



Ohio addiction policy inventory and scorecard

1.

Prevention,
treatment
and
recovery

HPIO
Addiction
Evidence
Project



Acknowledgements

Authors

Amy Bush Stevens, MSW, MPH
Hailey Akah, JD, MA

Graphic design and layout

Nick Wiselogel, MA

Contributors

Dan Purkepile, MPA, HPIO intern
Amy Rohling McGee, MSW
Reem Aly, JD, MHA
Zach Reet, MPA
Grace Dolan, HPIO intern
Bridget Cook, HPIO intern

Other stakeholders

Members of HPIO's Addiction Evidence Project Advisory Group, listed in Appendix A, provided guidance on the development of this report, including initial planning and feedback on drafts. In addition, several state agency staff contributed information about the implementation of addiction prevention, treatment and recovery activities in Ohio.

This project is funded by HPIO's core funders, as well as additional support from: Interact for Health, Premier Health and the Cardinal Health Foundation.

Contents

Executive summary	4
Part 1. Purpose and process	8
Part 2. Key findings	10
Part 3. Policy inventory summary	18
Part 4. Policy scorecard summary	23
Part 5. Evaluating the impact of Ohio's policies and programs	29
Appendix A. Methodology	31
Appendix B. Additional policy inventory tables	36

This report is part of HPIO's [Addiction Evidence Project](#). In December 2017, HPIO released two other products as part of this project:

- [Addiction Overview and Project Description](#) (12-page policy brief)
- [Evidence Resource Page: Prevention, Treatment and Recovery](#) (hub for expert consensus statements and guidelines, evidence registries and model policies)

Ohio addiction policy inventory and scorecard

Prevention, treatment and recovery

Executive summary

In 2016, 4,050 Ohioans died because of unintentional drug overdoses¹, and preliminary 2017 data indicates that the number of deaths has continued to rise.² The [overview and project description](#) for HPIO's Addiction Evidence Project provides additional information about drug trends and the factors driving this epidemic.

The 2017 Ohio Health Issues Poll found that 27 percent of Ohio adults had a family member or friend who had problems as a result of using prescription pain drugs and 23 percent knew someone who had problems with heroin.³

The consequences of addiction are widespread. For example, the number of babies born with neonatal abstinence syndrome (NAS) increased 500 percent in the past ten years⁴ and thousands of children living in families struggling with addiction experience trauma.⁵ Employers report difficulty hiring drug-free workers, and researchers estimate that the opioid crisis cost Ohio \$3,385 per capita in healthcare and criminal justice spending and reduced worker productivity in 2015.⁶

Public and private stakeholders have worked hard to understand and address the crisis. Policy changes advanced by the executive and legislative branches have led to implementation of many evidence-based programs in Ohio, reduced the amount of opioid prescriptions dispensed and increased health insurance coverage and treatment access for thousands of Ohioans through expanded Medicaid eligibility.

In order to provide policymakers and other stakeholders with the information needed to take stock of the policy response, this report reviews state-level policy changes related to addiction prevention, treatment and recovery enacted in Ohio from 2013-2017. It includes:

- **An inventory** of policy changes (legislation, rules, regulations and state agency initiatives, programs and systems changes) (see figure ES 1)
- **A scorecard** that indicates the extent to which Ohio is implementing strategies that are proven effective by research evidence (see figure ES 2)
- **Opportunities for improvement** in both the public and private sectors

3 key findings for policymakers

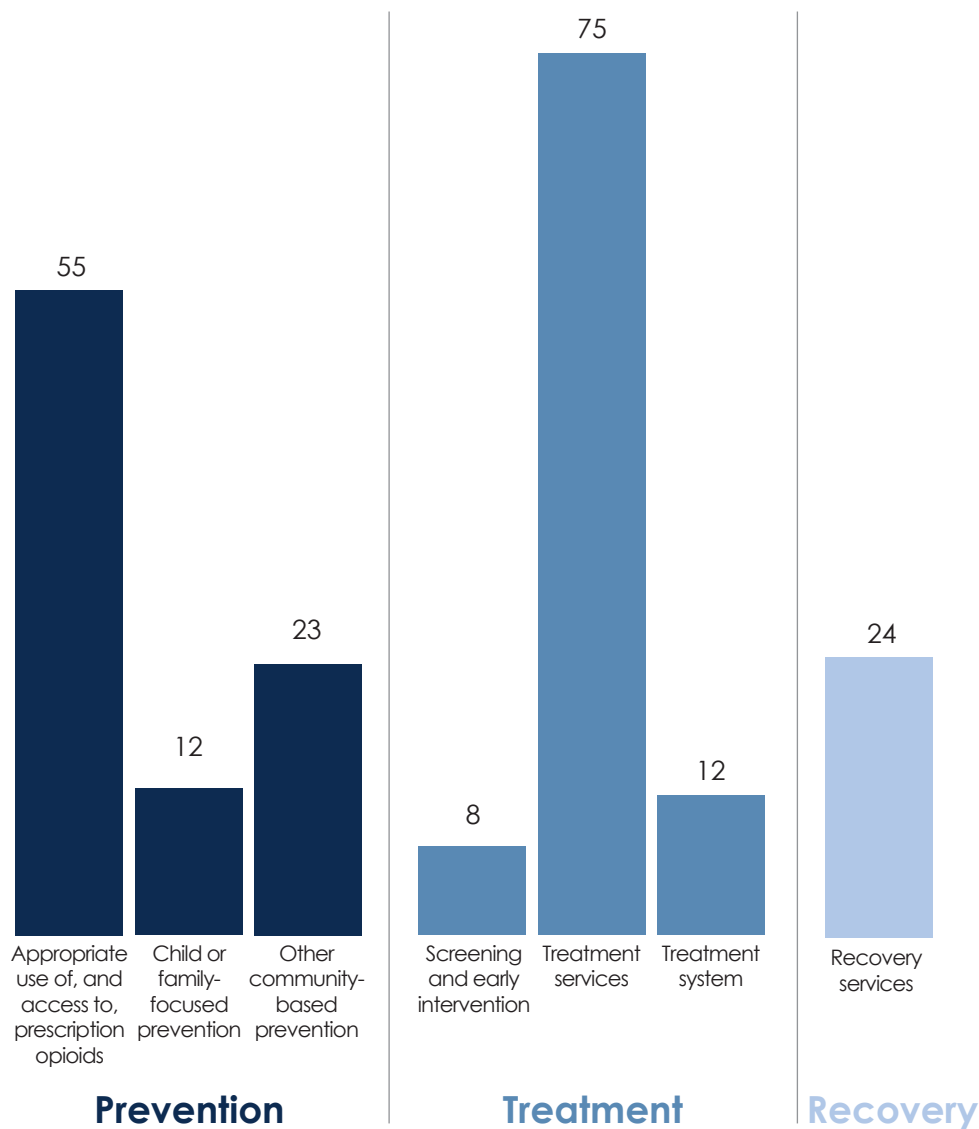
- **Progress to build on.** Policy changes advanced by the governor, state agencies and the General Assembly have led to implementation of many evidence-based programs, reduced the number of opioid prescriptions dispensed, and increased health insurance coverage and treatment access for thousands of Ohioans through expanded Medicaid eligibility.
- **Gaps that need more action.** Going forward, policymakers and others must address the underlying drivers of demand for drugs, expand the reach of effective programs that currently serve small numbers of Ohioans, strengthen the behavioral health treatment system and support long-term wellbeing for the thousands of Ohioans who are in recovery.
- **Data to drive improvement.** Policymakers need better information to evaluate the effectiveness and cost of strategies, while understanding that some will not yield immediate results.

What are the strengths of Ohio's policy response?

The Ohio General Assembly, Governor's Cabinet Opiate Action Team (GCOAT) and the Ohio Attorney General's Office are leading a wide range of activities to address the opiate crisis. The following strengths stand out:

- **Leadership and priorities.** Overdose deaths and behavioral health prioritized in state budgets and mid-biennium review bills
- **Cross-sector partnerships.** Strengthened partnerships between behavioral health, health care, public health, law enforcement and other sectors
- **Decreased opioid prescribing.** Policies that have successfully decreased opioid prescribing, including the Ohio Automated Rx Reporting System (OARRS), Ohio's Prescription Drug Monitoring Program (PDMP) and a series of prescribing guidelines for providers

Figure ES 1. **Number of addiction-related policy changes in Ohio, 2013-2017**



Note: See Appendix B for further description of these categories.

Source: HPIO review of Ohio legislation, regulations, Governor’s Cabinet Opiate Action Team timeline and other policy summaries

- **Medication-Assisted Treatment (MAT).** Evidence-aligned approach to MAT and strong efforts to increase MAT capacity
- **Medicaid eligibility.** Increased number of Ohioans with health insurance coverage, an important source of payment for addiction treatment, primarily through expanded Medicaid eligibility

What are the gaps in Ohio’s policy response?

Despite these strengths, Ohio continues to struggle with rising drug overdose death rates and the many challenges that result from addiction. Urgent action is needed to save lives. The following gaps remain:

- **Too few Ohioans reached.** Evidence-aligned programs and services are often limited to a small number of counties or participants

- **Poor pain management.** Limited patient and provider use of, and insurance coverage for, evidence-based non-opioid pain management therapies
- **Patchwork approach to prevention.** Lack of a sustained, long-term approach to child, family and community-based prevention resulting in a patchwork of uncoordinated programs that fail to reach many Ohioans
- **Inadequate treatment capacity.** Need for more providers of MAT, psychosocial treatment and recovery services, as well as more useful and comprehensive data on behavioral health treatment system capacity and workforce
- **Limited outcome measurement.** Difficulty assessing the effectiveness of programs and policies due to limited use of program evaluation and lack of measurable policy goals specified in legislation

In addition, there has been minimal policy focus on:

- Tobacco and nicotine, even though tobacco-related diseases continue to kill far more Ohioans every year than opioids
- Recovery, even though addiction is a chronic, relapsing disease and requires ongoing chronic disease management
- Health disparities and social determinants of health, even though low educational attainment and difficult economic conditions are risk factors for overdose death

Opportunities for improvement

The public and private sectors in Ohio can work together to:

1. Build upon the strong framework for appropriate opioid prescribing to continue to drive down opioid use rates

- Sustain and continually improve OARRS, including increased provider integration with electronic health records and ongoing enforcement of OARRS requirements
- Enforce, monitor and evaluate the impact of recently implemented prescribing limits and, based on evaluation results, consider tightening limits to three to five days as some other states have done
- Offer education, technical assistance and other support to providers to operationalize and implement prescribing limits and guidelines

2. Increase use of non-opioid pain management therapies, such as acupuncture, physical therapy and chiropractic care, through:

- Patient and provider education
- Improved insurance coverage for these services
- Partnerships across sectors (healthy aging,

chronic disease prevention, behavioral health, etc.) to promote widespread availability of non-pharmacologic approaches, such as tai chi, yoga and stress reduction

3. Strengthen the effectiveness and reach of addiction prevention activities

- Increase sustained sources of funding for evidence-based prevention strategies for children, families and communities
- Explore development of an addiction prevention wellness trust funded by future potential legal settlement proceeds
- Support a comprehensive approach to prevention of all forms of substance use disorder (including opioids, methamphetamines, alcohol, tobacco, etc.) across the life span, including adults over age 18
- Improve coordination, monitoring and evaluation of school-based prevention activities
- Increase coordination between state agencies so that local communities receive consistent and coordinated support from the state regarding community and school-based prevention

4. Ensure that evidence-based addiction treatment and recovery services are available for all Ohioans in need

- Actively promote awareness of state and federal parity laws and strengthen monitoring and enforcement
- Evaluate the impact of Behavioral Health Redesign on addiction treatment system capacity and treatment outcomes and make continuous improvements based on the results
- Collect quantitative data regarding treatment gaps and publicly report the

Figure ES 2. **Summary scorecard rating**

Topic	Subtopic	Rating
Prevention	Appropriate use of, and access to, prescription opioids: Prescribing and dispensing	Strong
	Appropriate use of, and access to, prescription opioids: Non-opioid pain management	Weak
	Child and family-focused prevention	Moderate
	Other community-based prevention	Weak
Treatment	Screening and early intervention	Weak
	Treatment services	Moderate
	Treatment system access and coverage	Strong
	Treatment system capacity and workforce	Weak
Recovery	Recovery services	Moderate

Note: Rating based on evidence alignment and implementation reach

number of patients receiving evidence-based treatment (including MAT) in state-certified facilities and through county ADAMH board funding

- c) Strengthen the behavioral health workforce through increased reimbursement rates, enhancing the Behavioral Health Workforce Initiative and continuing to build integration with physical health care

5. Reduce health disparities and address the social determinants of health

- a) Ensure that resources and strategies are more aggressively directed toward populations at greatest risk of overdose deaths and incarceration
- b) Improve social and economic conditions in struggling Ohio communities

6. Increase use of data and evaluation to drive improvement

- a) Include measurable policy goals in legislation and integrate tools to track implementation and outcomes into the policymaking process
- b) Increase the transparency and usefulness of evaluation findings, such as by posting all evaluation results on state agency websites

In addition, the following steps would boost the effectiveness of Ohio's response to current and future addiction challenges:

- 7. Strengthen clinical-community linkages and connections between sectors. For example, ensure that hospital emergency departments, law enforcement and community behavioral health providers work together to make sure that people in need of treatment do not fall through the cracks
- 8. Develop a coordinated, long-term approach to serve the needs of children exposed to Adverse Childhood Experiences (ACEs) as a result of the addiction crisis, including sustained investments in early childhood home visiting and education, parenting education, trauma-informed care and education, the child welfare system and other evidence-based interventions
- 9. Develop a comprehensive plan for addressing potential positive and negative consequences of medical marijuana legalization, including impact on pain management, employers, adolescents and motor vehicle safety

About the HPIO Addiction Evidence Project

This report is part of HPIO's **Addiction Evidence Project**, which provides policymakers and other stakeholders with information needed to address substance use disorders in a comprehensive, effective and efficient way. This inventory and scorecard addresses three topics: prevention, treatment and recovery. Future reports will address the other topics listed below, including overdose reversal (naloxone).

Prevention	Treatment	Recovery	— This report
Harm reduction	Overdose reversal	Surveillance and evaluation	
Children services	Law enforcement	Criminal justice reform	

Part 1. Purpose and process

The purpose of this inventory and scorecard is to provide policymakers and other stakeholders with information needed to take stock of Ohio's policy response to the opiate crisis, including how well this response aligns with evidence, and to identify next steps to reduce addiction and improve the overall health of Ohioans. More specifically, this report:

- Reviews addiction policy changes relevant to prevention, treatment or recovery enacted in Ohio from 2013 to 2017
- Assesses the extent to which policy changes align with evidence on what works
- Evaluates the extent to which policies and programs are reaching Ohioans in need
- Identifies Ohio's policy strengths, challenges and opportunities for improvement

This report focuses on the first three elements of a comprehensive policy response to addiction, highlighted in red in figure 1: prevention, treatment and recovery. HPIO plans to develop similar inventories and scorecards for the other key elements of figure 1 in 2018 and 2019.

Although this report has a strong focus on prescription opioids and other opiates, the detailed inventory and scorecard also review policy changes related to several other substances (alcohol, tobacco, methamphetamine, cocaine, etc.).

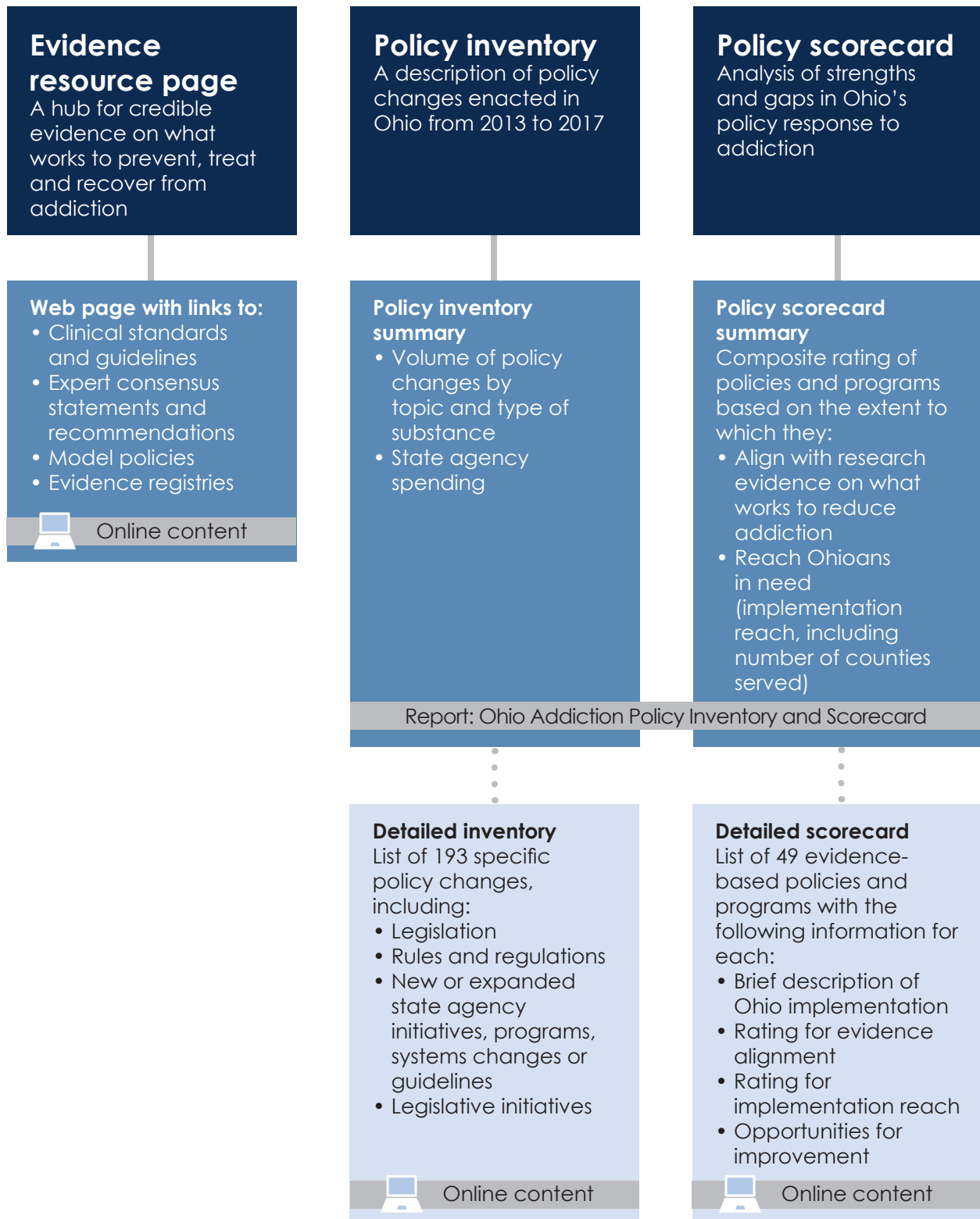
Figure 2 provides an overview of the contents and purpose of this report, as well as supplemental materials posted on the HPIO website which provide additional detail.

Figure 1. **Key elements of a comprehensive policy response to addiction**



Source: Health Policy Institute of Ohio adapted from Addiction Policy Forum (2017)

Figure 2. HPIO Addiction Evidence Project: Prevention, treatment and recovery



Part 2. Key findings

Overview

This section identifies 9 opportunities for improvement based on key findings regarding the following questions:

- What are the strengths of Ohio's policy response?
- What are the gaps in Ohio's policy response?
- Why does the overdose death rate continue to climb, despite all of the policy changes enacted in Ohio over the past five years?

In addition, this section highlights:

- Potential threats and changes on the horizon
- Information policymakers need, but do not currently have
- The role of evidence-based policymaking to reduce addiction in Ohio

What are the strengths of Ohio's policy response?

The General Assembly, Governor's Cabinet Opiate Action Team (GCOAT) and the Attorney General's Office have led a wide range of policy changes and other actions to address the opiate crisis. The following strengths stand out:

- **Leadership and priorities.** Overdose deaths and behavioral health have been prioritized in state budgets and mid-biennium review bills.
- **Cross-sector partnerships.** The crisis has mobilized local communities and strengthened partnerships between behavioral health, health care, public health, law enforcement and other sectors.
- **Focus on Medication-Assisted Treatment (MAT).** Evidence-aligned policies have been put in place to increase the number of Ohioans who receive MAT, a highly effective form of addiction treatment.

In addition, significant reductions in the number of opioid prescriptions dispensed and an increase in the number of Ohioans with health insurance coverage are major accomplishments that set a firm foundation for future prevention and treatment system improvements. The following policy changes directly contributed these outcomes:

Policies to decrease opioid prescribing. Ohio policymakers have implemented a series of policies and programs to decrease opioid prescribing, including:

- Robust Prescription Drug Monitoring Program (PDMP), the Ohio Automated Rx Reporting System (OARRS)
- Prescribing limits for acute pain

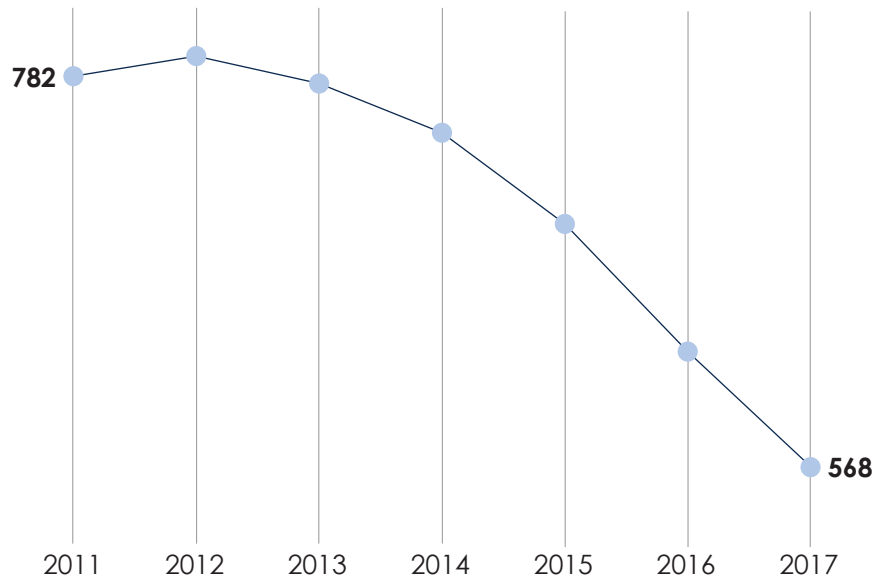
- Series of prescribing guidelines for acute and chronic pain

As shown in figure 3, the result has been a downward trend in the total number of prescription opioid doses dispensed from 2011 to 2017. It is important to note, however, that Ohio continues to have a high rate of prescription opioid use compared to many other states (see figure 4).

