment group for individuals who were disenrolled are provided in the eTable in the Supplement.

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Recurrence Outcomes

During the 3-month follow-up period, 707 participants (1.7%) experienced an overdose, and 773 (1.9%) had a serious opioid-related acute care use episode. Only individuals receiving MOUD treatment with buprenorphine or methadone were less likely to experience an overdose compared with those receiving no treatment (AHR, 0.24; 95% CI, 0.14-0.41) (**Table 2** and **Figure 1**A). Inpatient detoxification or residential services (AHR, 0.82; 95% CI, 0.57-1.19), naltrexone (AHR, 0.59; 95% CI, 0.29-1.20), nonintensive behavioral health services (AHR, 0.92; 95% CI, 0.67-1.27), or intensive

Table 1. Patient Characteristics[a]

Characteristic	Total	No Treatment	Inpatient Detoxification or Residential Services	BH IOP	MOUD		BH Other
					Buprenorphine or Methadone	Naltrexone	
Total sample	40 885 (100)	2116 (5.2)	6455 (15.8)	1970 (4.8)	5123 (12.5)	963 (2.4)	24 258 (59.3)
Age, mean (SD), y	47.73 (17.25)	44.85 (18.66)	39.22 (15.38)	31.28 (12.19)	42.58 (13.93)	38.10 (14.01)	53.05 (16.36)
Follow-up duration, mean (SD), d	293.2 (91.3)	285.0 (93.9)	284.3 (96.1)	291.1 (93.2)	281.8 (94.7)	282.5 (94.5)	299.3 (88.1)
Age group, y							
16-25	5978 (14.6)	437 (20.7)	1837 (28.5)	948 (48.1)	578 (11.3)	247 (25.6)	1931 (8.0)
26-34	5350 (13.1)	354 (16.7)	1124 (17.4)	404 (20.5)	1194 (23.3)	197 (20.5)	2077 (8.6)
35-44	6070 (14.8)	332 (15.7)	1089 (16.9)	290 (14.7)	1172 (22.9)	206 (21.4)	2981 (12.3)
45-54	7208 (17.6)	300 (14.2)	1059 (16.4)	188 (9.5)	995 (19.4)	167 (17.3)	4499 (18.5)
54-64	8897 (21.8)	318 (15.0)	983 (15.2)	117 (5.9)	817 (15.9)	108 (11.2)	6554 (27)
≥65	7382 (18.1)	375 (17.7)	363 (5.6)	23 (1.2)	367 (7.2)	38 (3.9)	6216 (25.6)
Sex							
Female	18 713 (45.8)	797 (37.7)	2482 (38.5)	662 (33.6)	1971 (38.5)	387 (40.2)	12 414 (51.2)
Male	22 172 (54.2)	1319 (62.3)	3973 (61.5)	1308 (66.4)	3152 (61.5)	576 (59.8)	11 844 (48.8)
Insurance type							
Commercial	23 636 (57.8)	1299 (61.4)	5062 (78.4)	1889 (95.9)	3630 (70.9)	841 (87.3)	10 915 (45)
Medicare Advantage							
Age <65 y	10 322 (25.2)	457 (21.6)	1067 (16.5)	63 (3.2)	1147 (22.4)	91 (9.4)	7497 (30.9)
Age ≥65 y	6927 (16.9)	360 (17.0)	326 (5.1)	18 (0.9)	346 (6.8)	31 (3.2)	5846 (24.1)
Race/ethnicity							
White	30 332 (74.2)	1485 (70.2)	4976 (16.4)	1552 (78.8)	4044 (78.9)	791 (82.1)	17 484 (72.1)
Hispanic	3388 (8.3)	192 (9.1)	511 (15.1)	158 (8.0)	338 (6.6)	47 (4.9)	2142 (8.8)
Black	4991 (12.2)	317 (15.0)	628 (12.6)	161 (8.2)	468 (9.1)	68 (7.1)	3349 (13.8)
Other or unknown	2174 (5.3)	122 (5.8)	340 (15.6)	99 (5.0)	273 (5.3)	57 (5.9)	1283 (5.3)
Elixhauser index score excluding mental health, mean (SD)	1.75 (2.35)	1.25 (2.15)	1.00 (1.67)	0.51 (1.15)	0.88 (1.49)	0.94 (1.41)	2.30 (2.60)
Any mental health diagnosis	18 218 (44.6)	585 (27.6)	3078 (47.7)	933 (47.4)	2060 (40.2)	620 (64.4)	10 942 (45.1)
Depression	9733 (23.8)	270 (12.8)	1670 (25.9)	552 (28.0)	965 (18.8)	398 (41.3)	5878 (24.2)
Anxiety	10 704 (26.2)	274 (12.9)	1921 (29.8)	554 (28.1)	1329 (25.9)	391 (40.6)	6235 (25.7)
ADHD	1774 (4.3)	33 (1.6)	402 (6.2)	159 (8.1)	272 (5.3)	77 (8.0)	831 (3.4)
PTSD	1462 (3.6)	41 (1.9)	245 (3.8)	104 (5.3)	153 (3.0)	69 (7.2)	850 (3.5)
Alcohol	4166 (10.2)	174 (8.2)	961 (14.9)	471 (23.9)	225 (4.4)	496 (51.5)	1839 (7.6)
Bipolar disorder	3138 (7.7)	102 (4.8)	556 (8.6)	183 (9.3)	290 (5.7)	146 (15.2)	1861 (7.7)
Psychosis	1526 (3.7)	76 (3.6)	268 (4.2)	76 (3.9)	87 (1.7)	40 (4.2)	979 (4)
IDU infection	5556 (13.6)	249 (11.8)	330 (5.1)	66 (3.4)	151 (2.9)	31 (3.2)	4729 (19.5)
Hepatitis C	2018 (4.9)	64 (3.0)	181 (2.8)	<29 (<1.7)	121 (2.4)	<11 (<1.1)	1623 (6.7)
Opioid overdose	2135 (5.2)	249 (11.8)	267 (4.1)	84 (4.3)	86 (1.7)	27 (2.8)	1422 (5.9)

Abbreviations: ADHD, attention-deficit/hyperactivity disorder; BH IOP, intensive behavioral health (intensive outpatient or partial hospitalization); BH other, only nonintensive behavioral health (outpatient counseling); IDU, injection drug use; MOUD, medication for opioid use disorder; PTSD, posttraumatic stress disorder.

[a] Data are presented as number (percentage) of patients unless otherwise indicated.

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behavioral health services (AHR, 0.81; 95% CI, 0.50-1.32) were not significantly associated with overdose.

MOUD treatment with buprenorphine or methadone was also protective against serious opioid-related acute care use during the 3-month follow-up period (AHR, 0.68; 95% CI, 0.47-0.99) (Table 2 and Figure 1B). Inpatient detoxification or residential services treatment, naltrexone, and intensive behavioral health services were not significantly associated with serious opioid-related acute care use during 3 months (inpatient detoxification or residential services: AHR, 1.05; 95% CI, 0.76-1.45; naltrexone: AHR, 1.15; 95% CI, 0.69-1.92; intensive behavioral health: AHR, 0.84; 95% CI, 0.54-1.30).