Expanded Medicaid eligibility levels. Health insurance, including Medicaid, is a critical source of payment for addiction treatment. In Ohio in 2016, for example, Medicaid covered 49.5 percent of buprenorphine, a medication used in MAT.⁷ In 2014, Ohio extended Medicaid eligibility to all adults with incomes at or below 138 percent of the federal poverty level (FPL). By 2016, Ohio's uninsured rate for adults ages 18-64 had fallen to 4.7 percent, well below the U.S. rate of 9.7 percent.⁸

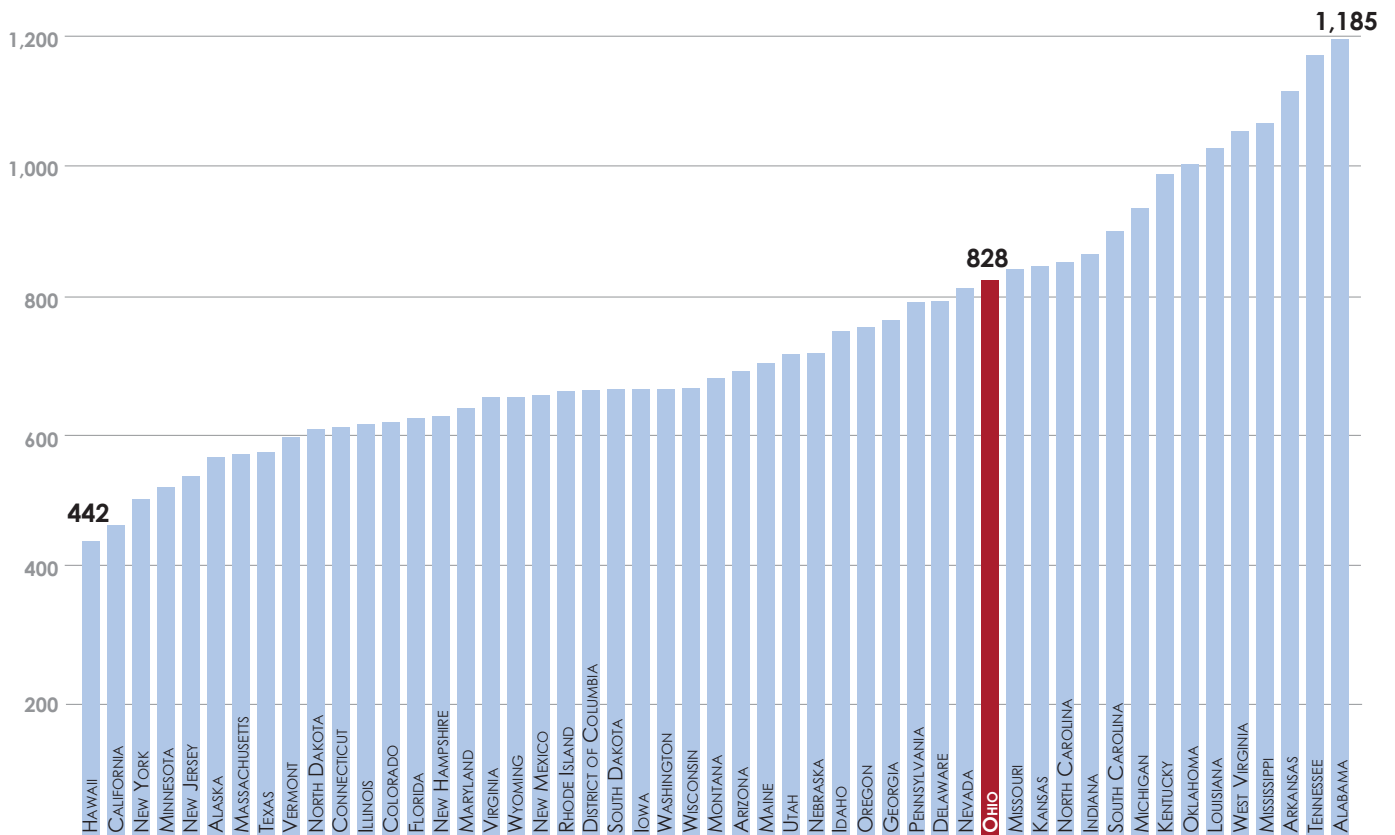
Evidence alignment. Overall, the policies and programs implemented in Ohio over the past five years have been largely consistent with recommendations from national experts and researchers on what works to reduce addiction. Ohio's comprehensive approach has been recognized by national organizations. A recent report from the National Safety Council, for example, identified Ohio, along with twelve other states, as leaders in implementing six key actions to address the opioid crisis (including opioid prescribing guidelines and Medicaid coverage for MAT).⁹ Other national organizations recognize OARRS as a strong PDMP.¹⁰

Figure 3. Number of opioid solid doses dispensed (in millions) to Ohio patients, 2011-2017



Source: State of Ohio Board of Pharmacy, Ohio Automated Rx Reporting System 2017 Annual Report

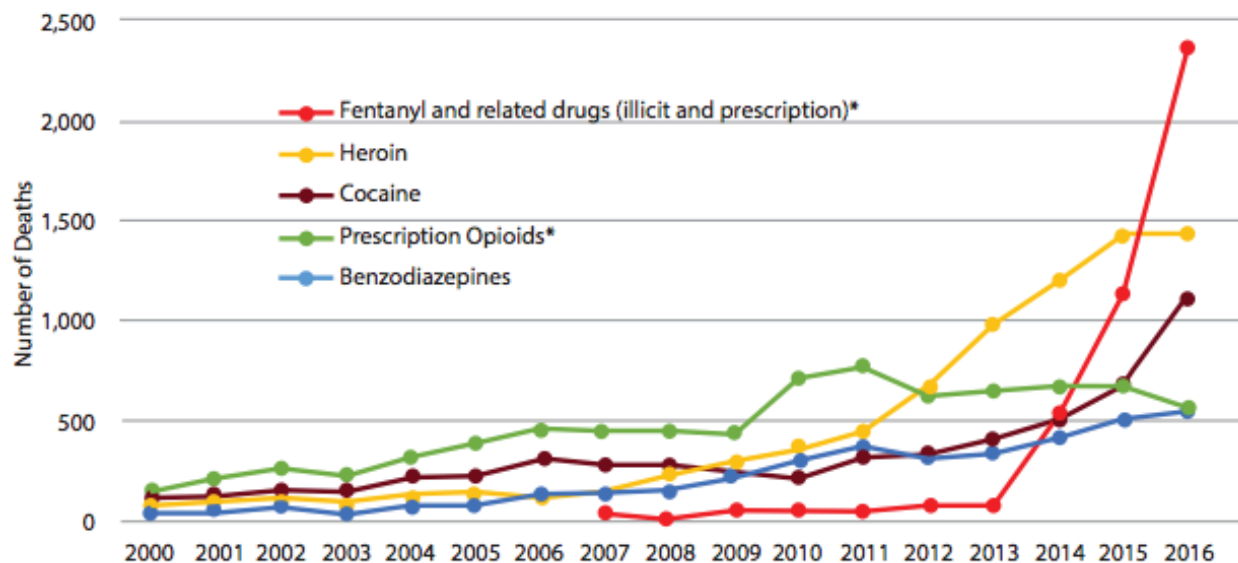
Figure 4. Prescription opioids dispensed per 1,000 population, by state, 2016



Note: Data year is the 12 months ending June 30, 2016

Source: IMS PayerTrak, IMS National Prescription Audit, June 2016; Centers for Disease Control and Prevention, as reported in "Use of Opioid Recovery Medications," IMS Institute for Healthcare Informatics

Figure 5. **Overdose deaths in Ohio, by drug type, 2000 to 2016**



*Excludes deaths involving fentanyl and related drugs

Source: 2016 Ohio drug overdose data: General findings, Ohio Department of Health

What are the gaps in Ohio’s policy response?

Despite these strengths, Ohio continues to struggle with rising drug overdose death rates and the many challenges that result from addiction. Ohio continues to have a high rate of prescription opioid use compared to many other states (see figure 4). And, as shown in figure 5, Ohio’s overdose death rate climbed steadily from 2000 to 2016, led by increases in deaths from heroin and fentanyl.

The following gaps remain as critical areas where Ohio could do more to reverse these trends:

- **Too few Ohioans reached.** Evidence-aligned policies and programs are often limited to a small number of counties or participants.
- **Poor pain management.** There is limited health insurance coverage for, and patient and provider use of, evidence-based non-opioid pain management therapies.
- **Limited outcome measurement.** It is difficult to assess the effectiveness of programs and policies due to limited program evaluation and lack of measurable policy goals.

Although prevention and treatment have received considerable policy attention, the following gaps remain and will require significant attention and funding going forward:

Patchwork approach to prevention. The lack of a sustained, long-term approach to child, family and community-based prevention has resulted in a patchwork of un-coordinated programs.

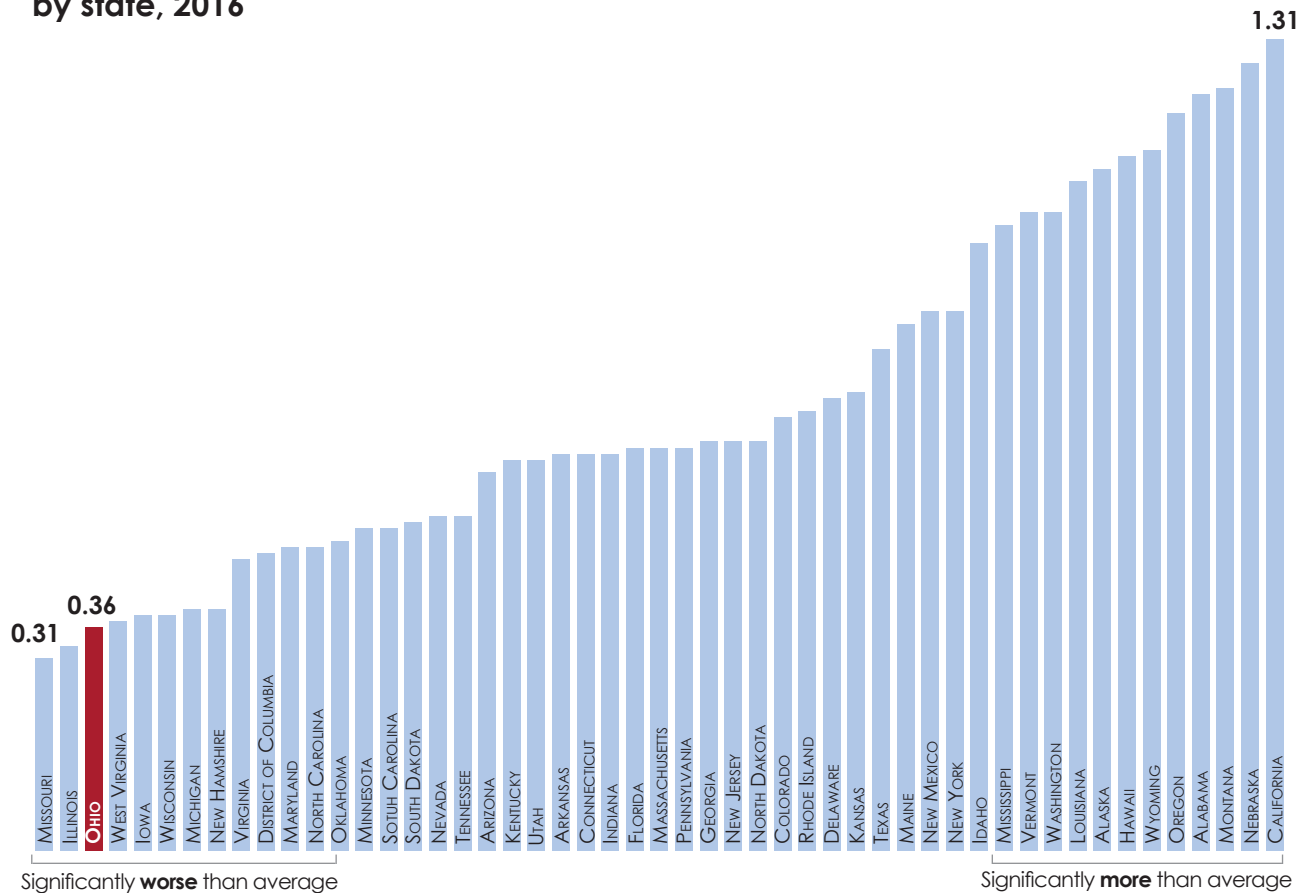
Potential threats and changes on the horizon

The following trends and potential changes in the environment pose a potential threat to Ohio’s efforts to reduce addiction:

- Changes in substances being abused (e.g. shift from heroin to fentanyl and fentanyl analogues; resurgence of methamphetamine and cocaine, etc.)
- Disruption caused by the upcoming change in administration (possible lack of continuity caused by change in Governor and agency leadership)
- Decreased federal and/or state funding for prevention, treatment, recovery and social determinants of addiction
- Increased uninsured rate (a possible consequence of policy changes at the state and/or federal level)
- Increased number of children exposed to Adverse Childhood Experiences, which increases risk for future addiction
- Increased number of older adults due to Ohio’s aging population, including many seniors at risk for pain and the negative side effects of opioid and benzodiazepine use (falls, cognitive impairment, overdose)

Prevention strategies fail to reach many Ohioans because they are largely funded by short-term grants (often from federal sources). Coordination between state agencies involved in prevention also could be strengthened.

Figure 6. **Ratio of certified buprenorphine providers to opioid overdose deaths, by state, 2016**



← Fewer buprenorphine providers relative to need →

Sources: Avalere analysis of SAMHSA Opioid Treatment Program Directory and Centers for Disease Control and Prevention (CDC) WONDER, 2016

Inadequate treatment capacity. Many stakeholders report a need for additional behavioral health system capacity, including more providers of MAT, evidence-based psychosocial treatment and recovery services. For example, Ohio's ratio of buprenorphine providers to overdose deaths is the third lowest in the nation (see figure 6), indicating less behavioral health system capacity relative to demand. (Buprenorphine is one form of MAT. See page 22.)

The behavioral health workforce must be increased to meet current and future needs, although data on the adequacy of the addiction treatment workforce is limited. Increasing the capacity of mental health services for young people is particularly important given that untreated emotional and behavioral problems are risk factors for addiction.

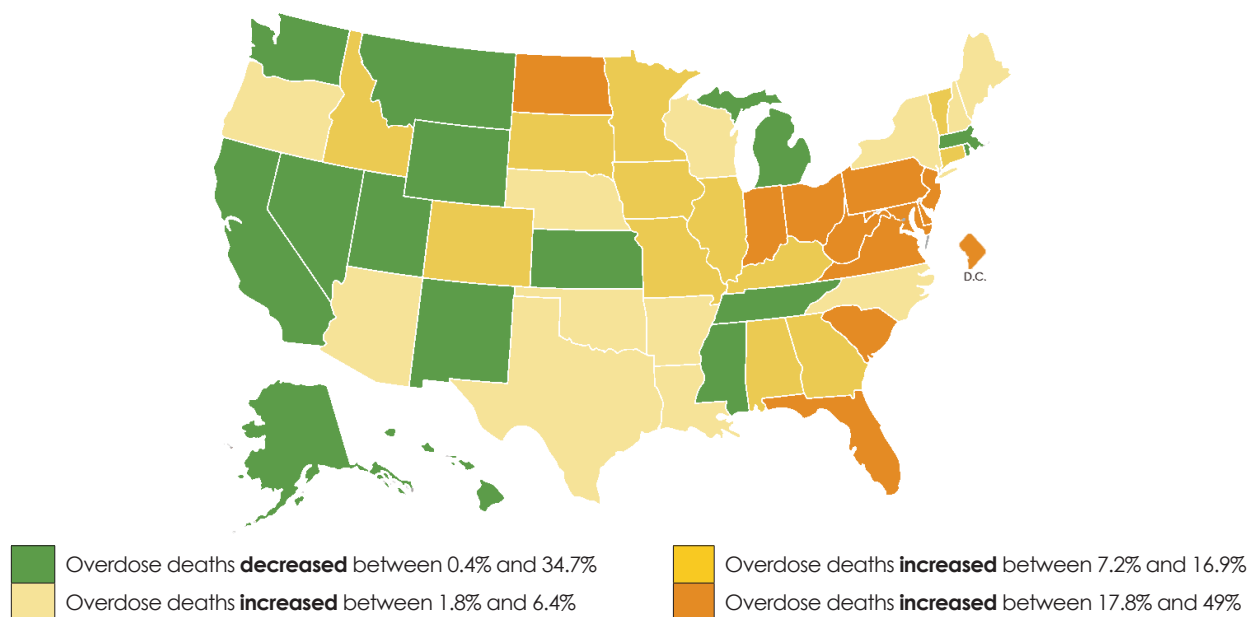
In addition, the following topics have received less policymaking attention and public funding:

Recovery services and supports. There has been minimal policy focus on recovery, compared to prevention and treatment, and Ohio lacks adequate long-term supports for ongoing recovery. Addiction is a chronic, relapsing disease and requires ongoing chronic disease management.

Alcohol, nicotine/tobacco and other non-opiate drugs. Tobacco-related diseases kill far more Ohioans every year than do opioids (estimated 20,180 annual smoking attributable deaths vs. 3,497 opioid overdose deaths in 2016).¹¹ However, fewer than 10 percent of the policies in this inventory specifically addressed alcohol or nicotine/tobacco, and there has been very little focus on non-opiate illicit drugs, such as cocaine and methamphetamine.

Existing tobacco cessation resources, such as Medicaid cessation coverage and the Ohio Tobacco QuitLine, suffer from low utilization.

Figure 7. **Percent change in number of drug overdose deaths, 12-month period ending in August 2016 to 12-month period ending in August 2017**



Note: Based on provisional counts, which may not include all deaths that occurred during a given time period. Numbers are subject to change.
Source: National Center for Health Statistics, Vital Statistics Rapid Release, Provisional Drug Overdose Death Counts, as of March 4, 2018

Much more can be done to streamline access to cessation services and encourage smokers to quit, and to prevent youth from ever starting to use nicotine.

Health disparities. Health disparities are differences in health outcomes across groups of people.¹² Ohio's policy response over the past five years has acknowledged geographic variations in outcomes, such as disparities in overdose death rates by county. In some cases, these differences have guided resource allocation, such as when high-risk counties were prioritized for the 21st Century Cures Act State Targeted Response (Cures STR) grant funds.

Other disparities, such as differences by education level or race and ethnicity, have received less attention from policymakers. Overdose death rates are much higher among Ohioans with lower levels of education¹³, and are rising rapidly among African Americans.¹⁴ For these reasons, it will be important to monitor substance abuse trend data by education and income level, race and ethnicity, and other demographic characteristics to ensure that resources and strategies are more aggressively directed toward communities with the highest levels of need.

Social determinants of health. The social determinants of health refer to factors beyond medical care that affect health, such as income, educational attainment and social connectedness. Research estimates that conditions in the social, economic and physical environment account for a larger share of the modifiable factors that impact health than clinical care.¹⁵

There is growing recognition that social and economic factors have contributed to the opiate epidemic. A 2017 Ohio State University study, for example, found that Ohio counties with higher unemployment and poverty rates, and lower labor force participation rates, had higher drug overdose death rates.¹⁶ Recent commentary in the American Journal of Public Health implored policymakers to address the root causes of demand for opioids and to acknowledge "the role of opioids as a refuge from physical and psychological trauma, concentrated disadvantage, isolation, and hopelessness."¹⁷

Ohio's policy response has been heavily focused on activities within the healthcare system (e.g. opioid prescribing and MAT) and there has been less explicit focus on social determinants.

Why does the overdose death rate continue to climb, despite all of the policy changes enacted in Ohio over the past five years?

The policy inventory and scorecard demonstrate that Ohio has implemented many evidence-aligned policies and programs over the past five years. However, the annual number of drug overdose deaths has continued to climb, increasing from 3,857 in the 12-month period ending August 2016 to 5,234 by August 2017, based on provisional data released by the CDC in March 2018.¹⁸ During that 12-month time period, Ohio had the third highest increase in overdose deaths in the U.S. (see figure 7).¹⁹

There are several potential reasons why negative outcomes have escalated, despite significant efforts from state and local leaders. The most obvious reason for the increase in overdose deaths is the widespread proliferation of fentanyl and other fentanyl-related drugs into the illicit drug supply. While policy efforts focused on prescription opioids have succeeded in reducing prescription opioid consumption and deaths, the epidemic has shifted to use of these extremely powerful substances that carry a higher risk of death. In addition, according to the Ohio Substance Abuse Monitoring (OSAM) Network, cocaine and methamphetamine are highly available across the state, and methamphetamine use is on the rise.²⁰

Second, it is not reasonable to expect that all policies and programs will have an immediate impact. In many cases, particularly for youth-focused prevention programs, it can take many years to yield positive behavioral health outcomes. Evidence-based approaches such as home visiting and PAX Good Behavior Game, for example, build protective factors and resilience for children ages 0-12 and may not demonstrate reductions in drug use until five to 20 years later.

Third, despite laudable efforts to increase treatment capacity and access to care, available data indicates that there are still not nearly enough behavioral health providers to meet the need for treatment and recovery services. Therefore, many Ohioans suffering from addiction may fall through the cracks because they wait too long to get help once they are ready to seek treatment.

Information policymakers need, but do not currently have

Future research by universities, state agencies and other public and private partners should be designed to answer the following questions in order to inform the policy response to the addiction crisis in 2018 and beyond:

- To what extent are Ohio's acute and chronic pain guidelines being followed by providers?
- How many Ohio children are participating in evidence-based prevention programs?
- What is the current capacity of Ohio's publicly-funded behavioral health system?
 - What services are least available to those in need? (MAT, psychosocial, inpatient vs. outpatient, recovery supports, etc.)
 - How many additional providers are needed to meet current and future demand?
 - How will we know if Behavioral Health Redesign is successful?
- To what extent are federal and state behavioral health parity laws and guidance being implemented?
- Which policies, programs and services are most cost effective?
- How much will state and local governments need to spend on addiction-related services and consequences in coming years?
- How many children have been affected by the addiction crisis? How many have had a parent die or have been placed in out-of-home care due to addiction or related neglect?

Finally, rather than devoting so many resources to reducing the supply of specific drugs, Ohio needs a stronger focus on the underlying drivers of demand for drugs. Alcohol, crack cocaine, methamphetamine, prescription opioids and heroin have devastated many families over the past four decades. Regardless of the next drugs on the horizon, Ohio families and communities need to be equipped with the knowledge, skills, resilience, economic resources and social capital needed to prevent addiction and sustain long-term wellbeing for the thousands of Ohioans who are in recovery.

Opportunities for improvement

The public and private sectors in Ohio can work together to:

1. Build upon the strong framework for appropriate opioid prescribing to continue to drive down opioid use rates

- a) Sustain and continually improve OARRS, including increased provider integration with electronic health records and ongoing enforcement of OARRS requirements
- b) Enforce, monitor and evaluate the impact of recently implemented prescribing limits and, based on evaluation results, consider tightening limits to three to five days as some other states have done
- c) Offer education, technical assistance and other support to providers to operationalize and implement prescribing limits and guidelines

2. Increase use of non-opioid pain management therapies, such as acupuncture, physical therapy and chiropractic care, through:

- a) Patient and provider education
- b) Improved insurance coverage for these services
- c) Partnerships across sectors (healthy aging, chronic disease prevention, behavioral health, etc.) to promote widespread availability of non-pharmacologic approaches, such as tai chi, yoga and stress reduction

3. Strengthen the effectiveness and reach of addiction prevention activities

- a) Increase sustained sources of funding for evidence-based prevention strategies for children, families and communities
- b) Explore development of an addiction prevention wellness trust funded by future potential legal settlement proceeds
- c) Support a comprehensive approach to prevention of all forms of substance use disorder (including opioids, methamphetamines, alcohol, tobacco, etc.) across the life span, including adults over age 18
- d) Improve coordination, monitoring and evaluation of school-based prevention activities
- e) Increase coordination between state agencies so that local communities receive consistent and coordinated support from the state regarding community and school-based prevention

4. Ensure that evidence-based addiction treatment and recovery services are available for all Ohioans in need

- a) Actively promote awareness of state and federal parity laws and strengthen monitoring and enforcement

- b) Evaluate the impact of Behavioral Health Redesign on addiction treatment system capacity and treatment outcomes and make continuous improvements based on the results

- c) Collect quantitative data regarding treatment gaps and publicly report the number of patients receiving evidence-based treatment (including MAT) in state-certified facilities and through county ADAMH board funding
- c) Strengthen the behavioral health workforce through increased reimbursement rates, enhancing the Behavioral Health Workforce Initiative and continuing to build integration with physical health care

5. Reduce health disparities and address the social determinants of health

- a) Ensure that resources and strategies are more aggressively directed toward populations at greatest risk of overdose deaths and incarceration
- b) Improve social and economic conditions in struggling Ohio communities

6. Increase use of data and evaluation to drive improvement

- a) Include measurable policy goals in legislation and integrate tools to track implementation and outcomes into the policymaking process
- b) Increase the transparency and usefulness of evaluation findings, such as by posting all evaluation results on state agency websites

In addition, the following steps would boost the effectiveness of Ohio's response to current and future addiction challenges:

7. Strengthen clinical-community linkages and connections between sectors. For example, ensure that hospital emergency departments, law enforcement and community behavioral health providers work together to make sure that people in need of treatment do not fall through the cracks
8. Develop a coordinated, long-term approach to serve the needs of children exposed to Adverse Childhood Experiences (ACEs) as a result of the addiction crisis, including sustained investments in early childhood home visiting and education, parenting education, trauma-informed care and education, the child welfare system and other evidence-based interventions
9. Develop a comprehensive plan for addressing potential positive and negative consequences of medical marijuana legalization, including impact on pain management, employers, adolescents and motor vehicle safety

A path forward: The role of evidence-based policymaking to reduce addiction in Ohio

Evidence-based policymaking is the “systematic use of findings from program evaluations and outcome analyses to guide government policy and funding decisions.”²¹ The purpose of this approach is to²²:

- Reduce wasteful spending
- Expand innovative programs that prove to be effective
- Strengthen accountability

As Ohio struggles to overcome the opiate epidemic, evidence-based policymaking provides a roadmap to ensure that the state is investing in the right approaches. The [Pew-MacArthur Results First Initiative](#) identifies five key components of evidence-based policymaking²³:

- **Program assessment:** Systematically review available evidence on the effectiveness of public programs
- **Budget development:** Incorporate evidence of program effectiveness into budget and policy decisions, giving funding priority to those that deliver a high return on investment of public funds
- **Implementation oversight:** Ensure that programs are effectively delivered and are faithful to their intended design
- **Outcome monitoring:** Routinely measure and report outcome data to determine whether programs are achieving desired results
- **Targeted evaluation:** Conduct rigorous evaluations of new and untested programs to ensure that they warrant continued funding

While state agencies are conducting outcome monitoring and targeted evaluation for some programs (see part 5), more could be done to incorporate evidence of program effectiveness into the state budget process. Furthermore, legislation in Ohio rarely requires an evaluation study or outcome tracking, and there are no mechanisms built into the legislative process that specify measurable outcomes for legislation. It is therefore difficult to assess whether legislation has achieved desired outcomes and if resources are being allocated toward the most effective approaches.

Other states have done more to incorporate evidence into the policymaking process, including steps to strengthen drug prevention and the behavioral health system. Examples include:

- **Washington:** The state legislature created the [Washington State Institute for Public Policy \(WSIPP\)](#) in 1983. WSIPP works with legislators and state agency staff to conduct non-partisan research on the effectiveness of policies and programs, including [benefit-cost analyses](#) on a wide variety of substance use prevention and treatment interventions. The WSIPP approach is being replicated in several other states through the [Pew-MacArthur Results First Initiative](#).
- **Minnesota:** The Department of Management and Budget is using the Results First framework to inventory currently-funded services, review which ones have evidence of effectiveness and conduct benefit-cost analyses. Findings on substance use disorder prevention, treatment and recovery services are [posted on the agency website](#).
- **Utah:** The Department of Human Services' Division of Substance Abuse and Mental Health is required to develop and publish a [statewide registry](#) of evidence-based prevention programs, and then use the registry to guide its contracting decisions. The division has established an [evidence-based workgroup](#) of prevention and evaluation experts that identify evidence-based programs and continually refine the criteria for effectiveness.
- **Massachusetts:** A [2016 law](#) established a Special Commission on Behavioral Health Promotion and Upstream Prevention. The purpose of this commission is to investigate evidence-based practices, allocate funding toward what works and set achievable goals for reducing behavioral health disorders.

Going forward, Ohio can do more to embed evidence considerations into the policymaking process to ensure that measurable objectives are met and resources are targeted to the most effective approaches in a more coordinated way.

For additional information about evidence-based policymaking, visit HPIO's [Guide to Improving Health Value](#).

Part 3. Policy inventory summary

Overview

This section highlights key findings from the policy inventory, including:

- Volume of policy changes, by topic
- Volume of policy changes, by substance type
- State agency spending

A complete list of specific policies, programs and services, including descriptions and links for more information, is available in the [detailed policy inventory](#).

Inventory process and methodology

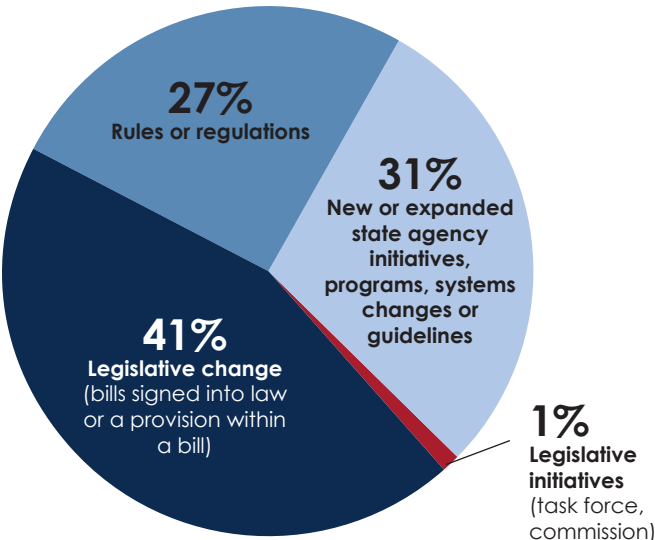
To develop the policy inventory, HPIO conducted a structured review of policy changes that occurred at the state level from 2013-2017 (130th and 131st General Assembly and first half of the 132nd General Assembly²⁴ as of December 2017). See Appendix A for a list of the search terms used.

Of the policy changes identified, 41 percent were legislative changes, 27 percent were rules or regulations and 31 percent were new or expanded state agency initiatives, programs, systems changes or guidelines (see figure 8).

Volume of policy changes, by topic

Figure 9 displays the number of policy changes enacted between 2013 and 2017 for addiction-related topics. Overall, treatment services and appropriate use of/access to prescription opioids received the largest amount of policy attention, while child and family-focused prevention and screening and early intervention received less attention. There

Figure 8. **Addiction-related policy changes in Ohio, by type of policy change, 2013-2017** (n=193)



Source: HPIO review of Ohio legislation, regulations, Governor's Cabinet Opiate Action Team timeline and other policy summaries

was also less policymaking activity regarding the treatment system—which includes capacity, workforce and access to care—and recovery services and supports.

Prevention

Prevention addresses health problems before they occur, rather than after people have shown signs of disease, injury or disability.²⁵ Preventing the onset of substance use disorder in the first place is critical for reversing the overdose epidemic. Addiction prevention policies and programs are designed to:

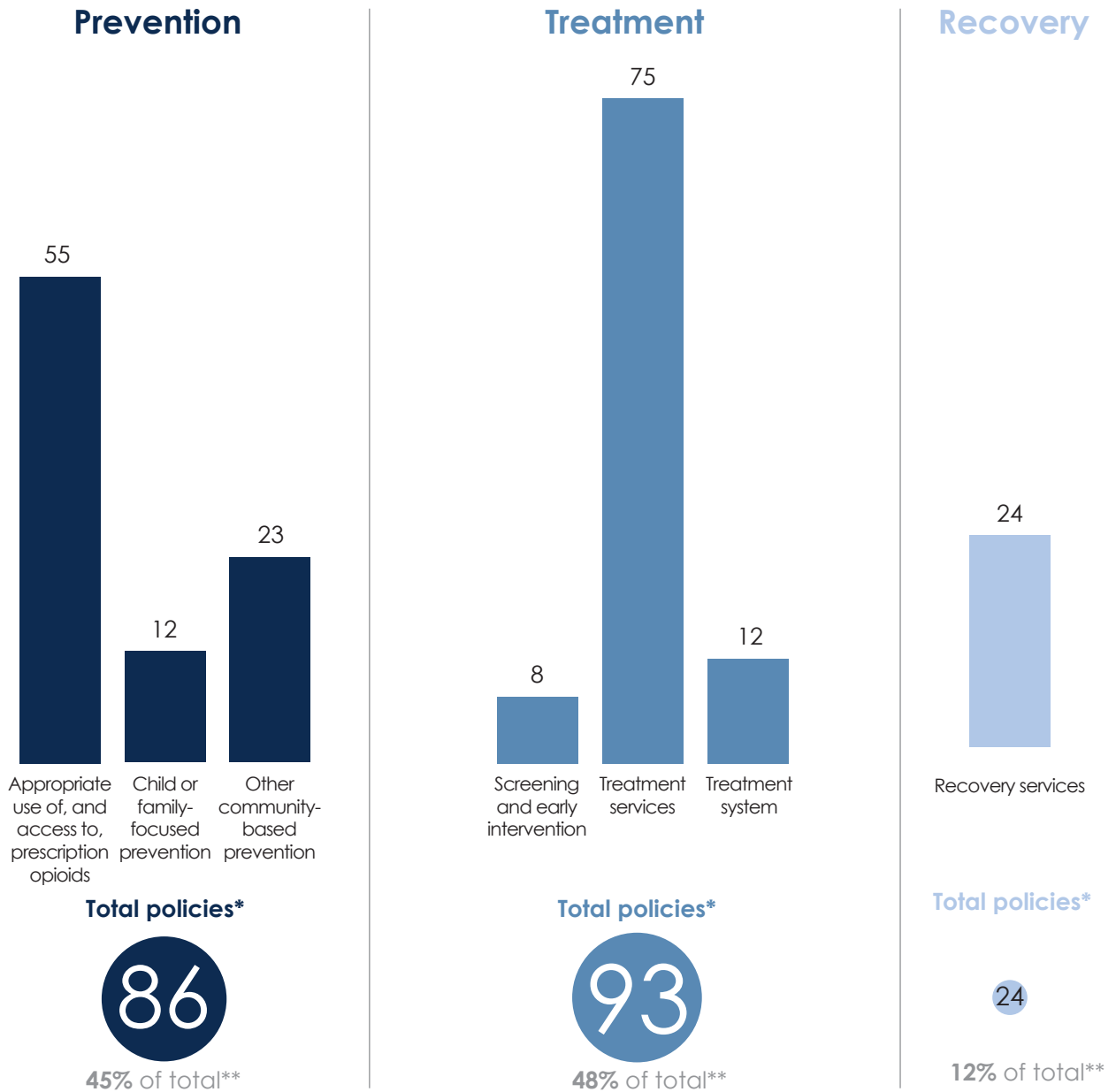
- Reduce the supply of or access to drugs (such as by reducing opioid prescribing, increasing the price of tobacco products or narcotics interdiction by law enforcement), or
- Reduce the demand for drugs by strengthening protective factors (such as positive youth social skills) and reducing risk factors (such as social norms that promote drug use)

Treatment and recovery

Treatment includes a wide range of services provided in an outpatient or inpatient setting, such as assessment, behavioral counseling, withdrawal management with follow-up care and MAT. Recovery services, such as recovery housing, peer support and 12-step programs, are designed to enable individuals to improve their health and wellness over the long-term.

This policy inventory and scorecard includes specific treatment and recovery services, as well as information about the overall capacity of the behavioral health system and access to care.

Figure 9. Number of addiction-related policy changes in Ohio, by topic, 2013-2017



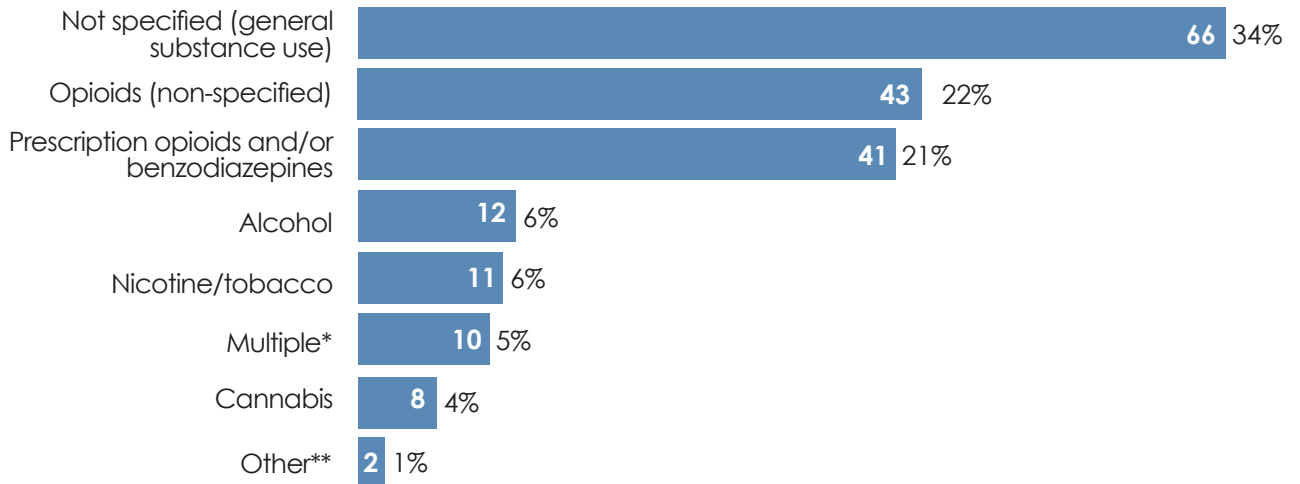
* Policies in the subcategories exceed the number of total policies because some policies were counted in more than one subcategory.

** Percents exceed 100 percent because some policies were counted in more than one category.

Note: See Appendix B for further description of these categories.

Source: HPIO review of Ohio legislation, regulations, Governor's Cabinet Opiate Action Team timeline and other policy summaries

Figure 10. **Number of addiction-related policy changes in Ohio, by substance type, 2013-2017** (n=193)



Note: There were no policies, programs or services newly enacted from 2013-2017 that focused specifically on methamphetamines or cocaine.

* "Multiple" includes policies that address more than one specific drug

** "Other" includes policies that address other drugs not specifically listed here (i.e., gabapentin, anorexiant)

Source: HPIO review of Ohio legislation, regulations, Governor's Cabinet Opiate Action Team timeline and other policy summaries

Volume of policy changes, by substance type

Overall, 43 percent of addiction-related policy changes addressed opioids (see figure 10). More specifically, 21 percent addressed prescription opioids and/or benzodiazepines, such as updates to OARRS, and 22 percent addressed either non-prescription opioids (including heroin and fentanyl), or opioids in general, such as access to MAT.

About one-third of addiction policy changes addressed "controlled substances" or "dangerous drugs" generally without naming specific drugs, or addressed addiction generally (such as early childhood prevention, drug taskforces and behavioral health workforce capacity).

Between 2013 and 2017, there were a smaller number of policy changes related to cannabis, alcohol and tobacco. Notably, most of the alcohol-related policies increase access to alcohol.

State agency spending

Figure 11 displays addiction-related spending in state fiscal year 2017 by state agencies with significant roles in prevention, treatment and recovery: Ohio Department of Mental Health and Addiction Services (OMHAS), Ohio Department of Health (ODH), Ohio Attorney General's Office (AG) and the Ohio Board of Pharmacy (BOP). (Criminal justice, law enforcement and child welfare spending will be included in a future report.)

Figure 11. **State spending, by agency*, State Fiscal Year 2017**

	Prevention		Treatment and Recovery	
	Federal	Non-federal	Federal	Non-federal
Ohio Department of Mental Health and Addiction Services	\$21,149,613	\$5,278,517	\$62,603,444	\$40,147,974
Ohio Department of Health	\$2,603,543	\$6,493,187	\$743,417	\$1,846,260
Board of Pharmacy	\$291,993	\$663,318	NA	NA
Attorney General	\$0	**\$2,742,649	***NA	***NA
Total for above agencies	\$24,045,149	\$15,177,671	\$63,346,861	\$41,994,234

*Only includes agencies primarily responsible for leading addiction prevention, treatment and recovery activities, other than ODM

** 2017-2018 school year

*** Treatment and recovery spending by the Attorney General will be captured in a future phase of the Addiction Evidence Project that focuses on children services, law enforcement and criminal justice reform.

The Ohio Department of Medicaid (ODM) has had the largest share of addiction-related state spending, focused on treatment services. In SFY 2016, ODM spent \$650,200,000 to provide healthcare services for Ohioans with drug addiction/behavioral health issues. Medicaid spending will increase to \$762,948,490 in SFY 2017. This amount includes spending on addiction treatment, community mental health services, community psychiatric supportive treatment, behavioral health counseling/therapy, mental health assessment services, crisis intervention, pharmacologic management services and emergency services/coverage of naloxone.²⁶

Medicaid is funded by a mix of state and federal dollars; the federal share, referred to as the Federal Medical Assistance Percentage (FMAP) is 62.3 percent for most Medicaid recipients in Ohio, but some eligibility groups, including the newly eligible Group VIII category, are reimbursed at higher rates.

Overall, state agency spending has been concentrated on treatment services, with less funding allocated to prevention. Notably, more than half of all funding for addiction prevention, treatment and recovery has come from federal sources.

Total spending

Local governments and private entities (consumers, employers, etc.) have also spent considerable amounts of money on addiction treatment and the consequences of the opioid epidemic. A recent working paper from the American Enterprise Institute estimates that the total cost of the opioid crisis to Ohio was \$3,385 per capita in 2015, including health care, worker productivity and criminal justice costs.²⁷

A similar analysis of total costs by Ohio State University researchers estimated that opioid abuse, dependency and overdose deaths resulted in \$6.6 to \$8.8 billion in healthcare and criminal justice costs and lost productivity in Ohio in 2015.²⁸

Cost-effectiveness of prevention and treatment spending

Studies have found that effective prevention and treatment programs can save taxpayer dollars. For example, WSIPP estimates that the Good Behavior Game, a prevention approach used in many Ohio schools, saves Washington State taxpayers \$2,760 per student (compared to \$163 program cost) due to education, criminal justice and other savings.²⁹ Similarly, a California study of substance use disorder treatment concluded that every \$1 spent on treatment saves \$7 due to reduced crime and increased earnings.³⁰

Medication-Assisted Treatment (MAT) Basics

MAT combines behavioral therapy and medications to treat substance use disorders. This report focuses primarily on MAT for opioid use disorder, although MAT can also be used to treat alcohol or nicotine addiction.³¹

There is strong evidence that MAT is an effective treatment for substance use disorder.³²

The three medications listed below are used to treat opioid addiction. Each medication has advantages and disadvantages, and providers work with patients to identify the appropriate medication for their needs. The American Society of Addiction Medicine (ASAM) recommends that medication be accompanied by a psychosocial needs assessment, supportive counseling, links to existing family members and referrals to community services.³³

Cost effectiveness

Several studies have found that methadone and buprenorphine are highly cost effective because

they reduce future healthcare and criminal justice costs. For example:

- The New England Comparative Effectiveness Public Advisory Council concluded that for every dollar spent on MAT with methadone or buprenorphine, \$1.80 in savings are realized due to reduced healthcare and social costs (law enforcement, crime victimization and productivity loss). New England states could save \$1.3 billion by expanding treatment of opioid-dependent persons by 25 percent.³⁴
- WSIPP found that for every \$1 spent on methadone maintenance, there was a \$2.19 benefit based on increased earnings and reduced healthcare costs.³⁵

Although naltrexone is also effective in achieving positive health outcomes, the comparatively high price for this drug reduces its cost effectiveness.³⁶

Federal Drug Administration-approved medications to treat opioid use disorder³⁷

Medication (brand name examples)	How it is used	Prescriber regulations
Methadone	<ul style="list-style-type: none"> • Liquid • Patient must go to a certified treatment facility frequently to receive medication at beginning of treatment 	<ul style="list-style-type: none"> • Highly regulated (Drug Enforcement Agency [DEA] schedule II drug) • Can only be dispensed by a Substance Abuse and Mental Health Services Administration (SAMHSA)-certified Opioid Treatment Program (OTP)
Buprenorphine-naloxone and buprenorphine hydrochloride (Suboxone, Subutex)	<ul style="list-style-type: none"> • Tablet, film or implant • Used daily, but patient does not have to go to provider every day 	<ul style="list-style-type: none"> • Highly regulated (DEA schedule III drug) • Can only be prescribed by physicians (and some other providers³⁸) who are registered with the DEA and have obtained a waiver from SAMHSA (DATA 2000 waiver) • Prescribers are limited in the number of patients they can treat (30 in first year of waiver; 100 after first year; up to 275 after second year)
Naltrexone (Vivitrol, Revia, Depade)	<ul style="list-style-type: none"> • Extended-release injection or tablet • Monthly injection from healthcare provider 	<ul style="list-style-type: none"> • Not a scheduled drug • Can be prescribed by any physician, nurse practitioner or physician assistant with prescribing authority

For additional information, see the [SAMHSA MAT Pocket Guide](#).

Part 4. Policy scorecard summary

Overview

The policy scorecard summary tables in this section rate Ohio's prevention, treatment and recovery policies and programs on a three-point scale (see key below) based on the extent to which they:

- Align with research evidence on what works to reduce addiction, and
- Reach Ohioans in need

In addition, the scorecard summary tables in this section highlight key strengths and gaps related to evidence alignment and implementation reach or utilization of evidence-based services. High-priority opportunities for improvement are listed in the right-hand column and additional opportunities are described in the [detailed policy inventory](#).

Scorecard process

To develop the list of evidence-based policies and programs in the scorecard, HPIO consulted rigorous reviews of available research literature, including:

- **Expert consensus statements and recommendations** from independent expert panels convened by organizations such as the National Academies of Sciences, Engineering and Medicine; U.S. Surgeon General; and the Centers for Disease Control and Prevention
- **Clinical guidelines** from medical associations such as the American College of Physicians and ASAM
- **Evidence registries and clearinghouses**, such as What Works for Health and the Office of Juvenile Justice and Delinquency Prevention (OJJDP) Model Programs Guide

HPIO then reviewed the inventory to identify policies and programs implemented in Ohio that were relevant to the specific evidence-based approaches and assessed the extent to which Ohio's efforts align with the evidence and are being implemented in a widespread

way. Although guided by specific criteria (see Appendix A), this assessment was largely qualitative.

HPIO sought and received input from state agencies and other stakeholders to ensure that the description of policy implementation in Ohio was accurate. Information about the number of Ohioans reached or fidelity to evidence-based models was often not available. See Appendix A for further description of limitations.

Key

Strong	Most policies, programs and services in this category are consistent with evidence on what works and some are being implemented in a widespread way.	Moderate	Many policies, programs and services in this category are consistent with evidence on what works, but overall implementation reach may be limited.	Weak	For many of the policies, programs and services in this category, alignment with evidence and/or implementation reach is weak, mixed or unknown.
---------------	--	-----------------	--	-------------	--

*See Appendix A for scoring methodology. See [detailed policy scorecard](#) for list of specific policies, programs and services reviewed.

Figure 12. **Prevention scorecard summary**

		Strengths	Gaps	Opportunities for improvement
Strong	Appropriate use of and access to prescription opioids: Prescribing and dispensing	<ul style="list-style-type: none"> • Robust PDMP (OARRS), an evidence-based approach to reducing opioid use • Evidence-aligned opioid prescribing limits and guidelines in place 	Extent to which prescribing guidelines are being implemented is unknown	<ul style="list-style-type: none"> • Enforce, monitor and evaluate 2017 prescribing limits • Based on evaluation results, consider strengthening limits to 3-5 days • Offer education and technical assistance to help providers to operationalize and implement prescribing limits and guidelines • Sustain and continually improve OARRS
Weak	Appropriate use of and access to prescription opioids: Non-opioid pain management	<ul style="list-style-type: none"> • Ohio Medicaid covers several evidence-based, nonpharmacologic pain management therapies, including acupuncture, chiropractic and physical therapy • ODH and other state agencies launched the Take Charge Ohio campaign in 2017 to promote safe pain management and medication use, consistent with evidence-based guidelines 	<ul style="list-style-type: none"> • Ohio Medicaid does not cover some evidence-based, non-pharmacologic pain management therapies, such as tai chi, yoga, progressive relaxation, biofeedback, etc. • Ohio healthcare providers are not required to be trained in addiction or appropriate pain management, which may limit utilization of non-opioid therapies, including nonpharmacologic methods 	<ul style="list-style-type: none"> • Increase utilization of evidence-based, non-opioid pain management therapies through patient and provider education and improved insurance coverage • Require all providers who prescribe controlled substances to complete mandatory Continuing Medical Education credits on addiction, appropriate pain management and other relevant topics
Moderate	Child and family-focused prevention	<ul style="list-style-type: none"> • Ohio is implementing many evidence-based programs that support healthy child development, such as Nurse Family Partnership home visiting and Incredible Years parenting education • Ohio is implementing evidence-based prevention programs in K-12 schools, such as PAX Good Behavior Game, Botvin Life Skills and Keepin' It REAL 	<ul style="list-style-type: none"> • Implementation reach of many evidence-based programs is very limited • Data on the total number of K-12 students participating in evidence-based prevention programs is not currently available • Legislation requires K-12 schools to focus on opioid education, although a more comprehensive, skill-based, evidence-aligned approach is needed to prevent all forms of substance abuse 	<ul style="list-style-type: none"> • Sustain funding for evidence-based prevention programs, supporting a comprehensive approach to prevention of all forms of substance misuse • Improve coordination, monitoring and evaluation of school-based prevention activities, including increased coordination between ODH, OMHAS, ODE and AG • Establish health education standards for the state of Ohio
Weak	Other community-based prevention	<ul style="list-style-type: none"> • Many local communities have formed prevention coalitions to increase the reach of drug prevention activities through multi-sector collaboration • Ohio has a strong, evidence-aligned smoke-free workplace policy 	<ul style="list-style-type: none"> • There is minimal implementation of prevention activities for adults ages 18+ • Ohio has some alcohol and tobacco policies that are not aligned with evidence, such as relatively low taxes on alcohol and tobacco products and low investments in tobacco prevention and cessation 	<ul style="list-style-type: none"> • Expand community-based prevention efforts to reach adults ages 25-64—the group with the highest rates of overdose deaths • Given that overdose death rates are much higher among Ohioans with lower levels of education, focus on community-based prevention activities for adults who are not enrolled in college • Reduce consumption of alcohol and tobacco by increasing the unit price (excise taxes or minimum pricing)