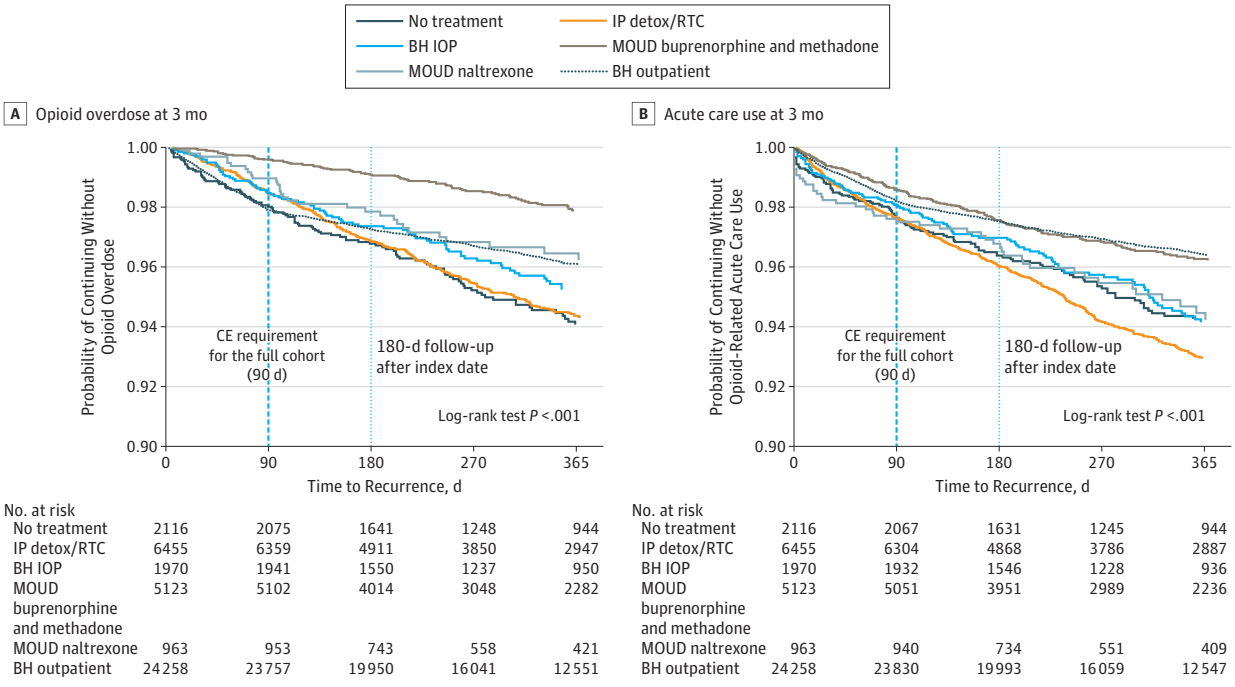
Table 2. Adjusted Hazard Ratios for Overdose and Serious Opioid-Related Acute Care Use by Initial Treatment Group Compared With No Treatment[a]

Variable	Adjusted Hazard Ratio (95% CI)	
	3 Months	12 Months
Overdose		
No treatment	1 [Reference]	1 [Reference]
Inpatient detoxification or residential services	0.82 (0.57-1.19)	1 (0.79-1.25)
BH IOP	0.81 (0.50-1.32)	0.75 (0.56-1.02)
MOUD treatment with buprenorphine or methadone	0.24 (0.14-0.41)	0.41 (0.31-0.55)
MOUD treatment with naltrexone	0.59 (0.29-1.20)	0.73 (0.48-1.11)
BH other	0.92 (0.67-1.27)	0.69 (0.56-0.85)
ED or inpatient stay		
No treatment	1 [Reference]	1 [Reference]
Inpatient detoxification or residential services	1.05 (0.76-1.45)	1.20 (0.96-1.50)
BH IOP	0.84 (0.54-1.30)	0.90 (0.67-1.20)
MOUD treatment with buprenorphine or methadone	0.68 (0.47-0.99)	0.74 (0.58-0.95)
MOUD treatment with naltrexone	1.15 (0.69-1.92)	1.07 (0.75-1.54)
BH other	0.59 (0.44-0.80)	0.60 (0.48-0.74)

Abbreviations: BH IOP, intensive behavioral health (intensive outpatient or partial hospitalization); BH other, only nonintensive behavioral health (outpatient counseling); ED, emergency department; MOUD, medication for opioid use disorder.

[a] The hazard ratios were adjusted for age, sex, race/ethnicity, insurance type, baseline medical (modified Elixhauser index score) and mental health comorbidities (depression, anxiety, posttraumatic stress disorder, and attention-deficit/hyperactivity disorder), evidence of overdose or infections related to intravenous drug use, and cost rank.

Figure 1. Probability of Opioid Overdose and Acute Care Use During the 3-Month Follow-up Period



BH indicates behavioral health; CE, continuing education; BH IOP, intensive behavioral health (intensive outpatient or partial hospitalization); IP detox/RTC, inpatient detoxification or residential services; and MOUD, medication for opioid use disorder.

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Nonintensive behavioral health services were associated with a reduction in serious opioid-related acute care use (AHR, 0.59; 95% CI, 0.44-0.80). Receiving MOUD treatment with buprenorphine or methadone continued to be protective against overdose (AHR, 0.41; 95% CI, 0.31-0.55) and serious opioid-related acute care use (AHR, 0.74; 95% CI, 0.58-0.95) at 12 months.

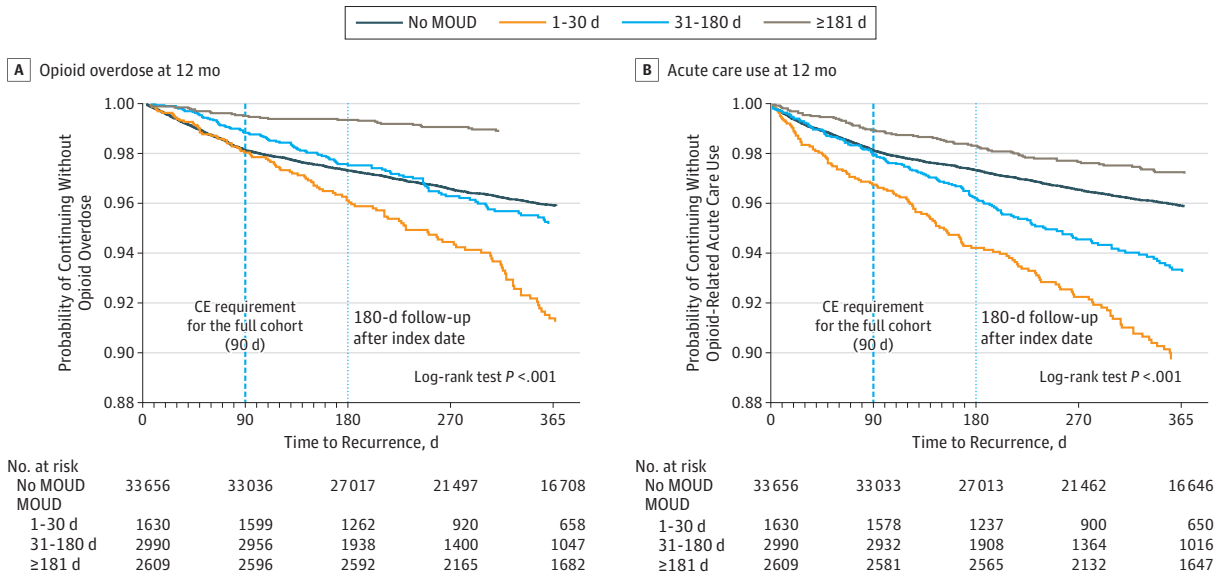
Compared with MOUD treatment with buprenorphine or methadone, all treatment groups were more likely to have a posttreatment admission to inpatient detoxification. Patients who initiated treatment with inpatient detoxification or residential services were most likely to return within 3 months (AHR, 3.76; 95% CI, 2.98-4.74) and 12 months (AHR, 3.48; 95% CI, 3.02-4.01). However, treatment with naltrexone or intensive behavioral health services was also associated with a higher risk of subsequent detoxification admission during the 3-month (naltrexone: AHR, 2.64; 95% CI, 1.84-3.78; intensive behavioral health: AHR, 2.19; 95% CI, 1.63-2.96) and 12-month (naltrexone: AHR, 1.98; 95% CI, 1.55-2.52; intensive behavioral health: AHR, 2.08; 95% CI, 1.73-2.50) follow-up periods.

MOUD Treatment Duration

Treatment duration for MOUD was relatively short. During 12 months, the mean (SD) treatment duration for naltrexone was 74.41 (70.15) days and 149.65 (119.37) days for buprenorphine or methadone. Individuals who received longer-duration MOUD treatment with buprenorphine or methadone had lower rates of overdose (**Figure 2**A) or serious opioid-related acute care use (Figure 2B).

At the end of 12 months, 1198 (3.6%) of those who received no MOUD had an overdose, and 1204 (3.6%) had serious opioid-related acute care use; 105 (6.4%) of those who received MOUD treatment with buprenorphine or methadone for 1 to 30 days had an overdose, and 133 (8.2%) had serious opioid-related acute care use; 101 (3.4%) of those who received MOUD treatment with buprenorphine or methadone for 31 to 180 days had an overdose, and 148 (5.0%) had serious opioid-related acute care use; and 28 (1.1%) of those who received MOUD treatment with buprenorphine or methadone for more than 180 days had an overdose, and 69 (2.6%) had serious opioid-related acute care use.

Figure 2. Probability of Opioid Overdose and Acute Care Use During the 12-Month Follow-up Period



CE indicates continuing education; MOUD, medication for opioid use disorder.