Figure 13. **Treatment and recovery scorecard summary**

		Strengths	Gaps	Opportunities for improvement
Weak	Screening and early intervention	<ul style="list-style-type: none"> • OMHAS and ODH have implemented initiatives to increase use of SBIRT, an evidence-based screening method for alcohol/drugs • SBIRT is being implemented in a variety of settings, including primary care hospital emergency departments 	<ul style="list-style-type: none"> • Stakeholders report that SBIRT implementation in Ohio has focused primarily on screening, while referral to treatment may be lacking • Although quality metrics for tobacco use screening, an evidence-based service, are now being tracked, ODM is not currently undertaking any initiatives to increase utilization of tobacco screening and cessation 	<ul style="list-style-type: none"> • Strengthen implementation and monitoring of “referral to treatment” component of SBIRT • Collect data regarding treatment gaps from SBIRT providers • Increase effective screening for tobacco use, particularly among Medicaid enrollees, and ensure provision of, or referral to, effective cessation services
Moderate	Treatment services (MAT, psychosocial services, outpatient, residential, etc.)	<ul style="list-style-type: none"> • Several policies have supported implementation of MAT, an evidence-based practice, such as Medicaid coverage (started in 2011), rules consistent with ASAM National Practice Guidelines and use of MAT in drug courts • Several programs have been implemented to extend the implementation reach of treatment services to priority populations, including pregnant women, infants with NAS and justice-involved adults 	<ul style="list-style-type: none"> • Despite recent improvements, the implementation reach of MAT is still limited in many parts of the state; Only 13 counties have at least 1 provider for all 3 types of MAT (see figure 14) • A 2017 OSU study estimated that Ohio’s current MAT capacity can serve only 10% to 40% of those in need • A recent national analysis determined that Ohio’s ratio of certified buprenorphine providers to opioid overdose deaths was significantly worse than most other states (see figure 6), indicating significant unmet need for MAT 	<ul style="list-style-type: none"> • Increase the number of counties that have all 3 types of MAT, including better access to methadone and buprenorphine in rural counties • Ensure that certified buprenorphine prescribers are maximizing their ability to fill capacity gaps, while adhering to ASAM guidelines and state and federal regulations • Assess the extent to which MAT is being paired with effective psychosocial approaches and improve integration as needed • Provide adequate treatment for people who use multiple substances, including methamphetamine and cocaine, which cannot be treated with MAT

Figure 13. **Treatment and recovery scorecard summary (cont.)**

		Strengths	Gaps	Opportunities for improvement
Strong	Treatment system access and coverage	<ul style="list-style-type: none"> Increased insurance coverage is an effective way to improve access to care; Policy changes in Ohio reduced the uninsured rate for adults ages 18-64 to 4.7% in 2016, compared to 7.4% in the U.S. Enactment of requirements for ODI and OMHAS to provide education on state and federal parity laws; create and promote a consumer hotline; and provide a report on outreach, trends and barriers to access and coverage 	Insurance coverage does not always lead to adequate access to care due to lack of providers, prior authorization requirements and other barriers to care	<ul style="list-style-type: none"> Continue policies that have contributed to Ohio's historically low uninsured rate, including maintenance of current Medicaid eligibility levels Actively promote awareness of federal and state parity laws and strengthen monitoring and enforcement of federal behavioral health parity laws and guidance
Weak	Treatment system capacity and workforce	<ul style="list-style-type: none"> Behavioral Health Redesign, an initiative to improve community behavioral health system capacity, started in 2015, with full implementation to begin in 2018 Behavioral health primary care integration, an evidence-based approach, is a key component of Behavioral Health Redesign 	<ul style="list-style-type: none"> Provider workforce gaps are likely limiting the implementation reach of effective treatment services Other than the MAT provider information described above, there is limited data available to assess the capacity of Ohio's addiction treatment system relative to need 	<ul style="list-style-type: none"> Continue to implement Behavioral Health Redesign and assess impact on addiction treatment system capacity and outcomes Strengthen the behavioral health workforce through increased reimbursement rates, enhancing the Behavioral Health Workforce Initiative and continuing to build integration with physical health care
Moderate	Recovery services	<ul style="list-style-type: none"> ADAMH board continuum of care requirements include evidence-based services, such as recovery housing and peer support Several policies have been implemented to increase access to certified recovery housing and peer support, including increased funding for housing and formal certification of Peer Recovery Supporters 	<ul style="list-style-type: none"> Ohio Recovery Housing-certified housing is only available in 32 counties Implementation reach of peer support is also limited in many counties Ohio's policies and funding for supported employment services focus on people with severe and persistent mental illness, creating a gap for people recovering from addiction 	<ul style="list-style-type: none"> Increase the number of certified recovery houses throughout the state Extend Medicaid coverage of peer support to include people in recovery from substance use disorder Increase supported employment programs for people recovering from addiction

Acronyms in figure 12

AG: Ohio Office of the Attorney General
 OARRS: Ohio Automated Rx Reporting System
 ODE: Ohio Department of Education
 ODH: Ohio Department of Health
 OMHAS: Ohio Department of Mental Health and Addiction Services

Acronyms in figure 13

ADAMH: Alcohol Drug and Mental Health Boards
 ASAM: American Society of Addiction Medicine
 NAS: Neonatal Abstinence Syndrome
 ODH: Ohio Department of Health
 ODI: Ohio Department of Insurance
 ODM: Ohio Department of Medicaid
 OMHAS: Ohio Department of Mental Health and Addiction Services
 OSU: The Ohio State University
 SBIRT: Screening, Brief Intervention and Referral to Treatment

Figure 14. **Providers of Medication-Assisted Treatment (MAT), by Ohio county, as of January 2018**

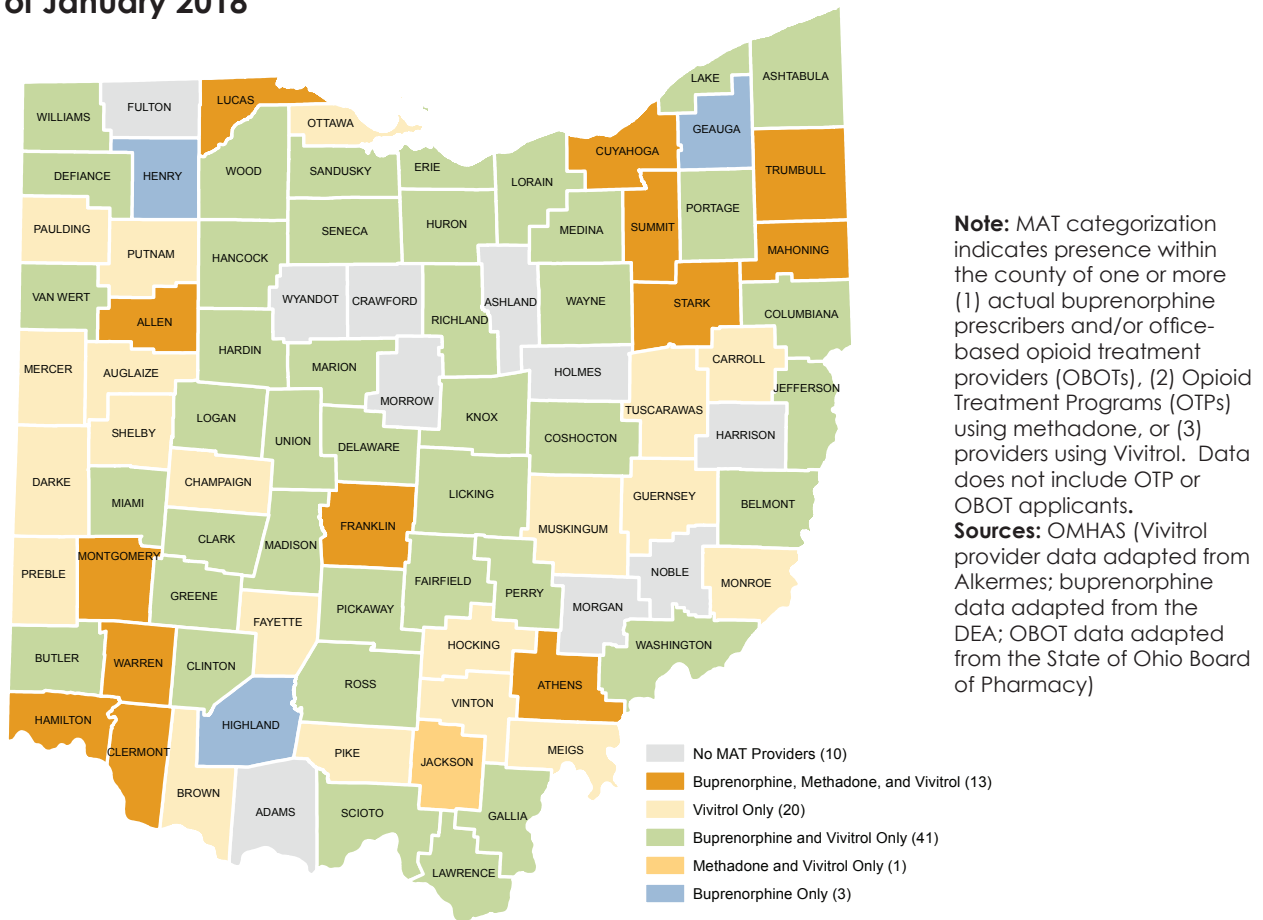


Figure 14 illustrates the implementation reach of MAT. Only 13 counties have at least one provider for all three types of MAT and 10 counties have no MAT providers.

Ohio policies for which there is a lack of evidence of effectiveness

The [detailed policy inventory](#) includes many specific policy changes implemented in Ohio for which there is not currently research evidence available. In some cases, this is because the policy changes are related to administrative or systems changes (such as ADAMH board contracting requirements or chemical dependency counselor licensure provisions) that have not been evaluated. In other cases, the research base is simply too new to provide definitive evidence of effectiveness. Although the research literature includes decades of studies on what works to prevent and treat nicotine and alcohol

addiction, the evidence base on opiate addiction prevention, treatment and recovery is still developing.

Given the severity of the overdose epidemic, policymakers must act—sometimes without rigorous research evidence. In these cases, it is important for policymakers to implement strategies that are evidence-informed—meaning that they are built upon accurate information about the nature of the problem and contributing factors.

The Start Talking! campaign, launched by OMHAS in 2014, is one example of an evidence-informed approach that lacks rigorous outcome evaluation. Start Talking! provides parents with information about how to talk with their children about drugs. This is an evidence-informed approach because it aims to increase important protective factors that research finds deter adolescent substance

use: positive parent-child communication and parents expressing a negative attitude about drug use. However, the overall Start Talking! initiative has not been evaluated in a rigorous or comprehensive way so it is not possible to determine whether it has been effective in increasing these protective factors in Ohio. The K-12 Health and Opioid Abuse Prevention Education (HOPE) Curriculum, a new component of Start Talking!, is currently being evaluated by Wright State University researchers, although results are not yet available.

Ohio policies for which there is evidence of ineffectiveness or harm

The research literature includes few examples of prevention, treatment or recovery policies that have specifically been found to be ineffective or harmful. Below are examples of public policies or programs that have been implemented in Ohio that are not aligned with evidence:

- **Mandatory random drug testing in schools:** The OJJDP Model Programs Guide rates mandatory random drug testing in schools as an intervention with no effects³⁹ and the American Academy of Pediatrics opposes widespread drug testing in schools due to the lack of evidence of effectiveness.⁴⁰ Some schools in Ohio test their students for drug use (including 27 schools participating in Drug Free Clubs of America⁴¹), although the total number is unknown.
- **Traditional DARE:** The traditional DARE program (as evaluated from 1983-2009) was found to be ineffective in reducing youth substance use.⁴² In response to negative evaluation findings, DARE has adopted an evidence-based curriculum called Keepin' it REAL, which is now used by most DARE officers in Ohio.
- **Alcohol access and price:** Increased access to alcohol is a risk factor for excessive alcohol use and addiction⁴³ and experts recommend increasing alcohol taxes to reduce harmful alcohol use.⁴⁴ Ohio's alcohol tax rates were rated as weak by the CDC⁴⁵ and Ohio implemented 10 policy changes during the past five years that increased access to alcohol.⁴⁶

- **Opioids for chronic, non-cancer pain:** There is a growing body of research that finds that opioids are as effective or less effective than other pain management methods, and carry much higher risks.⁴⁷ Despite many policy changes to reduce opioid dispensing, Ohioans still consume more prescription opioids per person than people in most other states (see figure 4).⁴⁸ This means that, through Medicaid and health insurance coverage for state employees, the state of Ohio continues to pay for large quantities of drugs for which there is evidence of ineffectiveness and harm. Furthermore, prescription opioids for pain remain less highly regulated than methadone and buprenorphine (two forms of MAT).

Part 5. Evaluating the impact of Ohio’s policies and programs

Evaluation research assesses how a policy or program was implemented and whether or not it was effective in achieving desired outcomes.

Of the 193 prevention, treatment and recovery policies reviewed in this inventory, only 25 (13 percent) included a clear reference to an evaluation requirement or some other provision related to implementation or outcome monitoring or data tracking.

While state legislation rarely requires documentation of outcomes, federal grants typically include an evaluation component. Most evaluation activity over the past five years, therefore, has been for federally-funded programs. The federal Cures STR grant, for

example, is being evaluated at the national level in a large cross-site evaluation by an external evaluator, with additional evaluation activities being conducted by OMHAS.

Some state-funded pilot programs have also been evaluated, such as the Addiction Treatment Project, which provides MAT to drug court participants.

Transparency of evaluation results

Of the 25 policies with an evaluation or data monitoring component identified, about half (11) had evaluation results or other data posted online. Figure 15 provides links to this publicly-available information.

Figure 15. **Publicly-available evaluation results or other data used to evaluate addiction prevention, treatment and recovery policies implemented in 2013-2017**

Policy or program	Evaluation results or other data posted online
Multiple policies to reduce opioid prescribing and dispensing, such as prescribing guidelines and improvements to OARRS	Annual OARRS reports and county data with information about number of opioid doses dispensed are posted on the Ohio Board of Pharmacy website .
Addiction Treatment Project (pilot program to provide MAT in drug courts)	A December 2015 evaluation report from the Begun Center for Violence Prevention, Research and Education at Case Western Reserve University is posted on the OMHAS website .
Addiction Treatment Project (expanded program to provide MAT in drug courts)	A June 2017 evaluation report from the Treatment Research Institute is posted on the OMHAS website .
ORC 5119.362 requires that all community addiction services providers maintain a waiting list for opioid and co-occurring drug addiction services and recovery supports. The waiting list data is due to OMHAS on a monthly basis. (Note that behavioral health stakeholders report limitations to the usefulness of this data.)	The waiting list data is reported in aggregate, by county, on the OMHAS website .
Baby and Me Tobacco Free (tobacco cessation program for pregnant women)	A December 2017 evaluation report from Strategic Research Group is posted on the ODH website .

In addition, ODH posts [drug overdose death reports](#) and OMHAS posts [Ohio Substance Abuse Monitoring \(OSAM\) Network](#) qualitative and quantitative drug trend data and State Epidemiological Outcome Workgroup (SEOW) data via a [Network of Care website](#). This data can be used to assess the overall impact of Ohio's addiction policy changes.

Academic researchers are conducting evaluation studies and data analytics that can also help to identify effective approaches to reducing addiction. The Ohio Colleges of Medicine Government Resource Center (GRC), for example, is currently working with academic partners and ODM on several relevant research projects, including the [Ohio Opioid Analytics Project](#) and Behavioral Health Redesign monitoring.

Additional information about evaluation and data sources will be included in a future HPIO addiction policy inventory and scorecard, to be released later in 2018, which will address surveillance and evaluation.

Links to data on addiction and the behavioral health system

- [Ohio Automated Rx Reporting System \(OARRS\) reports](#), Ohio Board of Pharmacy
- [Ohio Substance Abuse Monitoring Network \(OSAM\)](#), OMHAS
- [Ohio Public Health Data Warehouse \(mortality data\)](#), ODH
- [State Epidemiological Outcomes Workgroup \(SEOW\)](#), OMHAS
- [2016 State Health Assessment](#), ODH
- [Behavioral Health Barometer](#), SAMHSA
- [National Survey of Substance Abuse Treatment Services \(N-SSATS\)](#), SAMHSA
- [Overdose Data Dashboard](#), Ohio Hospital Association

Appendix A. Methodology

Inventory process

In order to compile the detailed policy inventory, HPIO researchers searched the Ohio Revised Code (ORC), Ohio Administrative Code (OAC), the Governor’s Cabinet Opiate Action Team (GCOAT) timeline ([Combating the Opiate Crisis in Ohio](#)), state agency websites and policy summaries from other organizations. See figure 16 for examples of the types of policy changes reviewed.

HPIO researchers used the following search terms when reviewing the ORC and OAC:

- Addiction
- Alcohol
- Beer
- Buprenorphine
- Cigarette (including e-cigarettes)
- Cigars
- Cocaine
- Detox/detoxification
- Heroin
- Liquor
- Medication-Assisted Treatment
- Methamphetamine
- Naltrexone
- Neonatal Abstinence Syndrome
- Nicotine
- OARRS
- Opiate
- Opioid
- Pain
- Prevention
- Recovery
- Spirits
- Substance abuse
- Tobacco
- Vapor
- Wine

Figure 16. Types of policy changes reviewed

Type of policy change	Examples	Sources searched or consulted
Legislative change (bills signed into law or a provision within a bill)	<ul style="list-style-type: none"> • Provision of 2018-19 state budget (HB 49) requiring teacher preparation programs to include instruction on opioid and other substance abuse prevention • HB 367 requires school districts to provide education about prescription medication and opiate abuse 	<ul style="list-style-type: none"> • State main operating budget documents⁴⁹ • General Assembly archives⁵⁰
Rules or regulations	<ul style="list-style-type: none"> • OAC 4731-11-12 specifies uniform standards for treating patients with opiate addiction using buprenorphine 	<ul style="list-style-type: none"> • OAC • Relevant state agency websites
State agency initiatives, programs, systems changes or guidelines	<ul style="list-style-type: none"> • Improvements to OARRS, such as integration with Electronic Health Records • Department of Mental Health and Addiction Services receives federal grant to expand SBIRT 	<ul style="list-style-type: none"> • GCOAT timeline (Combating the Opiate Crisis in Ohio) • State agency websites • General Assembly archives (legislation)
Legislative initiatives (task force, commission)	<ul style="list-style-type: none"> • Ohio House HOPES Task Force 	<ul style="list-style-type: none"> • Media reports and policy summaries prepared by associations and other stakeholder organizations • General Assembly website

Major marijuana policy changes are included in the inventory, although HPIO did not conduct a comprehensive search for all policy changes related to marijuana or cannabis. There is some evidence that medical marijuana may provide effective pain management for certain conditions.⁵¹ Conversely, there is also evidence that cannabis use is likely to increase the risk for developing dependence on other substances.⁵² For these reasons, the overall impact of Ohio's new Medical Marijuana Control Program on the opiate crisis and the prevalence of substance use disorders is difficult to estimate. For additional detail on medical marijuana in Ohio, visit HPIO's [Medical Marijuana in Ohio](#) resource page.

The terms “naloxone” and “overdose” will be included for the next phase of the project (policy inventory and scorecard for Harm Reduction, Overdose Reversal and Surveillance and

Evaluation). Overdose reversal (naloxone) is not categorized as prevention because it occurs after an overdose has begun, and typically after substance use disorder has progressed.

Scorecard process

Step 1: Rating for specific policies and programs in detailed scorecard. HPIO researchers rated the specific policies, programs and services in the [detailed policy scorecard](#) based on five rating levels: strong, moderate, mixed, weak or unknown/more information needed. Each policy was given two ratings, one for alignment with evidence and another for extent of implementation reach. Figure 17 defines each of these ratings, as well as the score assigned to each rating.

Step 2. Summary score for subtopics. In order to summarize the scorecard findings for this report, the scores for each policy and program in the

Figure 17. **Definition of detailed scorecard rating levels**

Rating and score	Ohio alignment with evidence	Extent of implementation reach in Ohio
Strong (4)	Services, programs and policies being implemented in Ohio are highly consistent with the most rigorously-evaluated and effective evidence-based approaches in this category.	Services and programs are being implemented throughout the entire state (statewide or > 80 counties), are reaching a majority of intended groups of Ohioans and are funded at the level needed to implement widespread, effective programming with fidelity to the evidence-based model. Policies are being monitored, implemented and enforced as intended.
Moderate (3)	Services, programs and policies being implemented in Ohio are mostly consistent with recommended evidence-based approaches in this category.	Services and programs are being implemented in at least 40-80 counties, are reaching large numbers of intended groups of Ohioans and/or are funded adequately to meet current capacity and demand. Policies are likely being implemented and enforced as intended, although rigorous monitoring information may not be available.
Mixed (2)	Ohio is implementing some services, programs or policies with “strong” or “moderate” alignment with evidence, but is also implementing significant number of services, programs or policies with “weak” alignment.	Within this category, Ohio is implementing some services or programs with “strong” or “moderate” implementation reach, but is also implementing a significant number of services or programs with “weak” implementation reach. Some policies are being implemented as intended and enforced, while others are not.
Weak (1)	Ohio is implementing services, programs and policies that are not consistent with recommended evidence-based approaches within this category.	Services and programs are being implemented in fewer than 40 counties, are only reaching a small proportion of intended groups of Ohioans, and/or funding is inadequate to meet demand. Policies are not being implemented as intended and/or are not being enforced.
Unknown/ More information needed (1)	Adequate information to determine evidence alignment is not currently available.*	Adequate information to determine implementation reach is not currently available.*

*Note that this information may be available within specific counties, but is not available for an overall statewide basis.

Figure 18. Final summary score and rating for prevention, treatment and recovery subtopics

Subtopic	Alignment with evidence*	Extent of implementation, reach and funding*	Total summary Score	Summary rating
Appropriate use of and access to prescription opioids: Prescribing and dispensing	3.6	2.6	6.2	Strong
Appropriate use of and access to prescription opioids: Non-opioid pain management	3.0	1.4	4.4	Weak
Child and family-focused prevention	3.3	1.8	5.1	Moderate
Other community-based prevention	2.1	2.2	4.3	Weak
Screening and early intervention	3.7	1.0	4.7	Weak
Treatment services	3.9	1.6	5.5	Moderate
Treatment system access and coverage	3.5	2.5	6.0	Strong
Treatment system capacity and workforce	2.7	1.0	3.7	Weak
Recovery services	3.3	2.0	5.3	Moderate

*Average score across specific policies/programs within subtopic

Note: Subtopics with a score of 6.0 or higher received a strong rating, subtopics with a score between 5.0 and 5.9 received a moderate rating and subtopics with a score below 5.0 received a weak rating.

detailed policy scorecard were averaged across sub-topics. For example, policies on opioid prescribing limits, opioid prescribing guidelines and OARRS were averaged to calculate scores for the prevention subtopic: “Appropriate use and access to prescription opioids: *Prescribing and dispensing*.” This method was replicated for each subtopic (see figure 18). The total score for a subtopic is a composite score of alignment with evidence and extent of implementation and reach. If the subtopic total score was 6.0 or higher, it received a strong rating. Subtopics with a score between 5.0 and 5.9 received a moderate rating and subtopics with a score below 5.0 received a weak rating.

Sources of evidence

In order to identify the evidence-based policies, programs and practices listed in the scorecard, HPIO relied upon the most credible sources of information available. Rather than citing individual studies, HPIO turned to expert consensus statements, clinical guidelines and evidence registries whenever possible; these sources involve rigorous review of available research evidence by a group of experts who synthesize the information and make a recommendation or statement about what approaches are most effective. The types

of sources used to develop the scorecard are listed below, in order of preference. For some topics, gray literature reports were used if expert consensus statements or clinical guidelines were not available:

- 1. Expert consensus statements or recommendations from independent expert panels** convened by organizations such as the National Academies of Sciences, Engineering and Medicine (NAEM) or a federal agency. These reports are based on rigorous, systematic reviews of research evidence and typically rate the strength of recommendations based on quality of the evidence base. Examples: NAEM consensus study report, Pain Management and the Opioid Epidemic: Balancing Societal and Individual Benefits and Risks of Prescription Opioid Use, and U.S. Preventive Services Task Force (USPSTF) recommendations on alcohol and tobacco use screening
- 2. Clinical guidelines from professional/medical associations**, typically published in peer-reviewed journals. Example: ASAM National Practice Guideline for the Use of Medications in the Treatment of Addiction Involving Opiate Use
- 3. Evidence registries and clearinghouses.** Searchable databases or other user-friendly compilations of evidence-based

policies and programs. These registries use specific screening criteria to identify effective strategies and/or rate strategies on the strength of their available evidence of effectiveness. Examples: What Works for Health (University of Wisconsin Population Health Institute and Robert Wood Johnson Foundation), and OJJDP Model Programs Guide. (Note: Only programs with high ratings of evidence of effectiveness were included.)

4. Gray literature reports from private sector organizations with recommendations based on review of evidence (although typically not a systematic review). Example: Pew Charitable Trusts, Prescription Drug Monitoring Programs: Evidence-based Practices to Optimize Prescriber Use

For a complete list of credible sources of evidence on effective addiction prevention, treatment and recovery, visit the HPIO Addiction Evidence Project [evidence resource page](#).

Limitations

The inventory begins in 2013, and therefore does not include policies that were implemented earlier in the opiate crisis, such as the closing of the “pill mills” in 2011. (Major policies implemented prior to 2013 are however mentioned in the detailed scorecard when relevant to evidence alignment. Visit the [GCOAT timeline](#) for policies implemented in 2011-2012.)