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Discussion

In a national cohort of 40 885 insured individuals between 2015 and 2017, MOUD treatment with buprenorphine or methadone was associated with a 76% reduction in overdose at 3 months and a 59% reduction in overdose at 12 months. To our knowledge, this was the largest cohort of commercially insured or MA individuals with OUD studied in a real-world environment with complete medical, pharmacy, and behavioral health administrative claims.

Treatment with buprenorphine or methadone was associated with a 32% relative rate of reduction in serious opioid-related acute care use at 3 months and a 26% relative rate of reduction at 12 months compared with no treatment. In contrast, detoxification, intensive behavioral health, and naltrexone treatment were not associated with reduced overdose or serious opioid-related acute care use at 3 or 12 months.

Despite the known benefit of MOUD treatment with buprenorphine or methadone, only 12.5% initiated these evidence-based treatments. Most individuals in this cohort initiated treatment with psychosocial services alone or inpatient detoxification, both of which are less effective than MOUD. It is possible that individuals accessed public sector treatments that were not captured in our data, particularly for methadone, which was not covered by Medicare and may not have been covered without co-payment for all commercial plans during this time. Low rates of MOUD use among an insured population highlight the need for strategies to improve access to and coverage for MOUD treatment.

Our results demonstrate the importance of treatment retention with MOUD. Individuals who received methadone or buprenorphine for longer than 6 months experienced fewer overdose events and serious opioid-related acute care use compared with those who received shorter durations of treatment or no treatment. These findings are consistent with prior research[11,15,27-29] demonstrating high rates of recurrent opioid use if MOUD treatment is discontinued prematurely. Despite the benefit of MOUD in our study, treatment duration was relatively short. Given the chronic nature of OUD and the evidence that longer treatment duration may be associated with improved outcomes, patient-centered MOUD treatment models explicitly focused on engagement and retention are needed. Low-threshold treatment, which aims to reduce barriers to entry and is tailored to the needs of high-risk populations,[30] may be a strategy to improve retention; however, to our knowledge, no rigorous studies have evaluated these models to date.[31,32] In addition, patient-centered MOUD care, which allows participants to determine the services they need rather than requirements, such as mandatory counseling, are noninferior to traditional treatment.[32]

Numerous barriers limit sustained engagement in MOUD, including a lack of access to waivered practitioners, high co-payments, prior authorization requirements, and other restrictions on use. Previous studies[33,34] have demonstrated that restrictions on use for MOUD are associated with limited access and harm. Addiction treatment programs in states that require Medicaid prior authorizations for buprenorphine are less likely to offer buprenorphine, and the more restrictions on use in state Medicaid programs, the fewer treatment programs that offer buprenorphine.[33] Requiring prior authorization for higher doses of buprenorphine may also result in increased recurrence rates among patients.[34] Our finding that MOUD treatment with buprenorphine or methadone was associated with lower overdose and serious opioid-related acute care use supports expanded coverage of these medications without restrictions on use.

Our findings are also consistent with analyses showing that MOUD treatment with buprenorphine or methadone is significantly associated with reduced overdose and recurrence of opioid use compared with no treatment or non-MOUD treatment. A previous cohort study[15] of individuals in Massachusetts demonstrated a reduction in overdose-related mortality associated with treatment with buprenorphine (AHR, 0.62; 95% CI, 0.41-0.92) or methadone (AHR, 0.41; 95% CI, 0.24-0.70), results that are similar to our finding of an AHR of 0.41 (95% CI, 0.31-0.55) for overdose at 12 months for methadone or buprenorphine. A large meta-analysis[11] examining mortality when individuals were in or out of treatment with buprenorphine or methadone similarly showed

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decreased overdose mortality during treatment. A study[12] examining proxies for recurrent OUD among Massachusetts Medicaid enrollees found that treatment with buprenorphine or methadone was associated with lower recurrence rates and costs. No studies, to our knowledge, have examined the effect of different OUD treatment pathways on overdose and serious opioid-related acute care use among a national sample of commercially insured and MA enrollees.

Our finding that MOUD treatment with naltrexone was not protective against overdose or serious opioid-related acute care use is consistent with other studies[15,35] that found naltrexone to be less effective than MOUD treatment with buprenorphine. The mean (SD) treatment duration for naltrexone in this cohort was longer than prior observational studies at 74.41 (70.15) days.

The findings that nonintensive behavioral health treatment was associated with a reduced risk of overdose at 12 months but not 3 months and a reduced risk of opioid-related acute care use was surprising. Although we attempted to control for differences among various treatment groups, individuals referred to nonintensive behavioral health may represent a less complex patient population than those who receive MOUD treatment or are referred to intensive behavioral health or inpatient treatment.

Strengths and Limitations

Specifically, we identified a research question a priori that was meaningful, had clinical and policy implications, and was concise and unambiguous. Our study design's strengths are the large, nationally representative sample and complete claims data, which allowed us to adequately identify appropriate patients and interventions. In addition, we used a conservative definition of OUD and of proxies for OUD recurrence to limit inclusion of individuals who did not have OUD or of outcomes that did not represent clinically significant recurrence.

This study has limitations. The limitations of our study design include the lack of clinical information in claims data or outcomes that occurred outside a health care encounter (eg, fatal overdoses or active use without medical complication). As with any observational study, there is the possibility that unmeasured patient characteristics were associated with treatment assignment and outcomes, possibly biasing estimates of outcomes associated with MOUD treatment groups. It is also possible that individuals selected for different treatments differed by characteristics that were also associated with the outcomes. We were able to control for many patient characteristics, such as race/ethnicity, sex, insurance type, and comorbidities, but selection bias is possible. Another limitation is the degree of sample attrition during the 12-month follow-up period. However, we attempted to assess potential bias from informative censoring in 2 ways.[36] First, we compared the baseline characteristics of censored and uncensored cases. These distributions were similar, suggesting that, at least on the basis of observable characteristics, censored cases were not statistically different from uncensored cases. Second, we examined the proportionality of HRs. Visual inspection of the HRs indicated that they were proportional for the 3-month period but could not be assumed to be proportional for the 12-month period. Another limitation is the risk of immortal time bias by requiring 3-month enrollment for inclusion; however, we believed it was important to require 3 months of follow-up to adequately measure outcomes. In addition, assessment of community mortality with claims data is characterized by high degrees of measurement error. Traditional instrumental variable methods for addressing immortal time bias cannot be applied to survival models because of their nonlinear functional form.

Conclusions

In a national sample of commercial insurance and MA enrollees with OUD, treatment with buprenorphine or methadone was associated with reductions in overdose and serious opioid-related acute care use, but only a few individuals were treated with these medications. These findings suggest that opportunities exist for health plans to reduce restrictions on use for MOUD and the need for treatment models that prioritize access to and retention of MOUD treatment.

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Corresponding Author: Sarah E. Wakeman, MD, Division of General Internal Medicine, Department of Medicine, Massachusetts General Hospital, 55 Fruit St, Founders 880, Boston, MA 02114 (swakeman@partners.org).

Author Affiliations: Division of General Internal Medicine, Department of Medicine, Massachusetts General Hospital, Boston (Wakeman); Department of Medicine, Harvard Medical School, Boston, Massachusetts (Wakeman); Clinical Addiction Research and Education Unit, Boston Medical Center, Boston, Massachusetts (Larochelle); Department of Medicine, Boston University School of Medicine, Boston, Massachusetts (Larochelle); Integrated Programs, OptumLabs Inc, Cambridge, Massachusetts (Ameli, Chaisson); Department of Research, OptumLabs, Minnetonka, Minnesota (McPheeters); Department of Research, OptumLabs, Cambridge, Massachusetts (Crown); Department of Research, Optum Behavioral Health, Cambridge, Massachusetts (Azocar); Department of Medicare and Retirement, United Healthcare, Minnetonka, Minnesota (Sanghavi).

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Concept and design: Wakeman, Larochelle, Ameli, Chaisson, Crown, Azocar, Sanghavi.

Acquisition, analysis, or interpretation of data: Wakeman, Larochelle, Ameli, Chaisson, McPheeters, Crown, Azocar.

Drafting of the manuscript: Wakeman, Ameli, Crown, Azocar.

Critical revision of the manuscript for important intellectual content: Wakeman, Larochelle, Ameli, Chaisson, McPheeters, Crown, Sanghavi.

Statistical analysis: Ameli, McPheeters, Crown.