Although this inventory is the most comprehensive review of addiction prevention, treatment and recovery policy changes in Ohio completed to date, it is likely that some policies may have been missed, such as:

- Legislation or rules/regulations that did not include any of the search terms used by HPIO researchers (listed above) when reviewing legislation and the OAC
- Rules/regulations that were revised between 2013 and 2017 but have prior effective dates outside of that date range. Due to the way rules are recorded, HPIO researchers were unable to discern which language was newly added and which language existed prior to 2013.

There were several challenges to rating the extent of implementation reach for the scorecard. First, information about the number of Ohioans or number of counties reached by a program or service was not always available. Second, information about the extent to which policies were being implemented as intended was not always available. Finally, service penetration rates and per-capita spending information from other states would provide useful context for assessing the adequacy of Ohio's efforts, but this information is rarely available.

Advisory Group

HPIO convenes an Addiction Evidence Project Advisory Group made up of over 20 representatives from state and local, public and private organizations with expertise in addiction prevention, behavioral health treatment and recovery, child welfare and criminal justice (listed below). This group provides guidance to HPIO on Addiction Evidence Project products, including this report.

First Name	Last Name	Organization
Carol	Baden	Ohio Attorney General
Andrea	Boxill	Ohio Department of Mental Health and Addiction Services; The Governor's Cabinet Opiate Action Team
Tara	Britton	Center for Community Solutions
Lori	Criss	Ohio Council of Behavioral Health & Family Service Providers
Jolene	Defiore-Hyrmer	Ohio Department of Health
Joan	Englund	Mental Health Advocacy Coalition
Fawn	Gadel	Public Children Services Association of Ohio
Paul	Hicks	Ohio Hospital Association
Shancie	Jenkins	Ohio Department of Health
Lesli	Johnson	Ohio University
Teresa	Long	Columbus Public Health (retired)
Jaime	Love	Interact for Health
Brie	Lusheck	Center for Community Solutions
Dustin	Mets	CompDrug
Alisha	Nelson	Ohio Attorney General
Amy	O'Grady	City of Columbus
G. Dante	Roulette	Summa Health
Jim	Ryan	Alcohol and Drug Abuse Prevention Association of Ohio
Shawn	Ryan	BrightView
Stephen	Snyder-Hill	Columbus Public Health
Ann	Spicer	Ohio Academy of Family Physicians
Molly	Stone	Ohio Department of Mental Health and Addiction Services
Cheri	Walter	Ohio Association of County Behavioral Health Authorities
Kathy	Yokum	Ohio Department of Mental Health and Addiction Services

Appendix B. Additional policy inventory tables

Trends

Figure 19. **Number of addiction-related policy changes in Ohio, by year, 2013-2017**

General Assembly session	Year legislation was passed, rule enacted or other policy change was made	Prevention	Treatment	Recovery	Total
130	2013 (includes SFY 2014-2015 budget)	2	4	1	7 (4%)
	2014 (includes 2014 Mid-Biennium review)	20	10	4	34 (17%)
131	2015 (includes SFY 2016-17 budget)	13	13	1	27 (14%)
	2016 (includes 2016 Mid-Biennium Review)	20	22	6	48 (24%)
132	2017 (includes SFY 2018-19 budget)	29	43	11	83 (42%)

Prevention policy changes

Figure 20. **Number of prevention policy changes in Ohio, 2013-2017**

Prevention subtopic	Number of policy changes
Appropriate use of, and access to, prescription opioids	55
Prescribing (authority, requirements, guidelines and education for prescribers of opioids or other controlled substances/dangerous drugs)	36
Pharmaceutical dispensing and other (anything pertaining to the dispensing, coverage/insurance/prior authorization, selling, purchasing, tracking, production or distribution of controlled substances/dangerous drugs and/or any provisions related to OARRS ["drug database"]. Includes requirements for pharmacies/pharmacists/pharmacy technicians.)	29
Non-opioid pain management (including coverage and formulary changes)	6
Prescription drug disposal programs (including public education on safe storage and disposal, drop boxes, take backs, etc.)	3
Child and family-focused prevention	12
Early childhood programs and prevention interventions for young children	2
School-based prevention interventions for K-12 school-aged youth	9
Policies to reduce excessive drinking by reducing access to or supply of alcohol for children specifically (access, availability, under age enforcement, etc.)	0
Policies to reduce tobacco use by reducing access to or supply of tobacco (access, availability, under age enforcement, etc.)	1
Other community-based prevention	23
Local community prevention coalitions	4
Local community opiate task forces (led by law enforcement)	3

Figure 21. **Number of prevention policy changes in Ohio, 2013-2017** cont.

Prevention subtopic	Number of policy changes
Other community-based prevention (cont.)	
Media campaigns and public education	3
Prevention interventions for age 18-25	0
Prevention interventions for age 26-64	0
Prevention interventions for age 65+	1
Family and economic opportunity policies and programs	0
Policies to reduce excessive drinking by reducing access to or supply of alcohol (pricing/taxes, access, availability, etc.)	3
Policies to reduce tobacco use by reducing access to or supply of tobacco (pricing/taxes, access, availability, etc.)	1
Prevention provider contract rules and licensing	1
ADAMH board requirements specific to prevention	2
Tobacco prevention- general/other	3
Prevention — other	4

Treatment policy changes

Figure 22. **Number of treatment policy changes in Ohio, 2013-2017**

Treatment subtopic	Number of policy changes
Screening and early intervention	8
SBIRT	4
Tobacco use screening	4
Treatment services	75
Transition from overdose reversal to treatment	1
Withdrawal management, detox and ambulatory detox	2
MAT (including protocols, treatment standards and coverage)	27
General treatment services (including treatment program regulations and treatment provider contract rules; assessment; behavioral therapies and psychosocial approaches; outreach and engagement activities; assessment services; care coordination; inpatient and residential treatment and partial hospitalization; outpatient treatment)	17
Medicaid provider regulations or coverage provisions	7
Treatment services for criminal justice-involved clients (treatment in context of drug court, diversion or treatment in lieu of conviction, treatment in jail/prison, treatment at re-entry, etc.)	16
NAS treatment and treatment for pregnant, post-partum and parenting women	3
Tobacco cessation	6
Treatment — other	5

Figure 23. **Number of treatment policy changes in Ohio, 2013-2017** cont.

Treatment subtopic	Number of policy changes
Treatment system	12
Behavioral health system access and integration (includes Behavioral Health Redesign, workforce, parity, capacity, parity)	11
ADAMH board requirements specific to treatment	3
Media campaigns and other efforts to reduce stigma associated with addiction	1
Treatment/BH system- other	1

Recovery policy changes

Figure 24. **Number of recovery policy changes in Ohio, 2013-2017**

Recovery subtopic	Number of policy changes
Recovery services	24
Mutual aid groups and 12-step programs	1
Peer support	4
Recovery housing	4
Recovery employment services	0
Recovery education and vocational training services	0
Recovery program regulations and recovery provider contract rules	1
ADAMH board requirements specific to recovery	1
Recovery- other or general recovery unspecified	10

Other addiction-related policy changes

The policy inventory included a total of 193 policy changes. Of these, 19 addressed mood-altering substances but did not directly contribute to prevention, treatment or recovery. All of these 17 policy changes increase access to substances in some way (see figure 21d).

Figure 25. **Number of policy changes that increase access to substances in Ohio, by substance type, 2013-2017**

Substance	Number of policy changes
Alcohol (policies eliminating the maximum permitted alcohol content of beer, exemptions to open container laws, permitting the manufacturing of alcohol ice cream, etc.)	19
Alcohol (policies eliminating the maximum permitted alcohol content of beer, exemptions to open container laws, permitting the manufacturing of alcohol ice cream, etc.)	10
Cannabis (legislation and regulation establishing the Medical Marijuana Control Program)	7
Prescription opioids (policies eliminating the requirement for optometrists to check OARRS before prescribing opioids and permitting emergency medical providers to treat minor patients with opioids without obtaining written parental consent)	2

For additional detail and links to more information about each policy, see [detailed policy inventory](#).

Notes

- 2016 Ohio Drug Overdose Data: General Findings. Ohio Department of Health, 2016.
- Data from the Ohio Public Health Data Warehouse. Ohio Department of Health. Accessed April 5, 2018. <http://publicapps.odh.ohio.gov/EDW/DataBrowser/Browse/Mortality>
- Ohio Health Issues Poll: Misuse of Prescription Drugs, Use of Heroin, Methamphetamine in Ohio. Interact for Health, 2017. https://www.interactforhealth.org/upl/OHLP_substance_use_Ft_NAI2_040418.pdf
- Hospital Insights: OHA Opioid Response Initiative. Ohio Hospital Association, 2018.
- The Opioid Epidemic's Impact on Children Services in Ohio. Public Children Services Association of Ohio, 2017. And Lander, Laura, Janie Howsare and Marilyn Byrne. "The Impact of Substance Use Disorders on Families and Children: From Theory to Practice." *Social Work in Public Health* 28, no. 3 (2013): 194-205. doi: 10.1080/19371918.2013.759005
- The Geographic Variation in the Cost of the Opioid Crisis. American Enterprise Institute, 2018.
- IMS PayerTrak, IMS National Prescription Audit, June 2016; Centers for Disease Control and Prevention, as reported in "Use of Opioid Recovery." <https://www.iqvia.com/-/media/iqvia/pdfs/institute-reports/use-of-opioid-recovery-medications.pdf?la=uk-ua&hash=632018494E28F-11A109B034BD6DA62A40E8BE0B>
- HPIO analysis of 2016 American Community Survey 1-year estimates, accessed through the American Factfinder. "Table B27001 - Health Insurance Coverage status by sex by age." U.S. Census Bureau. Accessed Feb 14, 2018. https://factfinder.census.gov/bkmk/table/1.0/en/ACS/16_1YR/B27001/0400000US39
- Prescription Nation 2018. National Safety Council, 2018.
- Prescription Drug Monitoring Programs: Evidence-based Practices to Optimize Prescriber Use. The Pew Charitable Trusts, 2016. And, Prevention Status Reports. Centers for Disease Control and Prevention, 2015. <https://wwwn.cdc.gov/psr/>
- Ohio has an estimated 20,180 smoking attributable deaths per year. (American Lung Association, State of Tobacco Control 2018, Ohio state Highlights). Ohio had an estimated 3,303 alcohol-attributable deaths from 2006-2010, or approximately 661 per year. (Centers for Disease Control and Prevention, Alcohol-Related Disease Impact, accessed 3/13/18) In 2016, 3,495 Ohio residents died from unintentional drug overdose involving opioids (all opioids). (Ohio Department of Health, 2016 Ohio Drug Overdose Data: General Findings).
- "Defining Health Equity," Health Equity Institute, accessed March 2018, <https://healthequity.sfsu.edu/content/defining-health-equity>
- Ohio State University analysis of data from the Ohio Public Health Database, 2007-2016. C. William Swank Program in Rural-Urban Policy. "Taking Measure of Ohio's Opioid Crisis." (2017)
- The opioid drug overdose death rate for non-Hispanic blacks in Ohio rose from 3.2 per 100,000 in 2009 to 21.5 per 100,000 in 2016. Henry J. Kaiser Family Foundation, State Health Facts, Opioid Overdose Deaths by Race/Ethnicity. Accessed March 2018.
- Booske, Bridget C. et al. *Different Perspectives for Assigning Weights to Determinants of Health*. County Health Rankings, University of Wisconsin Public Health Institute, 2010. <http://www.countyhealthrankings.org/sites/default/files/differentPerspectivesForAssigningWeightsToDeterminantsOfHealth.pdf>
- C. William Swank Program in Rural-Urban Policy. "Taking Measure of Ohio's Opioid Crisis." (2017)
- Dasgupta, Nabarun, Leo Beletsky, and Daniel Ciccarone. "Opioid Crisis: No Easy Fix to Its Social and Economic Determinants." *American Journal of Public Health* 108, no. 2 (2018): 182-186.
- Data from National Center for Health Statistics, Centers for Disease Control and Prevention. "Vital Statistics Rapid Release: Provisional Drug Overdose Death Counts." Accessed March 2018. <https://www.cdc.gov/nchs/nvss/vsr/drug-overdose-data.htm>
- Ibid
- Surveillance of Drug Abuse Trends in the State of Ohio: January – June 2017. Ohio Substance Abuse Monitoring Network, Ohio Department of Mental Health and Addiction Services, 2017. http://mha.ohio.gov/Portals/0/assets/Research/OSAM-TRI/FINAL_January-June_2017_Full_Report-updated.pdf
- Pew-MacArthur Results First Initiative. "How States Engage in Evidence-Based Policymaking: A National Assessment." (2017)
- Pew-MacArthur Results First Initiative. "Evidence-Based Policymaking: A Guide for Effective Government." (2014)
- Ibid
- Search was conducted for legislation, rules and regulations as of 12/17.
- Adapted from: National Public Health Partnership. "The language of prevention." Melbourne: NPHP, 2006. And, Cohen, Larry, and Sana Chehimi. "The Imperative for Primary Prevention." Prevention is Primary: Strategies for Community Wellbeing. The Prevention Institute, 2007.
- SFY 2016 amount is from: John R. Kasich, Governor, State of Ohio, Communication Department, "Fighting Drug Abuse and Addiction in Ohio." SFY 2017 amount was provided directly by ODM to HPIO in April 2018. Note that these amounts only include the services listed and do not include other healthcare services these enrollees may have received.
- The Geographic Variation in the Cost of the Opioid Crisis*. American Enterprise Institute, 2018.
- Taking Measure of Ohio's Opioid Crisis*. Swank Program in Rural-Urban Policy, The Ohio State University, 2017.
- Data from the Washington State Institute for Public Policy, Benefit-Cost Results. "Good Behavior Game." Last updated December 2017. <http://www.wsipp.wa.gov/BenefitCost>
- Eitner, Susan L., et al. "Benefit-cost in the California Treatment Outcome Project: Does Substance Abuse Treatment 'Pay for Itself'?" *Health Services Research* 41, no. 1 (2006): 192-213. doi: 10.1111/j.1475-6773.2005.00466.x
- "Medication-Assisted Treatment (MAT)," Substance Abuse and Mental Health Services Administration, accessed 3/29/18, <https://www.samhsa.gov/medication-assisted-treatment>
- Facing Addiction in America: The Surgeon General's Report on Alcohol, Drugs and Health*. U.S. Department of Health & Human Services, 2016. See also, *The National Practice Guideline for the Use of Medications in the Treatment of Addiction Involving Opioid Use*. American Society of Addiction Medicine, 2015.
- The National Practice Guideline for the Use of Medications in the Treatment of Addiction Involving Opioid Use*. American Society of Addiction Medicine, 2015.
- Management of Patients with Opioid Dependence: A Review of Clinical, Delivery System and Policy Options*. The New England Comparative Effectiveness Public Advisory Council, 2014.
- "Benefit-Cost Results: Methadone Maintenance for Opioid Use Disorder," Washington State Institute for Public Policy, last updated Dec. 2017, <http://www.wsipp.wa.gov/BenefitCost?topicId=7>
- Murphy, Sean M. et al. "Cost-Effectiveness of Extended Release Naltrexone to Prevent Relapse among Criminal Justice-Involvement Individuals with a History of Opioid Use Disorder." *Addiction* 112, no.8 (2017):1440-1450. doi: 10.1111/add.13807
- Facing Addiction in America: The Surgeon General's Report on Alcohol, Drugs and Health*. U.S. Department of Health & Human Services, 2016.
- The Comprehensive Addiction and Recovery Act (CARA) of 2016 temporarily expanded buprenorphine prescribing eligibility to qualifying nurse practitioners and physician assistants through October 1, 2021.
- National Institute of Justice, Office of Juvenile Justice Model Programs Guide. Program Profile: Mandatory-Random Student Drug Testing. (2012) Accessed 3/23/18: <https://www.crimesolutions.gov/ProgramDetails.aspx?ID=223>
- American Academy of Pediatrics. Policy Statement: Adolescent Drug Testing Policies in Schools. (2015)
- Drug testing is part of the Drug Free Clubs of America model. A list of Ohio schools implementing this program is posted here: <https://drugfreeclubs.com/find-my-school/ohio/>
- Office of Juvenile Justice and Delinquency Prevention, Model Programs Guide, Review of Drug Abuse Resistance Education (DARE) (1983-2009).
- Health Policy Institute of Ohio, "Addiction Overview and Project Description." (2017)
- Centers for Disease Control and Prevention, Guide to Community Preventive Services (Community Guide). Increasing alcohol taxes, recommended. (2007)
- Centers for Disease Control and Prevention. Prevention Status Reports rate Ohio's beer and wine taxes as "red," indicating weak implementation of recommended policies, based on comparison of alcohol taxes in other states.
- See detailed policy inventory (HPIO Addiction Evidence Project, 2018).
- Dowell, Deborah, Tamara M. Haegerich, and Roger Chou. "CDC guideline for prescribing opioids for chronic pain—United States, 2016." *JAMA* 315, no. 15 (2016): 1624-1645. doi:10.15585/mmwr.mm6501e1. And, Krebs, Erin E. et al. "Effect of Opioid vs Nonopioid Medications on Pain-Related Function in Patients With Chronic Back Pain or Hip or Knee Osteoarthritis Pain: The SPACE Randomized Clinical Trial." *JAMA* 319, no. 9 (2018): 872-882. doi:10.1001/jama.2018.0899
- IMS PayerTrak, IMS National Prescription Audit, June 2016; Centers for Disease Control and Prevention, as reported in "Use of Opioid Recovery." <https://www.iqvia.com/-/media/iqvia/pdfs/institute-reports/use-of-opioid-recovery-medications.pdf?la=uk-ua&hash=632018494E28F-11A109B034BD6DA62A40E8BE0B>
- Including budget in detail, comparison document and final analysis by Legislative Service Commission.
- Including legislation text and analysis by Legislative Service Commission. House and Senate bills only.
- The Health Effects of Cannabis and Cannabinoids: The Current State of Evidence and Recommendations for Research*. The National Academies of Sciences, Engineering and Medicine, 2017. <http://nationalacademies.org/hmd/Reports/2017/health-effects-of-cannabis-and-cannabinoids.aspx>
- Ibid.

HPIO core funders

The following core funders provide generous support to the Health Policy Institute of Ohio:

- Interact for Health
- Mt. Sinai Health Care Foundation
- The George Gund Foundation
- Saint Luke's Foundation of Cleveland
- The Cleveland Foundation
- HealthPath Foundation of Ohio
- Sisters of Charity Foundation of Canton
- Sisters of Charity Foundation of Cleveland
- Cardinal Health Foundation
- North Canton Medical Foundation
- Mercy Health
- CareSource Foundation
- United Way of Central Ohio



www.hprio.net

Revised 05.10.2018

©2018 Health Policy Institute of Ohio. All rights reserved.

C. William
Swank Program
in Rural-Urban Policy

TAKING MEASURE OF OHIO'S OPIOID CRISIS

Mark Rembert

Michael Betz

Department of Human Sciences

Bo Feng

Department of Agricultural, Environmental, and Development Economics

Mark Partridge, Swank Professor of Rural-Urban Policy

Department of Agricultural, Environmental, and Development Economics

Swank Program in Rural-Urban Policy

© October 2017

The Ohio State University

College of Food, Agricultural, and Environmental Sciences

College of Education and Human Ecology

Family and Consumer Sciences

Ohio State University Extension



THE OHIO STATE UNIVERSITY

Mark Partridge



Dr. Mark Partridge is the Swank Chair of Rural-Urban Policy at The Ohio State University. Professor Partridge is Co-Editor of the *Journal of Regional Science* and is the Co-Editor of new the *Springer Briefs in Regional Science* as well as serves on the editorial boards of eight journals including *Papers in Regional Science* and *Annals of Regional Science*. He has published over 125 peer-reviewed scholarly papers, scores of other reports, and coauthored the book *The Geography of American Poverty: Is there a Role for Place-Based Policy?* His research has been recently rated the highest ranked in the world in regional science. He has consulted with organizations and governments around the world and served on a National Academy of Sciences panel on defining rural areas. Professor Partridge has received research funding from many sources including the Appalachian Regional Commission, Brookings Institution, European Commission, Infrastructure Canada, Lincoln Institute of Land Policy, U.S. National Science Foundation, U.S. National Oceanic and

Atmospheric Administration, U.S. Department of Agriculture, and Social Science and Humanities Research Council of Canada. His research includes investigating rural-urban interdependence and regional growth and policy. Dr. Partridge served as President of the Southern Regional Science Association; is Fellow of the Southern Regional Science Association and Fellow of the Regional Science Association International; was Chair of the North American Regional Science Council; and is currently President-Elect of the Regional Science Association International. *E-mail: partridge.27@osu.edu*

Mark Rembert



Dr. Mark Rembert is a graduate of Department of Agricultural, Environmental, and Development Economics at The Ohio State University and previously served as the C. William Swank Research Associate. Mark is the co-founder of Energize Clinton County (ECC), and served as the Executive Director of the Wilmington-Clinton County Chamber of Commerce from 2011 to 2016. In his dual roles with ECC and the Chamber of Commerce, Mark led economic development efforts that combine grassroots action with traditional business retention and attraction, engaging citizens, local officials, and businesses of all sizes. These efforts have targeted economic and social issues facing rural communities, including human capital development, the brain drain, entrepreneurship, and local food systems. Mark's work in Wilmington has gained recognition from the White House, U.S. Senate, U.S. Department of Agriculture, national media and conferences, and communities across the country as a model for community and economic development. *E-mail: mrembert@gmail.com*

Bo Feng



Bo Feng is a PhD candidate in the Department of Agricultural, Environmental, and Development Economics at The Ohio State University and serves as the C. William Swank Research Associate. He received a B.S. degree in Finance from Shanghai Jiao Tong University (Shanghai, China), and a M.S. degree in Economics from the University at Buffalo-SUNY. His research focuses on state and local fiscal policies and regional development programs. His interests also include related topics such as persistent poverty, intergenerational mobility, and migration. He teaches China's Economic Reform and Globalization at OSU. Prior to joining OSU, he was an assistant research fellow in Urban Economy Institute at Central University of Finance and Economics (Beijing, China). As a researcher in China, he conducted extensive studies on the strategic planning of local economic development, and advised local governments on various issues regarding development strategies. *E-mail: feng.411@osu.edu*

Michael Betz



Dr. Michael Betz is an assistant professor in the Department of Human Sciences at The Ohio State University. Professor Betz's research focus is on how local economic conditions impact a wide range of individual, family, and community wellbeing indicators and is particularly interested in the differences between rural and urban areas. He has published in journals such as *Energy Economics*, *Rural Studies*, *Papers in Regional Science*, and *International Regional Science Review*. He has received funding for his research from The Ohio State University Institute for Population Research, the North Central Regional Center for Rural Development, and The Appalachian Research Initiative for Environmental Science. He is currently the secretary for the USDA multi-state research project NE1749: Enhancing Rural Economic Opportunities, Community Resilience, and Entrepreneurship. *Email: betz.40@osu.edu*

Contents

Executive Summary.....	1
I. Introduction: Ohio's Opioid Crisis.....	2
II. The Costs of the Opioid Crisis	7
III. The Socio-Economic Characteristics of the Opioid Crisis	10
IV. Access to Opioid Treatment.....	14
V. Conclusions & Policy Discussion.....	18
References.....	21

About the C. William Swank Program in Rural-Urban Policy

The C. William Swank Program in Rural-Urban Policy is a nationally and internationally recognized research and outreach program focused on priority issues related to rural and urban communities and their growth and prosperity.

Led by Professor Mark Partridge, the Swank Program combines innovative approaches in economic theory, planning, advanced statistical research, and geographical information systems to create products that can be used by the academic community, stakeholders, policymakers, students, and the public. In turn, the Swank Program will help inform and facilitate teaching and student research at Ohio State and elsewhere.

The Swank Program conducts and supports research, teaching, and outreach within the College of Food, Agricultural, and Environmental Sciences; the Ohio Agricultural Research and Development Center; and Ohio State University Extension.

Learn more about the C. William Swank Program on Rural-Urban Policy at aede.osu.edu/swankprogram

Executive Summary

Opioid addiction, abuse, and overdose deaths have become the most pressing public health issue facing Ohio. Ohio leads the country in drug overdose deaths per capita, a rate that continues to rise, overwhelming families, communities, and local governments across the state. In this policy brief, we aim to contribute to the understanding of this unfolding crisis and highlight insights that can inform policymaking.

One important motivation for us to consider this topic is its significant costs. We estimate that there were likely 92,000 to 170,000 Ohioans abusing or dependent upon opioids in 2015, resulting in annual costs associated with treatment, criminal justice, and lost productivity of \$2.8 billion to \$5.0 billion. Additionally, we estimate that the lifetime lost productivity of those who died from an opioid overdose in 2015 to be \$3.8 billion, for **an annual total cost of opioid addition, abuse, and overdose deaths ranging from \$6.6 billion to \$8.8 billion**. To put this into perspective, Ohio spent \$8.2 billion of General Revenue Funds and Lottery Profits money on K-12 public education in 2015, thus, the opioid crisis was likely as costly as the state's spending on K-12 education.