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REFERENCES

1. Scholl L, Seth P, Kariisa M, Wilson N, Baldwin G. Drug and opioid-involved overdose deaths–United States, 2013-2017. *MMWR Morb Mortal Wkly Rep*. 2018;67(5152):1419-1427. doi:10.15585/mmwr.mm675152e1

2. Robinson WT, Kazbour C, Nassau T, et al. Brief report: nonfatal overdose events among persons who inject drugs: findings from seven national HIV behavioral surveillance cities 2009 & 2012. *J Acquir Immune Defic Syndr*. 2017;75(suppl 3):S341-S345. doi:10.1097/QAI.0000000000001426

3. Burnett JC, Broz D, Spiller MW, Wejnert C, Paz-Bailey G. HIV infection and HIV-associated behaviors among persons who inject drugs—20 cities, United States, 2015. *MMWR Morb Mortal Wkly Rep*. 2018;67(1):23-28. doi:10.15585/mmwr.mm6701a5

4. Hsu DJ, McCarthy EP, Stevens JP, Mukamal KJ. Hospitalizations, costs and outcomes associated with heroin and prescription opioid overdoses in the United States 2001-12. *Addiction*. 2017;112(9):1558-1564. doi:10.1111/add.13795

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5. Zibbell JE, Asher AK, Patel RC, et al. Increases in acute hepatitis C virus infection related to a growing opioid epidemic and associated injection drug use, United States, 2004 to 2014. *Am J Public Health*. 2018;108(2):175-181. doi:10.2105/AJPH.2017.304132

6. Cranston K, Alpren C, John B, et al; Amy Board. Notes from the field: HIV diagnoses among persons who inject drugs–Northeastern Massachusetts, 2015-2018. *MMWR Morb Mortal Wkly Rep*. 2019;68(10):253-254. doi:10.15585/mmwr.mm6810a6

7. Weir MA, Slater J, Jandoc R, Koivu S, Garg AX, Silverman M. The risk of infective endocarditis among people who inject drugs: a retrospective, population-based time series analysis. *CMAJ*. 2019;191(4):E93-E99. doi:10.1503/cmaj.180694

8. Chen Q, Larochelle MR, Weaver DT, et al. Prevention of prescription opioid misuse and projected overdose deaths in the United States. *JAMA Netw Open*. 2019;2(2):e187621. doi:10.1001/jamanetworkopen.2018.7621

9. Ciccarone D. The triple wave epidemic: supply and demand drivers of the US opioid overdose crisis. *Int J Drug Policy*. 2019;71:183-188. doi:10.1016/j.drugpo.2019.01.010

10. The National Academies of Science, Engineering, and Medicine. Medications for opioid use disorder save lives. March 20, 2019. http://www.nationalacademies.org/hmd/Reports/2019/medications-for-opioid-use-disorder-save-lives.aspx. Accessed March 26, 2019.

11. Sordo L, Barrio G, Bravo MJ, et al. Mortality risk during and after opioid substitution treatment: systematic review and meta-analysis of cohort studies. *BMJ*. 2017;357:j1550. doi:10.1136/bmj.j1550

12. Clark RE, Baxter JD, Aweh G, O'Connell E, Fisher WH, Barton BA. Risk factors for relapse and higher costs among Medicaid members with opioid dependence or abuse: opioid agonists, comorbidities, and treatment history. *J Subst Abuse Treat*. 2015;57:75-80. doi:10.1016/j.jsat.2015.05.001

13. Hser YI, Evans E, Huang D, et al. Long-term outcomes after randomization to buprenorphine/naloxone versus methadone in a multi-site trial. *Addiction*. 2016;111(4):695-705. doi:10.1111/add.13238

14. Weiss RD, Potter JS, Griffin ML, et al. Long-term outcomes from the National Drug Abuse Treatment Clinical Trials Network Prescription Opioid Addiction Treatment Study. *Drug Alcohol Depend*. 2015;150:112-119. doi:10.1016/j.drugalcdep.2015.02.030

15. Larochelle MR, Bernson D, Land T, et al. Medication for opioid use disorder after nonfatal opioid overdose and association with mortality: a cohort study. *Ann Intern Med*. 2018;169(3):137-145. doi:10.7326/M17-3107

16. Abraham AJ, Adams GB, Bradford AC, Bradford WD. County-level access to opioid use disorder medications in Medicare Part D (2010-2015). *Health Serv Res*. 2019;54(2):390-398. doi:10.1111/1475-6773.13113

17. Andrilla CHA, Moore TE, Patterson DG, Larson EH. Geographic distribution of providers with a DEA waiver to prescribe buprenorphine for the treatment of opioid use disorder: a 5-year update. *J Rural Health*. 2019;35(1):108-112. doi:10.1111/jrh.12307

18. Mojtabai R, Mauro C, Wall MM, Barry CL, Olfson M. Medication treatment for opioid use disorders in substance use treatment facilities. *Health Aff (Millwood)*. 2019;38(1):14-23. doi:10.1377/hlthaff.2018.05162

19. Jones CM, Campopiano M, Baldwin G, McCance-Katz E. National and state treatment need and capacity for opioid agonist medication-assisted treatment. *Am J Public Health*. 2015;105(8):e55-e63. doi:10.2105/AJPH.2015.302664

20. Hadland SE, Wharam JF, Schuster MA, Zhang F, Samet JH, Larochelle MR. Trends in receipt of buprenorphine and naltrexone for opioid use disorder among adolescents and young adults, 2001-2014. *JAMA Pediatr*. 2017;171(8):747-755. doi:10.1001/jamapediatrics.2017.0745

21. Morgan JR, Schackman BR, Leff JA, Linas BP, Walley AY. Injectable naltrexone, oral naltrexone, and buprenorphine utilization and discontinuation among individuals treated for opioid use disorder in a United States commercially insured population. *J Subst Abuse Treat*. 2018;85:90-96. doi:10.1016/j.jsat.2017.07.001

22. Wollschlaeger BA, Willson TM, Montejano LB, Ronquest NA, Nadipelli VR. Characteristics and treatment patterns of US commercially insured and Medicaid patients with opioid dependence or abuse. *J Opioid Manag*. 2017;13(4):207-220. doi:10.5055/jom.2017.0389

23. Morgan JR, Schackman BR, Weinstein ZM, Walley AY, Linas BP. Overdose following initiation of naltrexone and buprenorphine medication treatment for opioid use disorder in a United States commercially insured cohort. *Drug Alcohol Depend*. 2019;200:34-39. doi:10.1016/j.drugalcdep.2019.02.031

24. OptumLabs. *OptumLabs and OptumLabs Data Warehouse (OLDW) Descriptions and Citation*. Cambridge, MA: OptumLabs; May 2019.

Downloaded From: https://jamanetwork.com/ on 07/12/2021

25. Berger ML, Mamdani M, Atkins D, Johnson ML. Good research practices for comparative effectiveness research: defining, reporting and interpreting nonrandomized studies of treatment effects using secondary data sources: the ISPOR Good Research Practices for Retrospective Database Analysis Task Force Report, part I. *Value Health*. 2009;12(8):1044-1052. doi:10.1111/j.1524-4733.2009.00600.x

26. Quan H, Sundararajan V, Halfon P, et al. Coding algorithms for defining comorbidities in *ICD-9-CM* and *ICD-10* administrative data. *Med Care*. 2005;43(11):1130-1139. doi:10.1097/01.mlr.0000182534.19832.83

27. Sees KL, Delucchi KL, Masson C, et al. Methadone maintenance vs 180-day psychosocially enriched detoxification for treatment of opioid dependence: a randomized controlled trial. *JAMA*. 2000;283(10):1303-1310. doi:10.1001/jama.283.10.1303

28. Weiss RD, Potter JS, Fiellin DA, et al. Adjunctive counseling during brief and extended buprenorphine-naloxone treatment for prescription opioid dependence: a 2-phase randomized controlled trial. *Arch Gen Psychiatry*. 2011;68(12):1238-1246. doi:10.1001/archgenpsychiatry.2011.121

29. Fiellin DA, Schottenfeld RS, Cutter CJ, Moore BA, Barry DT, O'Connor PG. Primary care–based buprenorphine taper vs maintenance therapy for prescription opioid dependence: a randomized clinical trial. *JAMA Intern Med*. 2014;174(12):1947-1954. doi:10.1001/jamainternmed.2014.5302

30. Mofizul Islam M, Topp L, Conigrave KM, Day CA. Defining a service for people who use drugs as 'low-threshold': what should be the criteria? *Int J Drug Policy*. 2013;24(3):220-222. doi:10.1016/j.drugpo.2013.03.005

31. Edland-Gryt M, Skatvedt AH. Thresholds in a low-threshold setting: an empirical study of barriers in a centre for people with drug problems and mental health disorders. *Int J Drug Policy*. 2013;24(3):257-264. doi:10.1016/j.drugpo.2012.08.002

32. Schwartz RP, Kelly SM, Mitchell SG, et al. Patient-centered methadone treatment: a randomized clinical trial. *Addiction*. 2017;112(3):454-464. doi:10.1111/add.13622

33. Andrews CM, Abraham AJ, Grogan CM, Westlake MA, Pollack HA, Friedmann PD. Impact of Medicaid restrictions on availability of buprenorphine in addiction treatment programs. *Am J Public Health*. 2019;109(3):434-436. doi:10.2105/AJPH.2018.304856

34. Clark RE, Baxter JD, Barton BA, Aweh G, O'Connell E, Fisher WH. The impact of prior authorization on buprenorphine dose, relapse rates, and cost for Massachusetts Medicaid beneficiaries with opioid dependence. *Health Serv Res*. 2014;49(6):1964-1979. doi:10.1111/1475-6773.12201

35. Lee JD, Nunes EV Jr, Novo P, et al. Comparative effectiveness of extended-release naltrexone versus buprenorphine-naloxone for opioid relapse prevention (X:BOT): a multicentre, open-label, randomised controlled trial. *Lancet*. 2018;391(10118):309-318. doi:10.1016/S0140-6736(17)32812-X

36. Siannis F, Copas J, Lu G. Sensitivity analysis for informative censoring in parametric survival models. *Biostatistics*. 2005;6(1):77-91. doi:10.1093/biostatistics/kxh019

SUPPLEMENT.

eAppendix 1. Cohort Selection
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eFigure 1. Definition of OUD
eFigure 2. Cohort Inclusion and Timeline
eFigure 3. Alluvial Flow of OUD Treatment Pathways in the Initial Cohort
eTable. Censoring by Baseline Characteristics

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Screening for Unhealthy Drug Use in Adults and Adolescents

The US Preventive Services Task Force (USPSTF) has recently published recommendations on screening for unhealthy drug use in adults and adolescents.

What Is Unhealthy Drug Use?

Unhealthy drug use refers to using illegal drugs or misusing prescription medications or household products. Illegal drugs include cocaine, heroin, and hallucinogens (such as LSD). Prescription medications include sedatives (such as benzodiazepines), opioids, and stimulants. Household products include glues, solvents, and gasoline. Alcohol and tobacco are not considered drugs for the purposes of this recommendation statement but are illegal for underage persons.

Drug use is linked to risk-taking behaviors that cause injury and death, violence, unsafe sexual behaviors, and long-term mental health problems. There is also a risk of death due to overdose. Treatment for drug use disorders includes both medications as well as behavioral therapy and counseling.

How Is Screening for Unhealthy Drug Use Done?

Often, a primary care practitioner asks a simple yes/no question about drug use during wellness visits. For the purposes of clinical studies, more detailed questionnaires are used. Examples include the BSTAD (Brief Screener for Tobacco, Alcohol, and Other Drugs), ASSIST (Alcohol, Smoking and Substance Involvement Screening Test), and TAPS (Tobacco, Alcohol, Prescription Medication, and Other Substance Use). These questionnaires are not meant to diagnose a drug use disorder, and people who report unhealthy drug use should be referred for further evaluation.

What Is the Population Under Consideration for Screening for Unhealthy Drug Use?

This recommendation applies to adults aged 18 years or older and adolescents aged 12 to 17 years who do not have a current diagnosis of any drug use disorders.

What Are the Potential Benefits and Harms of Screening for Unhealthy Drug Use?

The potential benefit of screening for unhealthy drug use is reducing negative health, social, or legal outcomes related to drug use. No studies have directly looked at the effects of screening on these outcomes. For adults, there is adequate evidence that screening questionnaires are able to accurately detect drug use disorders and that treatment of these disorders with medications and/or psychotherapy can reduce drug use as well as relapse. There are little data available for adolescents. Potential harms include stigma from being labeled a drug user as well as side effects from medications used to treat drug use disorders. For adolescents, there is uncertainty about how some of these medications may affect brain development.

Screening for Unhealthy Drug Use in Adults and Adolescents

Unhealthy drug use can include illegal drugs, prescription medications, or household substances.

Population

Adults aged 18 years and older and adolescents aged 12 to 17 years who do not have a current diagnosis of any drug use disorders

USPSTF recommendation

The USPSTF recommends screening by asking questions about unhealthy drug use in adults age 18 years or older when services for accurate diagnosis, effective treatment, and appropriate care can be offered or referred.

For adolescents, the USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for unhealthy drug use.

How Strong Is the Recommendation to Screen for Unhealthy Drug Use?

The USPSTF concludes with moderate certainty that screening for unhealthy drug use in adults has moderate net benefit when services for further care and treatment can be offered. For adolescents, the balance of benefits and harms cannot be determined.

FOR MORE INFORMATION

US Preventive Services Task Force
https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/drug-use-in-adolescents-and-adults-including-pregnant-women-screening

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Author: Jill Jin, MD, MPH

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Caring for Ms. L. — Overcoming My Fear of Treating Opioid Use Disorder

Audrey M. Provenzano, M.D., M.P.H.

Ms. L. always showed up 10 minutes early for her appointments, even though I always ran late. Her granddaughter would rest her cheek against Ms. L.'s chest, squishing one eye shut, and scroll through Ms. L.'s phone while they waited. After reviewing her blood sugars, which Ms. L. recorded assiduously in a dog-eared blue diary, we'd talk about smoking cessation. That was a work in progress. "There's just nothing like a cigarette," she'd sigh. "Don't you ever start," she'd admonish her granddaughter, kissing the top of her head.

One day, I knew something was wrong the moment I opened the door. Ms. L. was alone. Sweat dotted her lip and forehead. She closed her eyes and looked away, and tears fell onto her lap. "I need help," she whispered, and it all came out: she had taken a few of the oxycodone pills prescribed for her husband after a leg injury, then a few more from a friend. And like a swimmer pulled into the undertow, she was dragged back into the cold, dark brine of addiction. I tried to hide my shock. I'd known she was in recovery from opioid use disorder (OUD), but it had simply never come up. She hadn't used in decades.

"No one can know that I relapsed," she said. "If my kids find out, they won't let me see my granddaughter." She wanted to try buprenorphine and was frustrated to hear that I could not prescribe it. "Why not?" Annoyed, she rocked in her chair. "I just want to feel normal again, and I know you. I don't want to tell anyone else."

I evaded her question: "I don't have the right kind of license to prescribe it," I said. "Let me refer you to a colleague."

But my incomplete answer gnawed at me. In truth, the reason I didn't have a waiver to prescribe buprenorphine was that I didn't want one. As a new primary care physician, I spent every evening finishing notes and preparing for the next day. Every Friday I left the office utterly depleted, devoid of the energy or motivation it would take to spend a weekend clicking through the required online training.

But more than not wanting to take on the extra work of prescribing a medication for OUD, I did not want to deal with patients who needed it. I knew that for some people with substance use disorders, the relationship with the drug can eclipse all other relationships, leading them to push away family, friends, and caregivers. I had witnessed patients waiting for prescriptions antagonize secretaries and nurses, seen patients try to manipulate toxicology screenings, and heard voices raised in exasperation at colleagues through thin clinic walls. Addiction, according to the American Society of Addiction Medicine, "is characterized by . . . impairment in behavioral control, craving, diminished recognition of significant problems with one's behaviors and interpersonal relationships, and a dysfunctional emotional response."[1] Already overwhelmed, I did not want to take on patients with needs that I did not know how to meet.

One of my colleagues started Ms. L. on buprenorphine treatment. When I saw her again for her diabetes, a space had opened between us. Then she didn't show up to her next appointment. I called her and sent a letter, but she didn't show up to the next one either. Months passed, and then a year.

The night I found out that Ms. L. had died of an overdose, a heavy, wet snow was falling throughout the city, dampening the sound of traffic. In the quiet,

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I was clicking through the usual computer screens, preparing for clinic in the morning. I saw Ms. L.'s name and stopped. I read the text twice, three times, and then again: "brought in by ambulance . . . unable to revive her." At first I felt horror and revulsion at the thought of her lifeless body on a gurney. Then, profound sadness. I thought about her husband, her children, and especially her granddaughter. I wondered how silent their house must be that snowy night, without Ms. L.'s brassy laugh floating through the hallways.