The emergence of the opioid crisis has been unevenly distributed across the state. We consider the relationship between drug overdose deaths in 2015 and several county level economic, demographic, and health factors. We find that areas of the state experiencing lagging economic growth and low economic mobility had higher drug overdose death rates. We also find that overdose deaths were strongly linked to educational attainment. **In 2015, the drug overdose rate for those in Ohio with just a high school degree was 14 times higher than those with a college degree.** Finally, we note the link between prescription opioids and overdose rates, finding that counties that had higher levels of prescription opioids per capita in 2010 also had higher overdose death rates in 2015.

Research has shown that the most clinically and cost effective method for reducing opioid addiction, abuse, and overdose death is medication-assisted treatment. We consider the prominent treatment options, and discuss their availability across the state. **We estimate that in the best-case scenario, Ohio likely only has the capacity to treat 20-percent to 40-percent of population abusing or dependent upon opioids.** We find distinct geographic disparities in access to treatment, especially between urban and rural areas of the state. Many people in rural areas of Ohio have extremely limited access to medication-assisted treatment. This is a particularly critical issue in the rural areas of Southwest Ohio where opioid abuse rates are high but local access to treatment is limited.

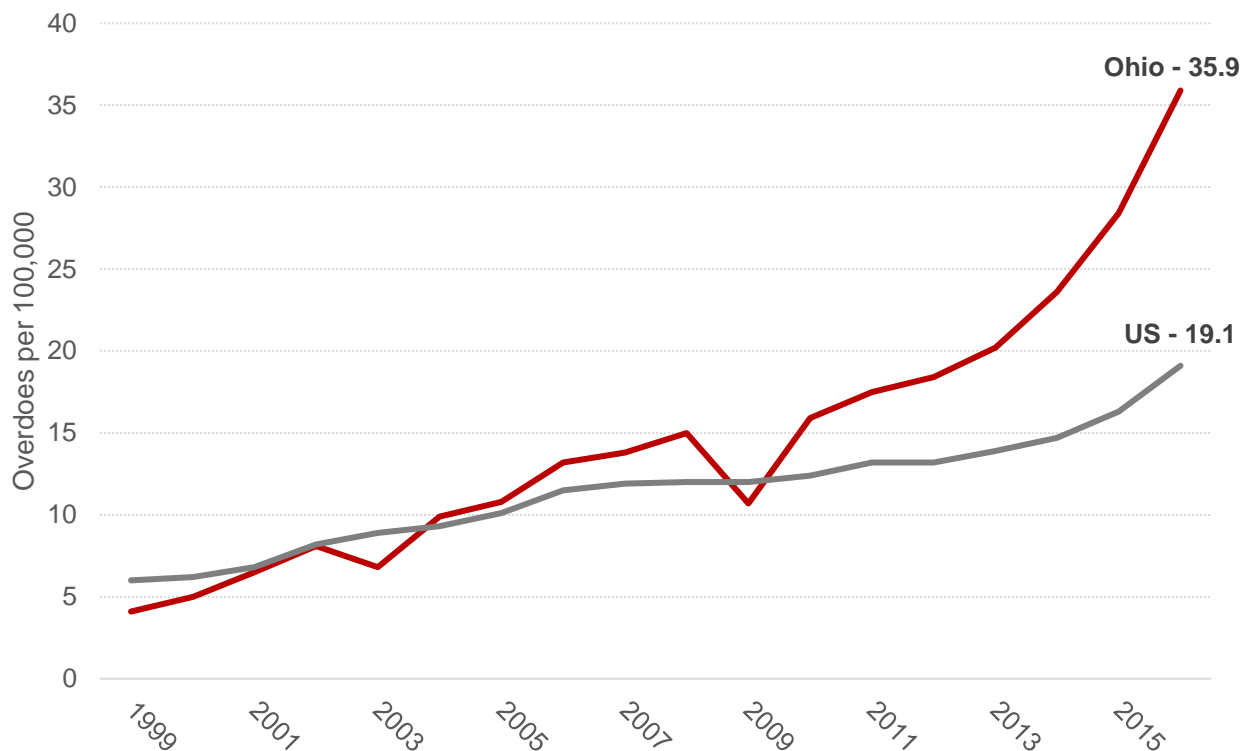
We conclude by offering two policy recommendations based on our analysis. **In the near term, the state should prioritize expanding access to treatment in underserved areas.** This would require working with physicians and hospitals in underserved areas to encourage providers to obtain the waiver required to prescribe opioid treatments to their patients. We note that Vermont offers an excellent model for expanding access to opioid treatment. **In the long term, the state should focus on improving the labor market outcomes of residents in areas severely impacted by the crisis.** Specifically, we recommend that the state focus on improving educational investments in as a way of deterring drug abuse and overdose, particularly noting the substantial evidence linking early childhood interventions on improved employment outcomes later in life.

I. Introduction: Ohio's Opioid Crisis

On August 10th, 2017, President Trump declared the opioid epidemic a national emergency.¹ Ohio leads the nation in per capita overdose deaths and has become the posterchild of the crisis in national media. Although the rise in opioid-related deaths has been well-documented, research identifying the epidemic's underlying causes and evaluations of early policy interventions have only recently come to the fore. This policy brief aims to apply recent findings to Ohio's specific context and provide evidence-based policy recommendations.

The rapid rise of drug overdose deaths in the United States and Ohio is unprecedented. Prior to the turn of the millennium, the national overdose rate was about six per 100,000 people. Estimates of the overdose rate in 2016 suggest it has more than tripled in less than two decades. Ohio's increase is even more startling, growing almost nine-fold between 1999-2016. Figure 1 demonstrates the rapid rise of overdose deaths in the U.S. and Ohio. Currently, the number of overdose deaths are greater than the peak number of car crash deaths (1973), AIDS deaths (1995), and gun-related deaths (1993) (Katz 2017). Drug overdoses are now the leading cause of death for Americans under 50 years old nationally (Quinones 2017).

FIGURE 1: Drug Overdose Rates 1999-2016



SOURCE: CDC WONDER Compressed Mortality Files 1999-2015, Ohio 2016 data from Ohio Public Health Data Warehouse, US 2016 data from NY Times

¹ Though at the time of press, a formal legal declaration has yet to be made

Table 1 demonstrates the magnitude of the crisis with respect to other causes of death in Ohio. Overdose deaths are now the leading cause of death for Ohioans under the age of 55 and the sixth leading cause of death overall.² More than two and a half times as many people die from drug overdoses than in car accidents in Ohio.

TABLE 1: Causes of Death in Ohio - 2015

Cause ³	Deaths Under Age 55	Total Deaths
Overdoses	2,744	3,304
Cancer	2,580	25,396
Heart disease	2,188	28,069
Suicide	1,088	1,650
Car crashes	794	1,259
Homicide	577	669
Chronic liver disease	440	440
Diabetes	378	3,645
Chronic lower respiratory	300	7,211

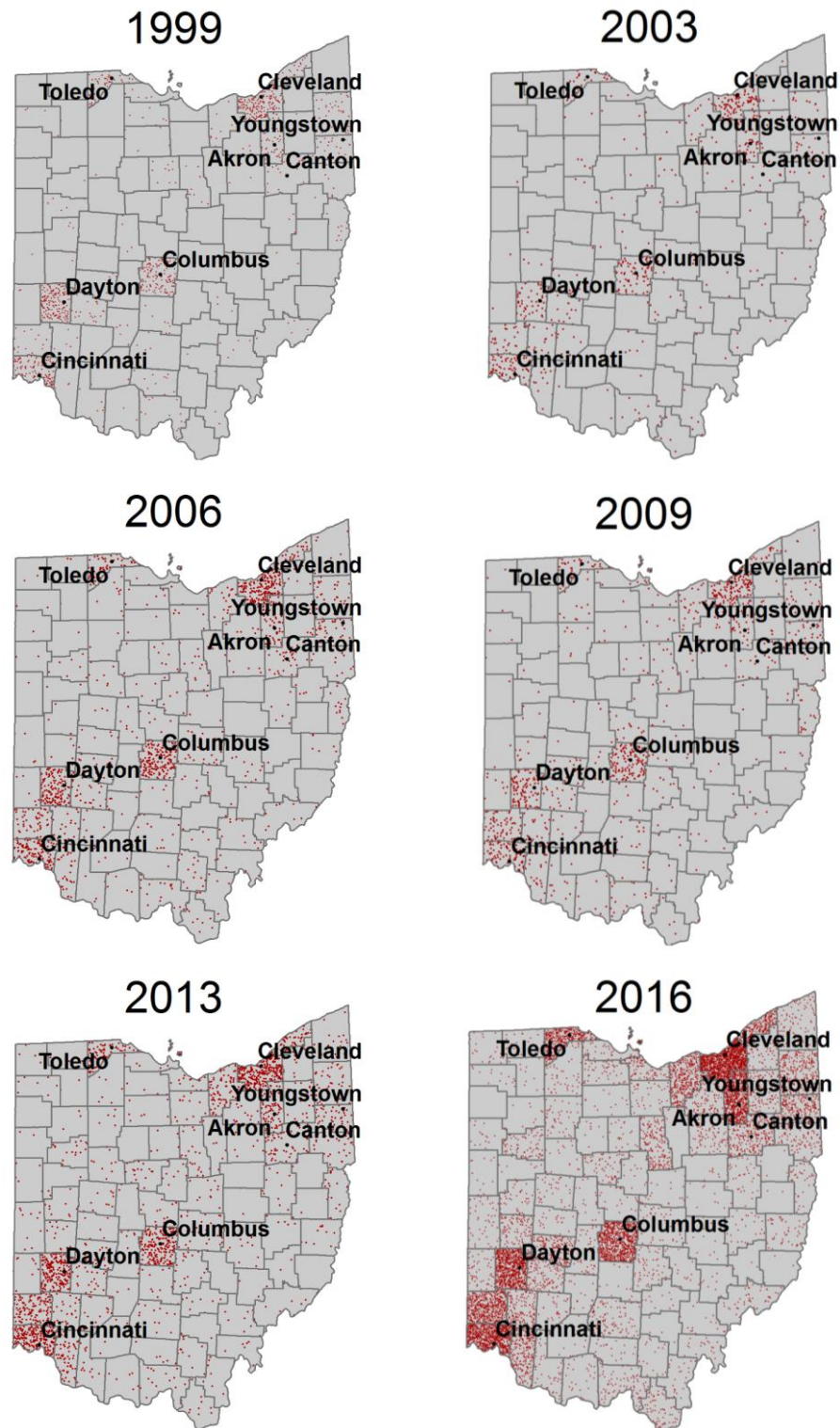
SOURCE: CDC WONDER Compressed Mortality Files 1999-2015

The crisis is not, however, spread equally across Ohio. Figure 2 shows the geographic evolution of overdose deaths between 1999 and 2016. Each dot on the map represents one death. In 1999, drug overdose deaths were largely concentrated in the urban core areas Ohio's major cities—Columbus, Cincinnati, Cleveland/Akron, Toledo and Dayton—with only a few overdose deaths in non-metro areas. By 2016, overdose deaths had spread drastically across the state, and every county in Ohio had at least one overdose death.

² Using 2016 estimates, overdose rates are the 5th leading cause of death overall in Ohio

³ ICD 10 codes for cause of death: Overdoses (X40-44, X60-64, Y10-14), Cancer (C00-C97), Heart disease (I00-I09, I11, I13, I20-I51), Suicide (X60-X84, Y87.0), Car crashes (V02-V04, V09.0, V09.2, V12-V14, V19.0-V19.2, V19.4-V19.6, V20-V79, V80.3-V80.5, V81.0-V81.1, V82.0-V82.1, V83-V86, V87.0-V87.8, V88.0-V88.8, V89.0, and V89.2), Homicide (U01-U02, X85-Y09, Y87.1), Chronic liver disease (K70, K73-K74), Diabetes (E10-E14), Chronic lower respiratory (J40-47), Influenza and Pneumonia (J09-18), Kidney disease (N00-N07, N17-N19, N25-N27), Alzheimer's (G30)

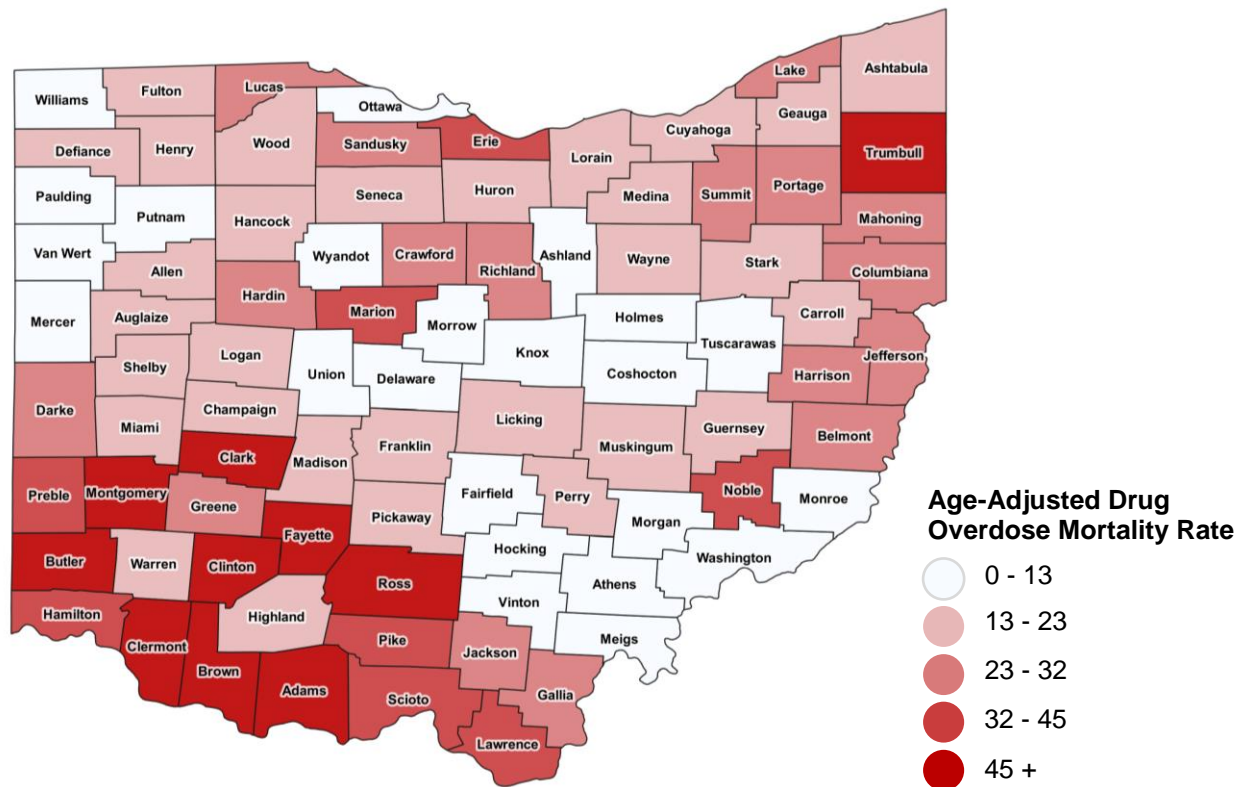
FIGURE 2: The spread of opioid overdoses in Ohio



NOTE: Overdose deaths 1999-2016. One dot represents one death. Source CDC Compressed mortality files 1999-2006, Ohio

As the opioid crisis has spread, it has affected both urban and rural communities. Figure 3 shows the age-adjusted overdose rates for Ohio counties in 2015. In 2015, only one of the top ten counties with the highest overdose rates (overdose deaths per 100,000 people) encompassed a large urban core (Montgomery County - Dayton), four of the top ten were rural, while the remaining were either suburban areas or small cities.

FIGURE 3: 2015 Age-Adjusted Drug Overdose Mortality Rates



SOURCE: Ohio Department of Health; NOTE: Overdose death count per 100,000 used where age adjusted rate is unavailable

Most analysis of opioid addiction and abuse focuses on overdose deaths because it captures the gravity of the crisis and because it is the most consistently collected data on the issue. Yet, opioid overdose deaths are only representative of the broader population of people abusing or addicted to opioids that policies should target. To analyze the full scope of Ohio's opioid problem we need to know the scale of the opioid abuse and dependency in the state.

Data on overdose deaths is far more accessible than data on opioid addiction and abuse. Data on opioid usage and dependency can only be collected through surveys, which are expensive to perform and can suffer from inaccuracies due to the hesitancy among survey respondents to

answer honestly on questions about drug abuse. Opioid overdose data is collected from death records, which are complete and less likely to suffer from inaccuracies.

In order to evaluate the full extent of the opioid crisis in Ohio, we construct an estimate that we use throughout the paper for the number of Ohioans that are abusing or dependent upon opioids. This estimate begins using survey response data from the most comprehensive national survey of drug use conducted by the US Department of Health and Human Services. The survey estimates that one percent of the US population 12 years and older abused opioids or had an opioid dependency in 2015. These estimates include illegal use of prescription opioids (0.8-percent) and heroin (0.2-percent). Unfortunately, similar data is not available at the state level. In our first estimate, we use this one percent share to calculate the number of opioid abusers in the state of Ohio (using the share of the population 16 and older).⁴

Using this procedure, we estimate that there were 92,000 Ohioans abusing or dependent upon opioids in 2015 (Table 2). We consider this a lower bound estimate given that Ohio ranks third nationally in the rate of opioid overdose deaths. This likely reflects a much higher than average level of opioid abuse, so using the national level will produce very conservative estimates. We utilize a weighting technique to correct for the fact that Ohio likely has a higher level of opioid abuse and dependency than the country as a whole. The weight is constructed using the ratio of Ohio's 2015 drug overdose rate to the national drug overdose rate in 2015. Using this weighting procedure, our estimate increases to 170,000 Ohioans abusing or dependent upon opioids in 2015.

TABLE 2. Estimated Population with Opioid Abuse/Dependency Disorder - 2015

	One percent share of pop abusing or addicted to opioids (Lower Bound Estimate)	Weighted share (Upper Bound Estimate)
Estimated Number of Ohioans with Opioid Abuse or Dependency Disorders	92,000	170,000

To put these estimates into a health context, in 2015 there were 62,000 new cancer cases in Ohio (Ohio Department of Health et al, 2016). We can also frame these numbers in economic terms. In 2016, the active Ohio labor force was 5.7 million people, down from a peak of 6 million in 2007 (BLS). If we consider the change over time, there were 300,000 fewer active workers in the labor force in 2016 than 2007. Given that opioid dependency and abuse can limit a person's

⁴ Estimates for the population 12 years old and older is not readily available from the American Community Survey, thus we use the more commonly used 16 years and older. In 2015, there were no opioid overdose deaths among the population under 15 years old, so we assume the number of opioid abusers 12 to 14 is small.

ability to participate in the labor force, one way at looking at the estimates for opioid abuse and dependency is that it could account for a third to more than a half of the decline in workforce participation since 2007.

Ohio is clearly experiencing one of the most serious health crises to face working age adults in the past 50 years. This brief will discuss factors that have contributed to the genesis of the crisis from both the supply side (increases in opioid availability) and demand side (possible reasons Ohioans demand opioids). We will also cover treatment options and the costs of the crisis. We will conclude with some policy recommendations aimed at addressing the immediate need to reduce opioid addiction, abuse, and overdoses, as well as the long term need to prevent drug related crises in the future.

II. The Costs of the Opioid Crisis

The personal and social costs of opioid addiction and abuse is high for drug users, their families, and their communities, but it also has economic costs. Addressing the opioid crisis is not just a public health issue; it is a significant economic issue.

The costs associated with opioid addiction are broadly distributed across four categories: health care and treatment costs, criminal justice costs, lost productivity among current opioid abusers, and lost productivity of drug overdose deaths. Florence et al. (2016) estimate that opioid abuse resulted in total social costs of more than \$78 billion in 2013. Medical care and substance abuse treatment for opioid abusers was the largest share of total costs, accounting for 38 percent of total costs (\$28.9 billion). They found that patients with opioid abuse had average annual health care costs that were \$13,000 greater than for similar patients that were not abusing opioids.

Twenty-seven percent (\$21.5 billion) of the costs resulted from the lost productivity of those who died from opioid overdoses. This measure of lost productivity captures the expected lifetime earnings of individuals that died from opioid overdose. This estimate suggests average lost lifetime earnings of \$1.3 million per opioid overdose death. Each additional year of productive life is valuable to both the individual and society. Due to the high social value of productive individuals, efforts to reduce opioid overdoses have significant benefits for society. Coffin and Sullivan (2013) find that even under extremely conservative scenarios, programs which distribute naloxone—a drug which counteracts opioid overdoses—to opioid abusers are highly cost-effective for society.

Twenty-six percent of total costs resulted from lost productivity of surviving opioid abusers. It has been estimated that opioid abuse reduces productivity by 17 percent among males and by 18 percent among females (National Drug Intelligence Center). Finally, ten percent resulted from spending on criminal justice, of which 96 percent was directly funded by state and local governments.

The costs of opioid addiction and abuse are born by both public and private entities. Florence et al. (2016) estimate that one quarter of the costs of opioid abuse is funded by public sources. In 2013, Medicare and Medicaid covered just over ten percent of these costs.

We use estimates for non-fatal opioid addiction and abuse costs from Florence et al. (2016) and fatal costs estimates from the Center for Disease Control to calculate the cost of opioid abuse in Ohio in 2015. Column 1 of Table 3 presents the cost estimates based on the conservative assumption that the opioid abuse and dependence rate in Ohio is equal to the national average (one percent). Using this conservative method, we estimate non-fatal costs⁵ to be \$2.8 billion. To obtain an upper bound estimate, we utilize the weighting technique discussed in the introduction, suggesting a non-fatal cost of \$5 billion. This gives us a reasonable range for the costs of non-fatal opioid abuse and dependency in 2015, ranging from \$2.8 billion to \$5.0 billion.

The cost of drug overdose fatalities in Ohio, most of which resulted from opioid abuse, is calculated using the Center for Disease Control and Prevention's (CDC) cost of fatal accidents module which calculates the lost lifetime productivity of fatal incidents of drug overdose deaths accounting for the age and gender of the deceased. In 2015, opioid overdoses resulted in \$3.8 billion in lost lifetime productivity in Ohio. In total, the cost of opioid abuse and dependency ranged from \$6.6 billion to \$8.8 billion.

TABLE 3. Cost of Opioid Abuse & Dependency - Ohio 2015

	Using one percent share of opioid abusers (Lower Bound Estimate)	Using weighted share (Upper Bound Estimate)
Non-Fatal Costs	\$2.8 billion	\$5.0 billion
Fatal Costs	\$3.8 billion	\$3.8 billion
Total Costs	\$6.6 billion	\$8.8 billion
Cost Per Capita	\$560	\$756

Using the weighting procedure, we estimate the cost per capita of opioid abuse for Ohio counties. It is important to note that these estimates are not exact, as several simplifying assumptions are made to generate these estimates. Similarly, it is important to keep in mind that these costs are not all born by the citizens within the county. For example, costs associated with medical treatment are paid for by a variety of sources, including private insurers and the federal government. Similarly, both local governments and the state government often pay for the criminal justice costs associated with opioid abuse. Yet, these estimates do likely reflect real differences in the economic burden of opioid abuse across Ohio counties.