But it was the shame that kept me awake, listening to the plows pass through the streets. This shame didn't just burn red and hot in my face — it burrowed thick and leaden into my chest and stomach. What if I had treated her myself, instead of referring her? I don't flatter myself that I could have provided her better care — I had complete confidence in my colleague. But Ms. L. and I had had a relationship. She had trusted me. And I'd turned her away.

In the ensuing months, I earned my waiver to prescribe buprenorphine. I still harbored apprehensions about caring for patients with addiction, but I also knew that I could not turn away another Ms. L. I now care for a small panel of patients with OUD. It has not been easy, and I could not provide this care without the support of colleagues with expertise in addiction and social work. I quickly grasped the pharmacology of buprenorphine therapy, but learning how to manage other aspects of addiction care, particularly for patients in early recovery, has been formidable.

One patient, Ms. J., has coexisting alcohol use disorder, chronic pain, and severe anxiety. I have practiced harm reduction for years — maximizing oral therapies in a patient with diabetes who declines to take insulin, for example. But navigating the gray shades of harm reduction in caring for Ms. J., who uses alcohol on an almost daily basis and takes several sedating psychiatric medications in addition to buprenorphine, is an entirely new calculus for me.

Beyond these difficult therapeutic questions, many of my patients with OUD have complex social needs. Before Ms. J., I had never cared for a patient whose visitation rights with her children were predicated on her continuing therapy with me. A few of my patients have had difficulties following clinic guidelines; implementing behavior contracts had not previously been a common part of my practice, and learning how to use them with kindness and respect remains challenging.

Colleagues with years of experience managing substance use often advocate: "Everyone should get waivered. OUD is a chronic disease just like any other — when a patient comes in with hypertension, you don't say, 'Oh, I don't treat that.'" This comparison does not capture the whole picture. Of course OUD is a chronic disease and should be managed in primary care as such. But it's also true that patients with addiction often have acute psychosocial needs. OUD can utterly shatter a life; I have never seen hypertension have such an effect. If we do not recognize, name, and talk about the social issues that must be addressed when caring for patients with OUD, we do a disservice to both patients and caregivers and create a significant barrier to more providers getting waivers. I know, because I was one of them. Everyone in primary care should get a waiver, but that is not enough. We must also advocate for team-based behavioral health and social work resources in every primary care setting to support patients and providers in managing all aspects of OUD, just as we have developed team-based protocols for managing hypertension.

Caring for these patients has become the most meaningful part of my practice. Ms. J., who has tested my clinical judgment almost weekly, has also inspired me with her persistence and courage through a grueling recovery. Buprenorphine has allowed her to feel "normal" — at least most days — and to focus on her sons. Providing some sense of normalcy for patients whose lives are roiled by overdose and estrangement is the most profound therapeutic intervention I've engaged in as a caregiver. I did not know what Ms. L. meant all those years ago when she said that she only wished to feel normal again. I wish that I'd listened more closely. I wish that I had not been afraid.

Patients' initials and identifying characteristics have been changed to protect their privacy.

Disclosure forms provided by the author are available at NEJM.org.

From the MGH Chelsea Health Center, Chelsea, and Harvard Medical School, Boston — both in Massachusetts.

1. Definition of addiction. Rockville, MD: American Society of Addiction Medicine, April 19, 2011 (https://www.asam.org/resources/definition-of-addiction).

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Health Federation of Philadelphia

Opioid Response Program

The Health Federation of Philadelphia in collaboration with the Philadelphia Department of Public Health offers a range of free, CME accredited, virtual programs to help you treat patients who have substance use disorder:

Medications for Opioid Use Disorder (MOUD) Preceptor Program

Recent federal guideline changes have made it easier for providers to prescribe buprenoprhine. This preceptorship program offers professional development tools to help X-waivered providers treat opioid use disorder (OUD):

- Interactive didactic live virtual training
- Practice telehealth session with a standardized patient
- Facilitated by experienced MOUD prescribers

12-Month Series: Treating and Understanding Health Outcomes for People Who Use Drugs

A series to support primary care providers to screen for and treat comorbidities associated with substance use:

- Monthly case review discussions on concurrent treatment of OUD and comorbidities
- Special programs on timely topics related to substance use and infectious disease treatment
- Learn trauma informed best practices to support compassionate primary care for people who use drugs

For more information, dates, and registration, please visit our website at https://healthfederation.org/training/opioid-epidemic-response-training

MOUD Provider Collaborative

The MOUD Provider Collaborative is offered to X-waivered primary care providers who want to learn from and network with their peers. Most sessions offer a brief presentation on timely issues led by local practitioners followed by open discussion. These are currently scheduled online for the 4th Thursday of the month from 8:00 am to 9:00 am.

HEALTH FEDERATION OF PHILADELPHIA

The keystone of community health since 1983

Questions? Contact Caroline Drob (she/hers)
Opioid Response Program Assistant
e: cdrob@healthfederation.org
p: 215.977.7262
123 S. Broad Street | Suite 650
Philadelphia, Pennsylvania 19109

HEALTH FEDERATION OF PHILADELPHIA
The keystone of community health since 1983

City of Philadelphia

PCSS Providers Clinical Support System

8 Hour Live Online Waiver Training

Waiver trainings are offered periodically for MD/DOs, Nurse Practitioners, and Physician Assistants in Pennsylvania to prescribe buprenorphine to patients for the treatment of opioid use disorder. AAAP is the Data Sponsor for this waiver training. pcss@aaap.org in coordination with the Philadelphia Department of Public Health and the Health Federation of Philadelphia. Visit https://healthfederation.org/training/opioid-epidemic-response-training or scan the above QR code for upcoming waiver training dates.

At the conclusion of this activity participants should be able to:

- Screen and identify patients with OUD and define evidence-based treatments.
- Discuss the pharmacology of opioids as it relates to treatment of opioid use disorder (OUD) patients.
- Describe the fundamentals of office-based opioid treatment including the treatment of the co-morbid patient.
- Explain the process of buprenorphine induction as well as stabilization and maintenance.
- Discuss all FDA approved antagonist and agonist medications to treat OUD.
- Discuss basic office protocols including medical record documentation and confidentiality.
- Utilize evidence-based resources to ensure providers have the confidence to prescribe buprenorphine for patients with OUD.
- Recognize the importance of obtaining a waiver to begin treating patients with OUD.

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JOINTLY ACCREDITED PROVIDER™ INTERPROFESSIONAL CONTINUING EDUCATION

Joint Accreditation Statement:
In support of improving patient care, this activity has been planned and implemented by the American Academy of Addiction Psychiatry , Philadelphia Department of Public Health, and Health Federation of Philadelphia. American Academy of Addiction Psychiatry is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC) to provide continuing education for the healthcare team.

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DOES YOUR OPIOID USE CAUSE PROBLEMS FOR YOU?
BUPRENORPHINE (BUPE) COULD BE RIGHT FOR YOU.

HOW CAN BUPE IMPROVE MY HEALTH?

Bupe stops withdrawal symptoms and cravings. This makes it easier for you to stop using opioids, cut down opioid use and lower your risk of death.

DOES BUPE HAVE SIDE EFFECTS?

Not everyone experiences side effects, but bupe can cause constipation, nausea, headache or insomnia.

WILL MY HEALTH INSURANCE PAY FOR BUPE?

Medicaid, Medicare and most other health insurance plans pay for bupe. Check your health insurance plan to make sure bupe is on the list of approved drugs.

HOW DO I GET BUPE?

Ask your doctor to prescribe bupe. Once you have a prescription, you can get bupe at a pharmacy and take it at home, just like other medications.

For more information about buprenorphine in Philadelphia, visit https://dhbids.org/MAT

3.19

ASK YOUR HEALTH CARE PROVIDER IF BUPE IS RIGHT FOR YOU.

Materials adapted with permission from the NYC Department of Health and Mental Hygiene

Department of Public Health
CITY OF PHILADELPHIA

BUPE

(e.g., Suboxone, Zubsolv, Bunavail)

Does your opioid use cause problems for you?

(e.g., Percocet, Vicodin, OxyContin, heroin)

We offer bupe (buprenorphine),
a safe medication to treat opioid dependence.

WE CAN HELP.

Ask your doctor or nurse for more information.

For more information about buprenorphine in Philadelphia,
visit https://dbhids.org/MAT

Department of
Public Health
CITY OF PHILADELPHIA

Materials adapted with permission from the NYC Department of Health and Mental Hygiene

SAMHSA
Substance Abuse and Mental Health Services Administration

BUPRENORPHINE
QUICK START GUIDE

Important Points to Review With the Patient

Specifically discuss safety concerns:

- **Understand that discontinuing buprenorphine increases risk of overdose death upon return to illicit opioid use.**
- **Know that use of alcohol or benzodiazepines with buprenorphine increases the risk of overdose and death.**
- **Understand the importance of informing providers if they become pregnant.**
- **Tell providers if they are having a procedure that may require pain medication.**

Facts About Buprenorphine

- FDA approved for Opioid Use Disorder treatment in an office-based setting.
- For those with tolerance to opioids as a result of OUD, buprenorphine is often a safe choice.
- Buprenorphine acts as a partial mixed opioid agonist at the μ-receptor and as an antagonist at the κ-receptor. It has a higher affinity for the μ-receptor than other opioids, and it can precipitate withdrawal symptoms in those actively using other opioids.
- It is dosed daily, has a long half-life, and prevents withdrawal in opioid dependent patients.
- Can be in tablet, sublingual film, or injectable formulations.
- Many formulations contain naloxone to prevent injection diversion. This formulation is the preferred treatment medication. The buprenorphine only version is often used with pregnant women to decrease potential fetal exposure to naloxone.
- There is a "ceiling effect" in which further increases above 24mg in dosage does not increase the effects on respiratory or cardiovascular function.
- Buprenorphine should be part of a comprehensive management program that includes psychosocial support. Treatment should not be withheld in the absence of psychosocial support.
- Overdose with buprenorphine in adults is less common, and most likely occurs in individuals without tolerance, or who are using co-occurring substances like alcohol or benzodiazepines.

Checklist for Prescribing Medication for the Treatment of Opioid Use Disorder

1

Assess the need for treatment

For persons diagnosed with an opioid use disorder,* first determine the severity of patient's substance use disorder. Then identify any underlying or co-occurring diseases or conditions, the effect of opioid use on the patient's physical and psychological functioning, and the outcomes of past treatment episodes.

Your assessment should include:

- A patient history
- Ensure that the assessment includes a medical and psychiatric history, a substance use history, and an evaluation of family and psychosocial supports.
- Access the patient's prescription drug use history through the state's Prescription Drug Monitoring Program (PDMP), where available,

to detect unreported use of other medications, such as sedative-hypnotics or alcohol, that may interact adversely with the treatment medications.
- A physical examination that focuses on physical findings related to addiction and its complications.
- Laboratory testing to assess recent opioid use and to screen for use of other drugs. Useful tests include a urine drug screen or other toxicology screen, urine test for alcohol (ethyl glucuronide), liver enzymes, serum bilirubin, serum creatinine, as well as tests for hepatitis B and C and HIV. Providers should not delay treatment initiation while awaiting lab results.

2

Educate the patient about how the medication works and the associated risks and benefits; obtain informed consent; and educate on overdose prevention.

There is potential for relapse & overdose on discontinuation of the medication. Patients should be educated about the effects of using opioids and other drugs while taking the prescribed medication and the potential for overdose if opioid use is resumed after tolerance is lost.

3

Evaluate the need for medically managed withdrawal from opioids

Those starting buprenorphine must be in a state of withdrawal.

4

Address co-occurring disorders

Have an integrated treatment approach to meet the substance use, medical and mental health, and social needs of a patient.

5

Integrate pharmacologic and nonpharmacologic therapies

All medications for the treatment of the opioid use disorder may be prescribed as part of a comprehensive individualized treatment plan that includes counseling and other psychosocial therapies, as well as social support through participation in mutual-help programs.

6

Refer patients for higher levels of care, if necessary

Refer the patient for more intensive or specialized services if office-based treatment with buprenorphine or naltrexone is not effective, or the clinician does not have the resources to meet a particular patient's needs. Providers can find programs in their areas or throughout the United States by using SAMHSA's Behavioral Health Treatment Services Locator at www.findtreatment.samhsa.gov.

*See The Criteria from American Psychiatric Association (2013). Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition,. Washington, DC, American Psychiatric Association, page 541.

Induction Considerations

The dose of buprenorphine depends on the severity of withdrawal symptoms, and the history of last opioid use (see flowchart in appendix for dosing advice).

- **Long acting opioids, such as methadone, require at least 48-72 hours since last use before initiating buprenorphine.**
- **Short acting opioids (for example, heroin) require approximately 12 hours since last use for sufficient withdrawal to occur in order to safely initiate treatment. Some opioid such as fentanyl may require greater than 12 hours.**
- **Clinical presentation should guide this decision as individual presentations will vary.**

Determine Withdrawal

Objective withdrawal signs help establish physical dependence

The risk with initiating buprenorphine too soon is that buprenorphine has a very high affinity for the mu receptor and will displace any other opioid on the receptor, thereby causing precipitated opioid withdrawal.

COWS Clinical Opiate Withdrawal Scale

Wesson & Ling, J Psychoactive Drugs. 2003 Apr-Jun;35(2):253-9.

Resting Pulse Rate: _____beats/minute *Measured after patient is sitting or lying for one minute* 0 Pulse rate 80 or below 1 Pulse rate 81-100 2 Pulse rate 101-120 4 Pulse rate greater than 120	GI Upset: *over last 1/2 hour* 0 No GI symptoms 1 Stomach cramps 2 Nausea or loose stool 3 Vomiting or diarrhea *5* Multiple episodes of diarrhea or vomiting
Sweating: *over past 1/2 hour not accounted for by room temperature or patient activity.* 0 No report of chills or flushing 1 Subjective report of chills or flushing 2 Flushed or observable moistness on face 3 Beads of sweat *on* brow or face 4 Sweat streaming off face	Tremor *observation of outstretched hands* 0 No tremor 1 Tremor can be felt, but not observed 2 Slight tremor observable 4 Gross tremor or muscle twitching
Restlessness *Observation during assessment* 0 Able to sit still 1 Reports difficulty sifting still, but is able to do so 3 Frequent shifting or extraneous movements of legs/arms 5 Unable to sit still for more than a few seconds	Yawning *Observation during assessment* 0 No yawning 1 Yawning once or twice during assessment 2 Yawning three or more times during assessment 4 Yawning several times/minute
Pupil size 0 Pupils pinned or normal size for room light 1 Pupils possibly larger than normal for room light 2 Pupils moderately dilated *5* Pupils so dilated that only the rim of the iris is visible	Anxiety or irritability 0 None 1 Patient reports increasing irritability or anxiousness 2 Patient obviously irritable anxious 4 Patient so irritable or anxious that participation in the assessment is difficult
Bone or Joint aches *If patient was having pain previously, only the additional component attributed to opiates withdrawal is scored* 0 Not present 1 Mild diffuse discomfort 2 Patient reports severe diffuse aching of joints/ muscles 4 Patient is rubbing joints or muscles and is unable to sit still because of discomfort	Gooseflesh skin 0 Skin is smooth 3 Piloerrection of skin can be felt or hairs standing up on arms *5* Prominent piloerrection
Runny nose or tearing *Not accounted for by cold symptoms or allergies* 0 Not present 1 Nasal stuffiness or unusually moist eyes 2 Nose running or tearing 4 Nose constantly running or tears streaming down cheeks	Total Score _____ The total score is the sum of all 11 items Initials of person completing Assessment:_____

Score: 5-12 mild; 13-24 moderate; 25-36 moderately severe; more than 36 = severe withdrawal

Information on Precipitated Withdrawal

- Precipitated withdrawal can occur due to replacement of full opioid receptor agonist (heroin, fentanyl, or morphine) with a partial agonist that binds with a higher affinity (Buprenorphine).
- Symptoms are similar to opiate withdrawal.
- Avoid by ensuring adequate withdrawal before induction (COWS > 12; Fentanyl may require higher COWS score and lower initial dosing), starting Buprenorphine at a lower dose (2.0mg/0.5 mg), and reassessing more frequently.
- Should precipitated withdrawal occur, treatment includes:
  - Providing support and information to the patient
  - Management of acute symptoms
  - Avoid the use of benzodiazepines
  - Encourage the patient to try induction again soon

Buprenorphine Side Effects

- **Buprenorphine's side effects may be less intense than those of full agonists. Otherwise, they resemble those of other mu-opioid agonists.**
- **Possible side effects include: Oral numbness, constipation, tongue pain, oral mucosal erythema, vomiting, intoxication, disturbance in attention, palpitations, insomnia, opioid withdrawal syndrome, sweating, and blurred vision**
- **Buprenorphine FDA labels list all potential side effects**

Co-prescribing of overdose reversal agents such as Naloxone is also recommended

Maintenance Therapy

Goal = once-daily dosing, no withdrawal between doses. Ideally, average dosing does not exceed 16 mg/4 mg (See flowchart in appendix)

- **Check PDMP regularly to ensure prescriptions are filled, and to check other prescriptions.**
- **Order urine drug testing (UDT) and consider confirmatory testing for unexpected results. UDT can facilitate open communication to change behavior.**
- **Assess for readiness for extended take-home dosing**

Psychosocial Therapies

- **Although people often focus on the role of medications in MAT, counseling and behavioral therapies that address psychological and social needs may also be included in treatment. To find treatment, please consult www.findtreatment.gov.**

Diversion

Diversion is defined as the unauthorized rerouting or misappropriation of prescription medication to someone other than for whom it was intended (including sharing or selling a prescribed medication); misuse includes taking medication in a manner, by route or by dose, other than prescribed.