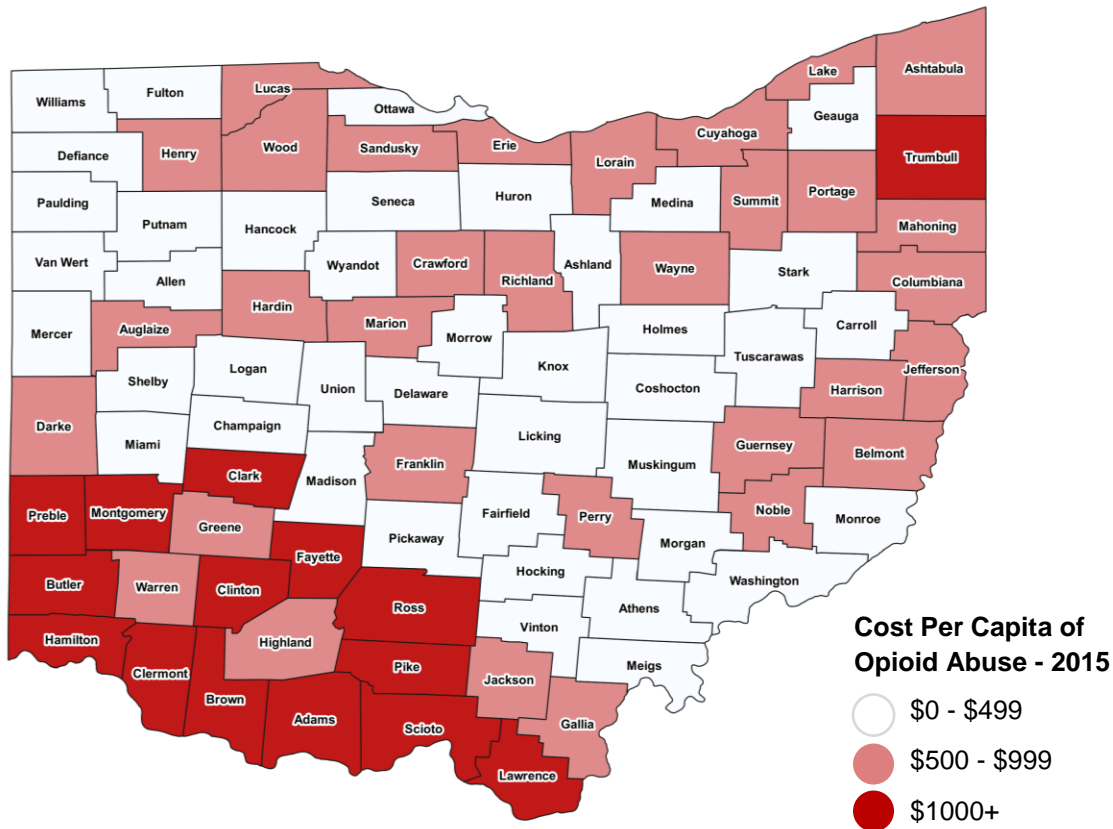
The per capita costs vary greatly across the state, reflecting the variation in the severity of opioid abuse (Figure 4). In 2015, Clark and Brown counties each had per capita costs associated with opioid abuse of more than \$1,400 per capita, while five counties in the state had

⁵ Non-fatal costs include health care costs, treatment costs, criminal justice costs, and lost productivity among opioid abusers

costs of less than \$100 per capita. The highest per capita costs were concentrated in the southwest quadrant of Ohio where per capita costs were more than \$1,000 in most counties.

Quantifying the economic costs of opioid abuse is critical to craft effective policy. Ideally, policymakers would use such estimates to evaluate the costs and benefits of measures which seek to reduce the harmful use of opioids. Yet, these costs are unevenly distributed across the state. Communities in southwest Ohio bare the largest costs of opioid abuse, and state efforts to reduce current and future opioid abuse should likely focus on this area of the state.

FIGURE 4: Cost Per Capita of Opioid Abuse – 2015



SOURCE: Authors' calculation

III. The Socio-Economic Characteristics of the Opioid Crisis

Understanding the root causes and the factors of that contributed to the genesis of the opioid crisis is critical to craft effective policy aimed at reducing opioid addiction and abuse. Opioid dependence and abuse results from a complex set of social, health, and economic factors. There is a deep academic literature studying the factors that have contributed to opioid-related overdose deaths going back to the early 1990s. In a review of this literature, King et al. (2014) identifies 17 determinants that have proven to contribute to opioid overdose deaths falling into three broad categories: prescriber behavior, user behavior and characteristics, and environmental and social factors. Research studying the current opioid crisis has focused on the rise in drug overdose deaths among white, prime-aged men with low educational attainment living in areas with high unemployment (Case and Deaton, 2015, 2017; Peirce and Schott, 2016; Rudd et al., 2016; Brown and Wehby, 2017; Carpenter et al., 2017; Hollingsworth et al., 2017).

In this section, we consider the relationship between several economic, demographic, and health factors and Ohio's recent opioid crisis. Table 4 presents the coefficient estimates produced by individually regressing a variety of economic, demographic, and health characteristics from 2010 on Ohio county drug overdose rates in 2015.⁶ This process tests for the statistical correlation between these socioeconomic factors and Ohio county overdose rates. We focus on this relationship because 2010 marked the beginning of the rapid rise in opioid overdose deaths in the state.

Economic Factors

Labor market conditions have recently been shown to have a strong relationship to the rise in opioid overdose deaths (Peirce and Schott, 2016; Brown and Wehby, 2017; Carpenter et al., 2017; Hollingsworth et al., 2017). As shown in Table 4, an Ohio county's unemployment rate in 2010 is positively correlated with overdose deaths in 2015. Thus, counties that were economically struggling in 2010 were more likely to have higher opioid overdose rates in 2015. Similarly, a higher labor participation rate in 2010 appears to be associated with a lower overdose death rate in 2015. Consistent with the public narrative, we find that counties that experienced a larger decline in manufacturing employment during the Great Recession had higher overdose rates in 2015.

⁶We use the overall drug overdose death as a proxy for opioid related overdose death because opioid related overdose is the major category among all drug related deaths.

TABLE 4. Regression Coefficients Estimating the Correlation Between Socioeconomic Factors and Overdose Mortality Rates⁷

Coefficients with 2015 Overdose Mortality Rate		
Economic Variables:		
Unemployment Rate	1.89	***
Labor Force Participation Rate	-0.44	*
% Change in Manufacturing Employment 2007 - 2010	-25.81	*
Poverty Rate	0.77	**
Median Income	-10.48	
Median Monthly Housing Cost	2.10	
Median Property Value	-3.38	
Intergenerational Mobility	-1.81	***
Demographic Characteristics:		
% of White Population	-0.54	***
% of Population between 25-34 Years Old	3.20	**
% of Population with at Least a High School Degree	-0.72	*
% of Married Population	-1.11	***
Health Factors:		
Percent insured ⁸	-0.03	
Opioid Prescriptions per Capita 2010	0.28	***
Opioid Prescriptions per Capita 2010 (Correlation with 2010 Overdose Mortality Rate)	0.16	***

Note: * significant at 10% level; ** significant at 5% level; *** significant at 1% level.

Each socioeconomic is individually regressed on the overdose mortality rate

Poverty is another factor often associated with drug overdose. Our results suggest that counties with a higher poverty rate in 2010 had high rates of overdose deaths in 2015. Interestingly, median income does not appear to be a statistically significant factor, although the coefficient is negative, suggesting that counties with higher median incomes in 2010 had lower overdose death rates in 2015, as we would expect. We suspect the lack of statistical significance could stem from a lack of statistical power in our sample.⁹ For similar reasons, the correlation for median property value and median monthly housing cost are not significant.

⁷ We collect most of our socioeconomic data from American Community Survey 2015 (five year estimate); social mobility from Chetty et al. (2014); opioid overdose and prescription data from Ohio Department of Health.

⁸ Percent insured in 2010 is not available. We use 2011 data here.

⁹ There are 88 counties in Ohio.

One narrative that has emerged to explain the rise of overdose deaths is the rise of “deaths of despair” (Case and Deaton, 2015). The story goes like this: low skill workers remember a time when their parents could support a family, buy a home, and have a valued place in society with only a high school degree. There is a sense that this life is no longer available to low skilled workers in today’s American economy as they are left behind by increasingly skilled work requirements. Such a realization, it is posited, leads to despair, drug use, and eventually overdose death. To consider this effect, we use a measure of “intergenerational mobility” from Chetty et al. (2014) as an indicator measuring how likely a child from a specific area is to earn more than their parents. We use county level intergenerational mobility data and find that an area’s mobility measure is negatively associated with opioid overdose mortality in Ohio. This result reveals the same nexus of poverty and opioid overdose: People living in Ohio counties with fewer economic opportunities were more likely to suffer from an overdose death in 2015.

Demographic Factors

While anecdotal media reports have highlighted addiction problems and overdoses across a wide ranging demographic, data points to a strong connection between educational attainment and overdoses in Ohio. Those who only have a high school degree have overdose death rates over 4.5 times higher than those with even just some college (Figure 5). When compared to those with a bachelor’s degree, those with just a high school degree have overdose death rates 14 times larger. This is consistent with the findings of Case and Deaton (2015) who found that increases in mortality rates for whites age 45-54 were driven entirely by those with a high school degree or less. In a follow-up study (Case and Deaton 2017), they found that not only are mortality rates diverging for non-Hispanic whites by education levels, but mortality is declining for those with a college degree and rising for those without. They attribute these trends to cumulative disadvantages in work, marriage, and health associated with those who only have a high school degree. Consistent with these findings, we find that overdose rates were higher in counties with lower marriage rates and lower high school graduation rates.

FIGURE 5: Ohio Overdose Rates by Education Level

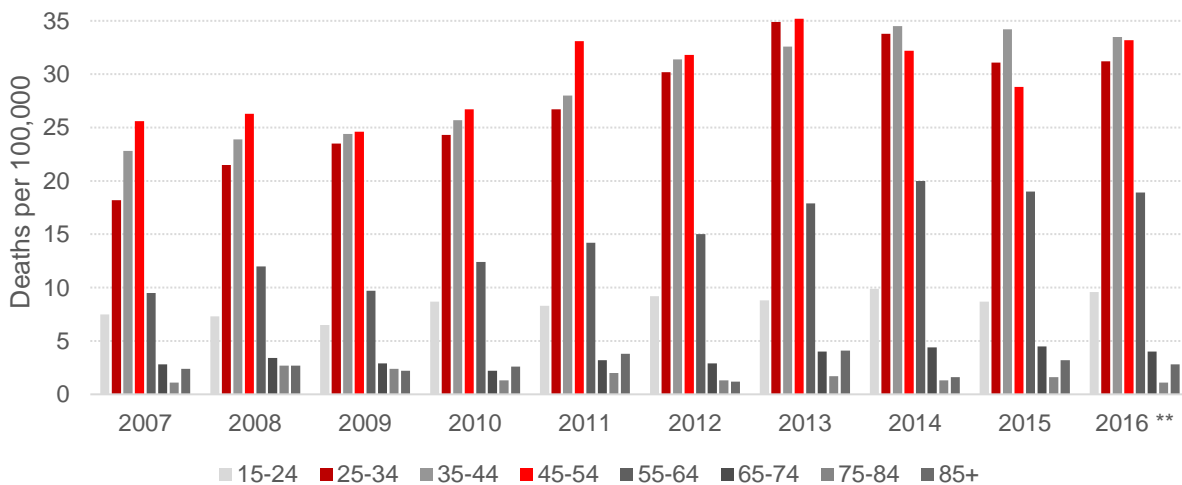


SOURCE: Ohio Public Health Data Warehouse. High school dropouts are not included in these numbers because the data source does not distinguish between high school dropouts and current students, skewing the measure.

Case and Deaton’s work focuses primarily on whites age 45-54. If we look at the age profiles of overdose deaths in Ohio, we see middle-aged workers may have been a driving force at the beginning of the crisis, but as time has gone on overdose deaths have trended younger. By 2014, both overdose death rates for 25-34 year olds and 35-44 year olds had surpassed those of 45-54 year olds (Figure 6). In Table 4, we find that counties with a higher share of population between 25 and 34 years old had a higher overdose death rate in 2015. The takeaway is that overdose deaths are concentrated within the prime working years for Ohio’s citizens, which will have increasing implications for the dynamism of Ohio’s economy. Finally, it is worth noting that the male overdose rate is approximately double the female rate, which is consistent with national trends.

In Table 4, we find one result that runs counter to the dominant narrative connecting the overdose deaths to the white population. Instead, we find that counties with a larger white population had a lower overdose rate in 2015. While research has found that the recent rise in drug overdoses have largely been driven by the white population, people of color are still more likely to die of a drug overdose than white people in Ohio.

FIGURE 6: Ohio Overdose Rates by Age



SOURCE: Ohio Public Health Data Warehouse

Health Factors

It is often thought that the over-prescription of opioid pain medications is a key contributor to the current opioid epidemic. To consider this relationship, we correlate the overdose mortality rate with opioid prescriptions per capita for Ohio counties. We find a positive relationship, suggesting that counties that had higher opioid prescriptions per capita experienced higher opioid overdose

death rates. We also observe that this effect has increased overtime, from 0.16 in 2010 to 0.28 in 2015. This increasing relationship likely reflects the shift towards dangerous prescription opioid alternatives like heroin and fentanyl corresponding with the increased availability of these illicit drugs and increased state regulation of prescription opioids after 2010.

We also consider the relationship between the percent of the population insured in 2011 and opioid overdose death rates in 2015 (Table 4). We find that insurance rates did not have a statistically significant relationship with overdose rates. One possible explanation for this finding is that the insurance rates in a county can have offsetting effects on the opioid overdose death rate. When people have insurance, they have greater access to medical treatment that may help them avoid or overcome opioid dependence and abuse. This effect would lower the overdose rate. Yet, higher levels of insurance also likely correlates with increased access to prescription opioids, which as we have shown can lead to increased opioid overdose deaths.

IV. Access to Opioid Treatment

Reducing the rate of opioid addiction, abuse and overdose will require a broad range of policies, including ensuring that those that are opioid dependent are able to access treatment. Effective treatment for people suffering from opioid dependence must take into consideration the physical, emotional, and social factors that contribute to opioid abuse.

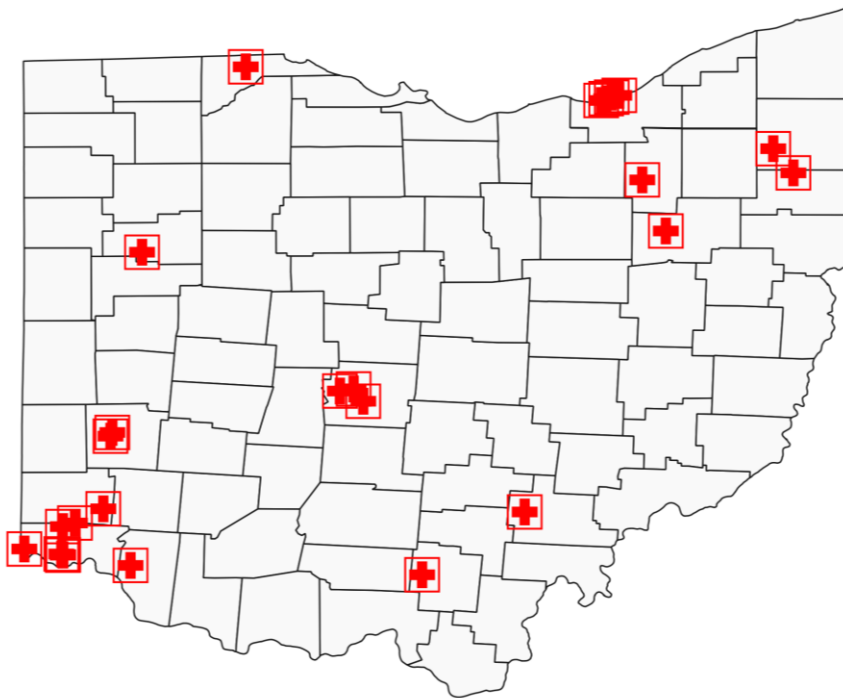
One essential component of a comprehensive opioid treatment is medication-assisted therapies (MAT) (Volkow et al., 2014). MATs are treatments that include the use of medications along with counseling and other supports. When properly administered, medication-assisted treatments have been shown to be the most effective method of treating opioid addiction and reducing overdose deaths by allowing the patient to regain a normal state of mind, reduce withdrawal symptoms, and manage opioid cravings (Connery, 2015). Given that opioid addiction is increasingly treated as a chronic disease like heart disease or diabetes, long-term access to physicians that can provide treatment and medication is critical to preventing recidivism.

There are three common medications used in the treatment of opioid addiction: methadone, buprenorphine, and naltrexone. Methadone and buprenorphine trick the brain into thinking that the body is getting the destructive opioid. The person taking these medications feels normal, not high, and the medication prevents withdrawal while reducing cravings. Methadone and buprenorphine treatments cost about \$6,500 per year (U.S. Department of Defense, 2016). Naltrexone works in a different way by blocking the effects of opioid drugs. As a result, a patient on naltrexone cannot get high, and it is most commonly used to help prevent relapse. Naltrexone is much more expensive than the other treatments, costing about \$14,000 per year (U.S. Department of Defense, 2016).

The administration of treatments for opioid abuse is regulated by the Substance Abuse and Mental Health Services Administration (SAMHSA). Methadone is the most highly regulated treatment and can only be administered by certified treatment facilities. Patients are required to visit these facilities each day to receive their methadone medication. Figure 7 maps the 26

certified methadone treatment centers in Ohio. The map shows clear disparities across Ohio counties in the access to methadone treatment centers. More than half of the centers are located in urban cores. Just two treatment centers are located in non-metro areas (Jackson, Ohio & Athens, Ohio). This low geographic distribution of methadone treatment centers presents a major barrier to treatment. Given that one must visit a methadone treatment center daily to receive the medication, most people in rural areas of Ohio are essentially left without access to this treatment.

FIGURE 7: Methadone Treatment Centers

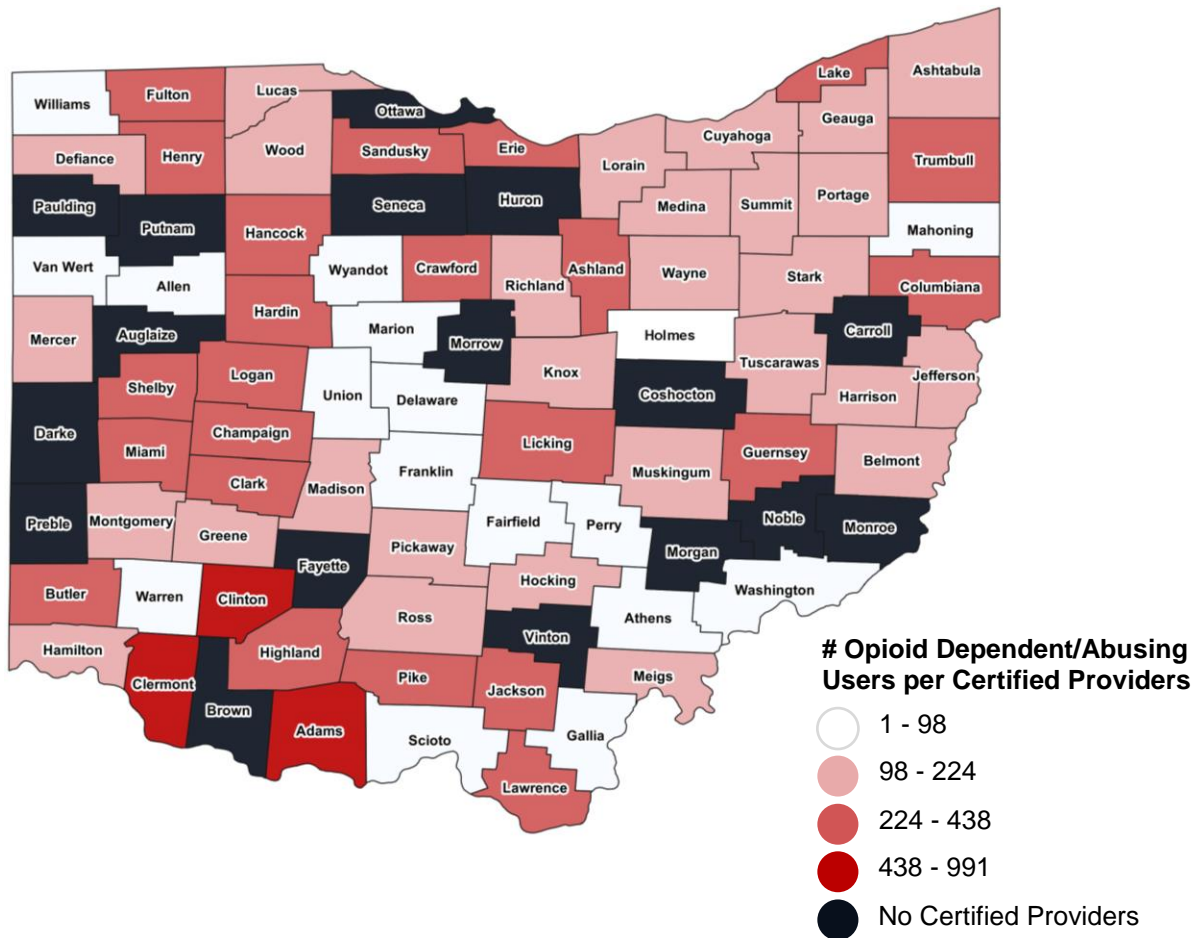


SOURCE: Substance Abuse and Mental Health Services Administration

Buprenorphine was the first drug approved to treat opioid abuse that can be prescribed or dispensed in physician offices. Buprenorphine is intended to greatly increase access to treatment, although it is still regulated by SAMSHA. Physicians must complete an opioid treatment training and obtain a waiver from SAMSHA to prescribe buprenorphine to patients. Waivers allow physicians to prescribe buprenorphine to 30 patients at a time, 100 patients at a time, or 275 patients at a time. In 2016, 273 physicians in Ohio were certified to treat 30 patients at a time, while 104 physicians were certified to treat 100 patients at a time. That means that just over 18,000 opioid dependent patients could have received buprenorphine treatment in 2016, assuming every certified physician treated the maximum number of patients. To put this into context, we estimate that between 92,000 and 170,000 Ohioans were abusing or

dependent upon opioids in 2015, which means that only 10 to 20 percent of those opioid users would have been able to receive buprenorphine treatment, assuming that all certified physicians treated the maximum number of patients. Including methadone treatment capacity, Jones et al. (2015) estimate that Ohio only had capacity to treat 40-percent of people with opioid dependency in 2012. Since then, overdoses have increased markedly, but treatment facilities have not.

FIGURE 8: Estimated Number of Dependent/Abusing Users per Providers Certified to Prescribe Buprenorphine



SOURCE: Abusing/Dependent Opioid Users – Authors’ calculation; Certified Doctors - SAMHSA buprenorphine treatment locator

While buprenorphine expands the number of physicians that can use MATs to treat opioid abuse and dependence, access to certified physicians is not equally distributed across the state. Figure 8 shows the number of people abusing or dependent upon opioids (2015, authors’ calculation) per certified doctor (2017, SAMSHA). The lightly shaded counties have the best

access to buprenorphine treatment. In these areas, doctors certified to treat at least 100 patients would be able to meet all of the need for treatment. The seventeen counties shaded black do not have any doctors certified to prescribe buprenorphine. While many of these counties had drug overdose rates well below the state average in 2015, Brown (58 overdoses per 100,000), Fayette (53.9 overdoses per 100,000) and Preble (40 overdoses per 100,000) had overdose rates that greatly exceeded the state average, yet have no doctors certified to prescribe buprenorphine. The area of greatest concern in Figure 8 is the region of southwest Ohio that includes Clinton, Fayette, Brown, Clermont, Adams, and Highland counties. Opioid dependence and abuse is very intense in this primarily rural region of the state, yet it has one of the lowest levels of treatment access in Ohio.

Naltrexone is the least regulated of the opioid treatment medications. Any doctor certified to prescribe medication can prescribe naltrexone. Yet, this does not necessarily mean it is more accessible. As we've noted, naltrexone treatment is more than twice as expensive as methadone and buprenorphine treatment. An additional barrier to accessing naltrexone is that it requires that a patient complete a detoxification from opioids before treatment can begin. The most common methods of medically assisted withdrawal from opioid dependence include prescribing either methadone or buprenorphine to control withdrawal symptoms. If dependent opioid users are unable to access the medical treatment they need to safely manage an opioid withdrawal, they are unlikely to reach a point at which naltrexone is a viable option for sustained treatment. Given these barriers, naltrexone is most commonly used by drug courts in Ohio as a treatment for people arrested for drug related crimes.

Medication-assisted treatment has been shown to be a cost-effective approach to treating opioid addiction. It has been estimated that for every dollar spent on methadone and buprenorphine treatment, \$1.80 in social savings would be realized (Institute for Clinical and Economic Review, 2014). Most of these savings are achieved through reduced medical spending. Lynch et al. (2014) estimate that treating opioid dependent patients using buprenorphine and addiction counseling can reduce annual medical expenses for opioid dependent patients by \$20,000 per year.

Increasing access and utilization of medication-assisted treatment is critical for Ohio to address the opioid crisis. As we have emphasized, ensuring that dependent opioid users have access to trained prescribers is an essential aspect of opioid treatment, and should be a priority for the state. There are additional policy issues that are also important to consider. Policies related to how public and private insurers manage the utilization of opioid treatment, limits on dosages prescribed, annual and lifetime medication limits, and cumbersome processes to authorize and reauthorize treatment all potentially limit the access and effectiveness of opioid treatment (American Society of Addiction Medication, 2013).

V. Conclusions & Policy Discussion

Opioid addiction, abuse, and overdose deaths have had devastating effects on families and communities in Ohio. State and local policymakers have rightly given this issue significant attention. As we've noted, opioid abuse and dependence in Ohio likely generates between \$6 and \$8 billion in annual costs. Ohio's latest biennium budget passed in 2017 allocated \$170 million in funding to address the opioid epidemic through programs addressing mental health, child and family welfare, criminal justice, and assistance to local governments. Additionally, Ohio adopted new rules in August 2017 requiring that physicians, doctors, and physician assistants provide details on the diagnosis and procedures when opioids are prescribed to patients. The policy aims to reduce the over-prescription of opioids, and medical professionals will face sanctions if they are found to be over-prescribing.