How can providers minimize diversion risk?

1. Early in treatment patients should be seen often, and less frequently only when the provider determines they are doing well.
2. Providers should inquire about safe and locked storage of medications to avoid theft or inadvertent use, especially by children. Patients must agree to safe storage of their medication. Counsel patients about acquiring locked devices and avoiding storage in parts of the home frequented by visitors.
3. Limit medication supply. Prescribe an appropriate amount of medications until the next visit. Do not routinely provide an additional supply "just in case."
4. Use buprenorphine/naloxone combination products when medically indicated. Reserve daily buprenorphine monoproducts for pregnant patients and/or patients who could not afford treatment if the combination product were required.
5. Counsel patients on taking their medication as instructed and not sharing medication.
6. Ensure that the patient understands the practice's treatment agreement and prescription policies. Providers can utilize the sample treatment agreement in SAMHSA's TIP 63, Page 3-78. A treatment agreement and other documentation are clear about policies regarding number of doses in each prescription, refills, and rules on "lost" prescriptions.
7. Directly observe ingestion randomly when diversion is suspected.
8. Providers should order random urine drug testing to check for other drugs and for metabolites of buprenorphine. Providers should also consider periodic point of care testing.
9. Doctors should schedule unannounced pill/film counts. Periodically ask patients to bring in their medication containers for a pill/film count.
10. Providers should make inquiries with the Prescription Drug Monitoring program in their state to ensure that prescriptions are filled appropriately and to detect prescriptions from other providers.
11. Early in treatment, providers can ask the patient to sign a release of information for a trusted community support individual, such as a family member or spouse, for the purpose of communicating treatment concerns including diversion.

What should I do if a patient diverts or misuses the medication?

- Misuse or diversion doesn't mean automatic discharge from the practice.
- Document and describe the misuse and diversion incident. Also document the clinical thinking that supports the clinical response, which should be aimed at minimizing future risk of diversion while still supporting the use of MAT.
- Strongly consider smaller supplies of medication and supervised dosing.
- Treatment structure may need to be altered, including more frequent appointments, supervised administration, and increased psychosocial support.
- When directly observed doses in the office are not practical, short prescription time spans can be considered.
- In situations where diversion is detected, open communication with the patient is critical. Providers may consider injectable and implantable buprenorphine to reduce diversion, once verified.

DSM-5 Criteria for Diagnosis of Opioid Use Disorder

Diagnostic Criteria*
These criteria not considered to be met for those individuals taking opioids solely under appropriate medical supervision.

Check all that apply

	Opioids are often taken in larger amounts or over a longer period of time than intended.
	There is a persistent desire or unsuccessful efforts to cut down or control opioid use.
	A great deal of time is spent in activities necessary to obtain the opioid, use the opioid, or recover from its effects.
	Craving, or a strong desire to use opioids.
	Recurrent opioid use resulting in failure to fulfill major role obligations at work, school or home.
	Continued opioid use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of opioids.
	Important social, occupational or recreational activities are given up or reduced because of opioid use.
	Recurrent opioid use in situations in which it is physically hazardous
	Continued use despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by opioids.
	*Tolerance, as defined by either of the following: (a) a need for markedly increased amounts of opioids to achieve intoxication or desired effect (b) markedly diminished effect with continued use of the same amount of an opioid
	*Withdrawal, as manifested by either of the following: (a) the characteristic opioid withdrawal syndrome (b) the same (or a closely related) substance are taken to relieve or avoid withdrawal symptoms

Total Number Boxes Checked: _____

Severity: **Mild**: 2-3 symptoms. **Moderate**: 4-5 symptoms. **Severe**: 6 or more symptoms

*Criteria from American Psychiatric Association (2013). Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition,. Washington, DC, American Psychiatric Association page 541. For use outside of IT MATTTRs Colorado, please contact ITMATTTRsColorado@ucdenver.edu

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Important Considerations: Buprenorphine/Naloxone Dosing

- Tablets/film may be split if necessary
- May take up to 10 min to dissolve completely (no talking, smoking, or swallowing at this time)
- Absorption better with moistened mouth

SUBOXONE sublingual tablets, including generic equivalents	Corresponding dosage strength of ZUBSOLV sublingual tablets
One 2 mg/0.5 mg buprenorphine/naloxone sublingual tablet	One 1.4 mg/0.36 mg ZUBSOLV sublingual tablet
One 8 mg/2 mg buprenorphine/naloxone sublingual tablet	One 5.7 mg/1.4 mg ZUBSOLV sublingual tablet
12 mg/3 mg buprenorphine/naloxone taken as: • One 8 mg/2 mg sublingual buprenorphine/naloxone tablet AND • Two 2 mg/0.5 mg sublingual buprenorphine/naloxone tablets	One 8.6 mg/2.1 mg ZUBSOLV sublingual tablet
16 mg/4 mg buprenorphine/naloxone taken as: • Two 8 mg/2 mg sublingual buprenorphine/naloxone tablets	One 11.4 mg/2.9 mg ZUBSOLV sublingual tablet

Algorithm for In-Office Induction (for home induction prescriptions may be given)

Initial Assessment

History and Physical
Concurrent medical issues and substance use
Medication history (with review of the PDMP)
Allergies
Mental health status and social history
Social history

Lab Workup
CBC, CMP, HIV, hepatitis A, B & C
Urine drug testing, and
consider pregnancy & STD screen

Referral
Refer to specialists as indicated
Refer to counseling
Refer to case management

Provide Patient Education
Treatment goals and medication education
Side-effects
How to store medication at home
Patient should update provider with new medications or other changes
Establish open communication

Discuss Safety Concerns
Altered tolerance to opioids on buprenorphine/suboxone
No co-administration of alcohol or benzodiazepines
Alert provider if planning pregnancy or pregnant
Planned procedures that may require opiate analgesia

Day One (Induction)

Last opioid use >6-12 hours ago → Moderate Withdrawal (COWS >12) → **Give First Dose of Buprenorphine/Naloxone (2 – 4mg)** → After 1 Hour: Monitor for precipitated withdrawal; If present, treat symptoms; Attempt induction 24 hours later

2 – 4 Hours Later: Withdrawal Symptoms Relieved?
- No → Give further 2 – 4mg dose
- Yes → Prescribe one dose; Return to clinic on day two for observation and review

2 – 4 Hours Later: Withdrawal Symptoms Relieved?
- No → Give further 2 – 4mg dose, up to 8mg total
- Yes → Prescribe one dose; Return to clinic on day two for observation and review

Day Two

Adequate symptom relief achieved After induction?
- No → Give day 1 dose and additional 2 – 4mg up to 16mg total
- Yes → Induction Complete - Give induction dose as ongoing dose, and review in 1 day

2 – 4 Hours Later: Withdrawal Symptoms Relieved?
- No → Give further 2 – 4mg dose, up to 16mg
- Yes → Induction Complete - Give induction dose as ongoing dose, and review in 1 day

Maintenance

Patient Stable On Current Dose?
- No → Consider further 2 – 4mg dose, up to 16mg
- Yes → Continue once daily dosing with regular review

Perform monthly urinary drug screens, and check PDMP regularly. Ensure on-going attendance at counseling and support groups. When patient stable on medication, assess readiness for take-home dosing