Yet, these policies overlook the most glaring opportunity to reduce opioid abuse and overdose deaths: increase access to treatment. Medical research has consistently found that medication-assisted treatment is the most clinically and cost effective means of reducing opioid abuse and overdose deaths. Yet, as we show in Figures 7 and 8, many Ohioans have either limited or no access to medical providers that can treat their addiction. We estimate that only 10 percent to 20 percent of Ohioans that are addicted to or abusing opioids could be treated with buprenorphine given the number of certified physicians. As we've noted, access to treatment varies widely across the state, with many residents in rural counties completely lacking access to opioid treatment.

The state should make increasing access to office based buprenorphine treatment a top priority. Research has found that Medicaid support and state efforts to educate physicians on appropriate buprenorphine usage can increase the number of physicians that can prescribe buprenorphine in a state (Stein et al., 2016). One of the best examples of state efforts to increase access to office based opioid treatment (OBOT) is Vermont. In 2000, Vermont was one of eight states in the US without any opioid abuse treatment providers, forcing residents to travel to neighboring states to get treatment. Today, Vermont has excess capacity to treat opioid addiction (Vestal, 2016). This remarkable increase in access to opioid treatment was achieved through the implementation of a novel hub and spoke based model which connected regional opioid addiction treatment centers with "spoke" providers certified to prescribe buprenorphine, including family practitioners, internists, psychiatrists, obstetricians, private group practices, hospital-owned practices, and solo practices (Brooklyn & Sigman, 2015). Patients are referred to a hub or a spoke based on their particular medical needs, and hubs provide regular support and training to spoke physicians treating opioid addiction. Because of this program, nearly 75-percent of the patients diagnosed with an opioid use disorder in Vermont were receiving medication assisted treatment by the end of 2014. In 2015, Vermont's opioid overdose death rate was 13.7 per 100,000 people compared to 31.3 per 100,000 in neighboring New Hampshire.

While increasing access to opioid treatment can help to address the short-term crisis, Ohio should also consider policies that seek to reduce long-run drug abuse. In response to skyrocketing overdose rates, states began to address the problem by trying to stop the flow of prescription opioids. Many states implemented prescription drug monitoring programs, some of which were of the more highly effective “must access” laws that required physicians to check prescription databases before prescribing opioid pain relievers. In many of the “must access” states, including Ohio, prescription rates came down significantly. Unfortunately, the declining availability of controlled prescription opioids likely forced those with an opioid dependence to street drugs like heroin, fentanyl, and carfentanil, resulting in a sharp increase in the overdose rate. This—along with simultaneous rises in suicide and liver disease death rates—suggests that while controlling the supply of both legal and illegal opioids has a role in the solution to the opioid epidemic, addressing the underlying factors that have contributed to increased demand for such highly addictive substances, especially among those with low education levels, is central to long-term solutions to the crisis.

Emerging research has found that unemployment and underemployment may be linked to increased demand for opioids (Case and Deaton 2017; Hollingsworth, Ruhm, and Simon 2016). Labor market prospects for those without a college education have declined considerably in the past several decades. The college wage premium—the average earnings difference between college and high school educated workers—has increased significantly since the mid-1960s. In 1965, high school graduates earned about 77% of college graduate salaries. By 2013 that had decreased to 62%. Maybe even more important is that high school educated workers not only lost ground relative to college workers, but in absolute terms as well. High school graduates now earn about 10% less than their counterparts in the 1960s, after accounting for inflation (Pew Research Center). Rural areas have been especially affected by these trends. Rural areas still lag metro areas in education (USDA 1), leaving them more susceptible to the overdose epidemic. Apart from education levels, rural areas have lagged metro areas coming out of the Great Recession, with slower employment and population growth (USDA 2), further creating conditions for high opioid use in non-metro areas. Ohio has largely followed those national trends. However, it is important to recognize that the opioid epidemic is not a singularly urban or rural issue. Montgomery County, part of the Dayton metro area, has the highest overdose rate in the state, and four of the ten counties with the highest overdose rates are rural.

The labor force participation rate in the U.S. has declined considerably since 2000 and has now reached a 40-year low. Some of this is due to retirements in the baby boomer generation, but a significant share is from prime-age men leaving the labor force (Krueger 2017). Recent work on the connection between opioid use and labor force participation has found that half of the prime age men who are not in labor force use pain medication daily, and nearly two-thirds of those use prescription pain medication (Krueger 2017). However, more research is needed to determine whether opioids are keeping prime-age men from the labor force, men who have given up hopes of meaningful employment have turned to opioids, or opioids have been prescribed to men experiencing legitimate pain that has kept them from working.

Ohio in particular has seen declines in manufacturing jobs over the past 40 years, but an even sharper drop since 2000, which is right about the time overdose deaths began to rise sharply.

Automation and outsourcing have eliminated most of these jobs and have contributed to the decline in employment prospects for those at the low end of the educational distribution. Recent research has found that one more robot per thousand workers reduces the employment/population ratio by about 0.18-0.24 percentage points (Acemoglu and Restrepo 2017). Other work has found that counties that were more greatly impacted by the permanent normalization of trade relations with China exhibit higher rates of suicide and related causes of death, concentrated among whites, especially white males (Pierce and Schott 2016). While federal policymakers can take steps to ease the impacts of international trade deals by providing ample lead time for workers to transition out of their current jobs, it is unlikely policymakers can influence the pace of innovation and automation without having serious negative consequences for the overall economy. Automation and outsourcing will likely continue to play a large role in Ohio's labor markets, especially so in the case of automation. In previous decades changes to the labor market were slower, giving workers more time to adjust and find alternative employment. The rate of technological advancement and global communications have rapidly changed, meaning that the U.S. needs new policies that match the pace of industry innovation to help workers through disruptive labor-market transitions.

There are no easy policy levers that will quickly improve the labor market prospects of Ohioans with a high school degree or less. How to effectively help older jobless workers has long been a perplexing problem for economists. Public programs to retrain workers for higher skill jobs have not had a particularly strong track record and enrolling in higher education has lower returns for older workers because they have a shorter time horizon to reap the benefits of a college education. The increasing disparity between college and high school worker earnings and the resultant health consequences have increased the benefit to cost ratio of a college degree, but those too are in part offset by increasing tuition costs.

Over the long term, the prospects of positively influencing individual labor market outcomes is better. Increasingly, sound research is demonstrating the importance of early childhood interventions, especially for those born into poor families and communities, in improving a child's labor market prospects as an adult (Bartik, Gormley, and Adelstein 2012; Heckman et al. 2010). Earlier educational investments and increased educational investments over the life course, including reducing barriers to higher education for poorer households, will decrease the percentage of adults that believe they have little to offer the labor market. There are no quick fixes to the opioid crisis, but continued investment the education, skills, physical health, and mental health of Ohio's citizens will yield healthier communities with less drug overdoses in the long run.

References

- American Society of Addiction Medicine. (2013). Advancing Access to Addiction Medications: Implications for Opioid Addiction Treatment
- Bartik, T.J., Gormley, W. and Adelstein, S. 2012. Earnings benefits of Tulsa's pre-K program for different income groups. *Economics of Education Review*, 31(6), pp.1143-1161.
- Brooklyn, J. R., & Sigmon, S. C. (2017). Vermont Hub-and-Spoke Model of Care for Opioid Use Disorder: Development, Implementation, and Impact. *Journal of Addiction Medicine*, 11(4), 286.
- Brown, E., & Wehby, G. L. (2017). Economic Conditions and Drug and Opioid Overdose Deaths. *Medical Care Research and Review*, 1077558717722592.
- Case, A., & Deaton, A. (2015). Rising morbidity and mortality in midlife among white non-Hispanic Americans in the 21st century. *Proceedings of the National Academy of Sciences*, 112(49), 15078-15083.
- Case, A., & Deaton, A. (2017). Mortality and morbidity in the 21st century. *Brookings Papers on Economic Activity*, 23-24.
- Carpenter, C. S., McClellan, C.B., and Rees, D.I. "Economic conditions, illicit drug use, and substance use disorders in the United States." *Journal of Health Economics* 52 (2017): 63-73.
- Chetty, R., Hendren, N., Kline, P., & Saez, E. (2014). Where is the land of opportunity? The geography of intergenerational mobility in the United States. *The Quarterly Journal of Economics*, 129(4), 1553-1623.
- Center for Substance Abuse Treatment. (2005). Medication-assisted treatment for opioid addiction in opioid treatment programs.
- Connery, H. S. (2015). Medication-assisted treatment of opioid use disorder: review of the evidence and future directions. *Harvard Review of Psychiatry*, 23(2), 63-75.
- Heckman, J.J., Moon, S.H., Pinto, R., Savelyev, P.A. and Yavitz, A., 2010. The rate of return to the High Scope Perry Preschool Program. *Journal of Public Economics*, 94(1), pp.114-128.
- Hollingsworth, A., Ruhm, C. J., & Simon, K. (2017). Macroeconomic conditions and opioid abuse (No. w23192). National Bureau of Economic Research.
- Institute for Clinical and Economic Review. (2014). Management of patients with opioid dependence: review of clinical, delivery system, and policy options. Available at:

<http://cepac.icer-review.org/wp-content/uploads/2014/04/CEPAC-Opioid-Dependence-Final-Report-For-Posting-July-211.pdf>

- Jones, C. M., Campopiano, M., Baldwin, G., & McCance-Katz, E. (2015). National and state treatment need and capacity for opioid agonist medication-assisted treatment. *American Journal of Public Health (ajph)*.
- Katz, J. "Drug Deaths in America Are Rising Faster Than Ever". *The New York Times*, <https://www.nytimes.com/interactive/2017/06/05/upshot/opioid-epidemic-drug-overdose-deaths-are-rising-faster-than-ever.html>. June 5, 2017
- King, N. B., Fraser, V., Boikos, C., Richardson, R., & Harper, S. (2014). Determinants of increased opioid-related mortality in the United States and Canada, 1990–2013: a systematic review. *American Journal of Public Health*, 104(8), e32-e42.
- Krueger, A.B., 2017. Where Have All the Workers Gone? An Inquiry into the Decline of the US Labor Force Participation Rate. In *Conference draft, Brookings Papers on Economic Activity*.
- Lynch, F. L., McCarty, D., Mertens, J., Perrin, N. A., Green, C. A., Parthasarathy, S., Dickerson, J.F., Anderson, B.M. & Pating, D. (2014). Costs of care for persons with opioid dependence in commercial integrated health systems. *Addiction Science & Clinical Practice*, 9(1), 16.
- National Drug Intelligence Center (2011). The Economic Impact of Illicit Drug Use on American Society. *Washington DC: United States Department of Justice*.
- Ohio Department of Health and The Ohio State University. (2016) *Cancer in Ohio 2016: Ohio Cancer Incidence Surveillance System*, Columbus, Ohio
- Pew Research Center. The Rising Cost of Not Going to College. February 11, 2014.
- Pierce, J. R., & Schott, P. K. (2016). Trade liberalization and mortality: Evidence from US counties (No. w22849). National Bureau of Economic Research.
- Rudd, R. A., Aleshire, N., Zibbell, J. E., & Matthew Gladden, R. (2016). Increases in drug and opioid overdose deaths—United States, 2000–2014. *American Journal of Transplantation*, 16(4), 1323-1327.
- Stein, B. D., Gordon, A. J., Dick, A. W., Burns, R. M., Pacula, R. L., Farmer, C. M., Leslie, D.L. & Sorbero, M. (2015). Supply of buprenorphine waived physicians: the influence of state policies. *Journal of Substance Abuse Treatment*, 48(1), 104-111.
- US Department of Health and Human Services. (2016). *Results From the 2015 National Survey on Drug Use and Health: Summary of National Findings*. Rockville, MD: Substance Abuse and Mental Health Services Administration

U.S. Department of Defense, Office of the Secretary. (2016). TRICARE; Mental Health and Substance Use Disorder Treatment. Federal Register

USDA 1. *Nonmetro education levels are improving, but still lag metro.*

<https://www.ers.usda.gov/data-products/chart-gallery/gallery/chart-detail/?chartId=58306>

USDA 2. Rural Employment and Unemployment. <https://www.ers.usda.gov/topics/rural-economy-population/employment-education/rural-employment-and-unemployment/>

Volkow, N. D., Frieden, T. R., Hyde, P. S., & Cha, S. S. (2014). Medication-assisted therapies—tackling the opioid-overdose epidemic. *New England Journal of Medicine*, 370(22), 2063-2066.

Vestal, C. (2016, January 15). Few Doctors Are Willing, Able to Prescribe Powerful Anti-Addiction Drugs. *pewtrusts.org*

Reproduced with permission from Tax Management Compensation Planning Journal, Vol. 46, No. 5, p. 90, 05/04/2018. Copyright © 2018 by The Bureau of National Affairs, Inc. (800-372-1033) <http://www.bna.com>

Mental Health Parity: Compliance Steps for Plan Sponsors

By Gretchen Harders, Esq., Cassandra Labbees, Esq., and Kevin Malone, Esq.*

Plan sponsors face a myriad of difficulties in ensuring their group health plans comply with the requirements of the Mental Health Parity and Addiction Equity Act (MHPAEA).¹ MHPAEA prevents group health plans and health insurance issuers that provide mental health or substance use disorder (MH/SUD) benefits from imposing less favorable benefit limitations on MH/SUD benefits than medical or surgical benefits.² Generally all group health plans, whether self-funded or fully-insured, that provide MH/SUD benefits must comply with parity rules, with limited exceptions for small employers (less than 51 employees), retiree-only health plans, or plans that meet the increased cost exemption.

* Gretchen Harders is a member of Epstein Becker & Green, P.C.'s Employment, Labor & Workforce Management and Health Care & Life Sciences practices in the New York office specializing in employee benefits and executive compensation. Cassandra Labbees is an associate with the firm's New York office in the Employment, Labor & Workforce Management practice specializing in employee benefits and executive compensation. Kevin Malone is an associate with the firm's Washington D.C. office in the Health Care & Life Sciences practice specializing in managed care and value based purchasing and accountable care. Mr. Malone formerly served at HHS in the federal coordinated health care office of CMS as a health insurance specialist.

¹ Pub. L. No. 110-343, Div. C, §511, §512.

² ERISA §712(e) defines medical or surgical benefits as benefits with respect to services for medical or surgical services as defined under the terms of the plan or health insurance coverage, but does not include mental health or substance use disorder services. Mental health benefits are with respect to services for mental health conditions, as defined under the terms of the plan and in accordance with applicable federal and state law. Substance use disorder benefits are benefits with respect to services for substance use disorders, as defined under the terms of the plan and in accordance with applicable federal and state law.

Compliance with MHPAEA has taken on a sharper focus under the 21st Century Cures Act, which was signed into law on December 18, 2016, and requires the Department of Health and Human Services (HHS), the Department of Labor (DOL), and the Department of Treasury (Treasury) to: (1) issue guidance to improve compliance of group health plans and health insurance coverage with parity between MH/SUD benefits and medical or surgical benefits; (2) publish public feedback on the disclosure request process for documents relating to parity requirements; and (3) audit plan documents for compliance with parity.³ To this end, on June 16, 2017, the DOL, HHS, and Treasury released ACA implementation FAQs Part 38, a Paperwork Reduction Act Notice, and a Draft Model Form, and solicited comments.⁴ On April 23, 2018, the agencies released Proposed FAQs About Mental Health and Substance Use Disorder Parity Implementation and the 21st Century Cures Act Part XX,⁵ along with an updated Model Form to request documentation from an employer group health plan or insurers regarding treatment limitations (incorporating the public comments on the draft form),⁶ and a Self-Compliance Tool For MHPAEA designed to assist plan sponsors.⁷

Along with increased disclosure requirements, plan sponsors will be under greater pressure to ensure compliance with MHPAEA. The President's Commis-

³ Pub. L. No. 114-255, Div. B, §13007.

⁴ The model form could be used by participants, enrollees, or their authorized representatives to request relevant MHPAEA disclosures. Payers asked the agencies to cut down on the amount of information the MHPAEA regulations and disclosure require a plan sponsor to provide. The full list of commenters and comments is at: <https://www.dol.gov/agencies/ebsa/laws-and-regulations/rules-and-regulations/public-comments/faq-38>.

⁵ [Proposed] FAQs About Mental Health and Substance Use Disorder Parity Implementation and the 21st Century Cures Act Part XX (hereinafter the Proposed MHPAEA FAQs), <https://www.dol.gov/sites/default/files/ebsa/about-ebsa/our-activities/resource-center/faqs/aca-part-39-proposed.pdf>.

⁶ See <https://www.dol.gov/sites/default/files/ebsa/laws-and-regulations/laws-and-regulations/mental-health-parity/mhpaea-disclosure-template-draft-revised.pdf>.

⁷ 2018 MHPAEA Self-Compliance Tool, <https://www.dol.gov/sites/default/files/ebsa/about-ebsa/our-activities/resource-center/publications/compliance-assistance-guide-appendix-a-mhpaea.pdf>.

sion on Combating Drug Addiction and the Opioid Crisis issued its final report November 1, 2017, which recommended, among other things, that the DOL be granted increased authority to oversee and investigate insurers for parity violations, as well as for federal and state regulators to use a standard data collection tool for documenting and disclosing compliance strategies for parity of non-quantitative treatment limitations for SUD benefits.

According to the report on the DOL Employee Benefit Security Administration's (EBSA's) enforcement activity from 2017, the DOL conducted 187 investigations of employer group health plans (out of 2.2 million plans) for MHPAEA compliance and cited 92 violations,⁸ more than double the number of violations cited in 2016 (44). Furthermore, litigation by Employee Retirement Income Security Act beneficiaries involving claims based on MHPAEA have continued at a steady pace over the years. Many ERISA lawsuits have been brought by parents acting on behalf of dependent children with behavioral health conditions, especially with respect to autism-spectrum conditions and eating disorders. ERISA plaintiffs have pursued class actions over parity issues. Further, courts have allowed limited health care provider and provider association standing for assigned post-service claims, increasing the incentive for litigation by non-plan participants.

To address the increasing risks to plan sponsors of parity compliance, this article focuses on the legal requirements, enforcement, and litigation activity and provides a checklist for best practices in auditing plan compliance. This article is organized into four sections: (1) summary of the MHPAEA requirements; (2) outline of regulatory enforcement actions; (3) discussion of recent MHPAEA litigation; and (4) a step-by-step checklist for periodic plan review by plan sponsors to ensure MHPAEA compliance.

MHPAEA REQUIREMENTS

If an employer group health plan offers MH/SUD benefits, the plan should ensure that the benefits are provided in parity with medical or surgical benefits with regards to: (1) annual and lifetime limits; (2) financial requirements and quantitative treatment limitations; and (3) non-quantitative treatment limitations.

Classification of Benefits

The first step in determining whether a benefit package is designed and delivered in compliance with MHPAEA is to identify and classify benefits as MH/SUD or medical or surgical benefits and then into one of six classifications of benefits (for a total of twelve categories). The six classifications are:⁹

- Inpatient in-network,

- Inpatient out-of-network,
- Outpatient in-network,
- Outpatient out-of-network,
- Emergency, and
- Prescription Drugs.

To ensure compliance with MHPAEA, plan sponsors should confirm that any condition or disorder defined in a plan as being (or not being) a mental health condition or substance use disorder is consistent with generally recognized independent standards of current medical practices. This ensures that benefits are not classified in order to avoid parity requirements.¹⁰ The definitions must be consistent with generally recognized independent standards of current medical practice.¹¹ Three tools that plans may use to MH/SUD benefits are: (1) the most current version of the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM-5); (2) the most current version of the International Classification of Diseases (ICD-10); or (3) state guidelines.

All services covered under the group health plan must be identified and classified. Services can be placed into multiple classifications but will be analyzed based on how they are developed and applied to enrollees with a primary MH/SUD diagnosis in comparison to how the limits on that benefit are developed and applied as to enrollees with a primary medical or surgical diagnosis. For part of the analysis, it may be necessary to distinguish the dollars expended for services based on the benefits classification.

Important Note: These classifications of benefits will serve as the basis for all the other steps in the MHPAEA analysis so it is very important that the plan consistently classify benefits, have a firm evidentiary basis for the classification decisions, and have access to data on all the benefits by classification. For many health plans, this initial step in the process takes as long as or longer than any other part of the MHPAEA process. Further, it will be impossible to prove to a regulator that a plan is operating in a compliant manner if plan sponsors only develop the classifications in response to a market conduct exam or other request. Regulators are likely to conclude that the plan sponsors have not been analyzing plan benefit and limit changes for MHPAEA compliance.

Annual and Lifetime Limits

The annual and lifetime dollar limits parity requirements only apply to the extent that the MH/SUD benefits are not essential health benefits.¹² The annual and lifetime dollar parity requirements include a one-

⁸ EBSA, FY 2017 MHPAEA Enforcement, <https://www.dol.gov/sites/default/files/ebsa/about-ebsa/our-activities/resource-center/fact-sheets/mhpaea-enforcement-2017.pdf>.

⁹ DOL Reg. §2590.712(c)(2)(ii)(A).

¹⁰ Preamble to Final Regulations, 78 Fed. Reg. 68,239, 68,242 (Nov. 13, 2013).

¹¹ See DOL Reg. §2590.712(a).

¹² ERISA §715; I.R.C. §9815; PHS §2711.

third rule, two-third rule, and a rule for plans that do not fit either category.¹³

One-third rule. If a plan does not include an aggregate lifetime or annual limit on any medical or surgical benefits or includes a limit that applies to less than one-third of all medical or surgical benefits, then the plan may not impose an aggregate lifetime or annual dollar limit on any MH/SUD benefits.

Two-third rule. If a plan includes an aggregate lifetime or annual dollar limit on at least two-thirds of all medical or surgical benefits, then the plan must either: (1) apply the limits to the medical or surgical benefits as it would otherwise apply to the MH/SUD benefits in a manner that does not distinguish between the medical or surgical benefits and MH/SUD benefits; or (2) not include an aggregate lifetime or annual dollar limit on MH/SUD benefits that is less than the aggregate lifetime or annual dollar limit on medical or surgical benefits.

Doesn't Fit Into a Category. If a group health plan that provides medical or surgical benefits and MH/SUD benefits does not include an aggregate lifetime limit or annual limit on substantially all medical or surgical benefits, then it may not impose such limits on any MH/SUD benefits. Similarly, if the plan includes an aggregate lifetime or annual limit that applies to less than one-third of all medical or surgical benefits, then the plan may not impose any aggregate or annual limits on any MH/SUD benefits.

Financial Obligations and Treatment Limitations

MHPAEA also requires that the predominant level of financial obligations and quantitative treatment limitations that is applied to MH/SUD benefits within a classification offered under a group health plan must not be more restrictive than financial obligations and treatment limitations that apply to substantially all medical or surgical benefits within the corresponding classification.

Federal regulations break down treatment limitations into two categories: quantitative treatment limitations (QTLs), which are numerical in nature (e.g., the number of covered visits), and non-quantitative treatment limitations (NQTLs), which are non-numerical limits on the scope or duration of treatment benefits (e.g., preauthorization requirements). NQTLs are not subject to the predominant and substantially all tests described in this section, but are instead subject to a different test for comparability and stringency as described below.

Financial requirements (e.g., copays, co-insurance, and deductibles) and QTLs for MH/SUD benefits must be no more restrictive than the predominant financial requirements and QTLs that apply to substantially all medical or surgical benefits in the same classification.

¹³ DOL Reg. §2590.712(b); Treas. Reg. §54.9812-1(b).

Non-Quantitative Treatment Limitations

Group health plans are also prevented from applying NQTLs to MH/SUD benefits in any classification unless under the terms of the plan, the processes, strategies, evidentiary standards, or other factors used in applying the non-quantitative treatment limitations to MH/SUD benefits in the classification are comparable to and are applied no more stringently than the processes, strategies, evidentiary standards, or other factors used in applying limitations to medical or surgical benefits in the same classification.¹⁴ This requirement is extremely sweeping and requires an analysis of how *any* QTL is developed *and* applied including a detailed analysis of the processes, strategies, and evidentiary standards used in the development and application. Some NQTLs that the DOL said presumptively require additional analysis to determine compliance with mental health parity includes blanket preauthorization requirements for all MH/SUD benefits, preauthorization for treatment facility admission, and extensive pre-notification requirements for MH/SUD benefits. The recently released proposed DOL FAQs include detailed guidance on NQTLs that further emphasizes the sweeping scope of the MHPAEA requirement in this area.¹⁵ Specific examples includes standards for exclusions of experimental or investigative treatment, applying as an example controlled randomized trials for ABA Therapy for autism spectrum disorder, application of dosage limits for prescription medications, and differences in step therapy protocols applied to MH/SUD benefits.

Opioid Use and Medication Assisted Treatment

A timely example of an NQTL that presents a challenge for MHPAEA compliance relates to medical management techniques intending to ensure the effective delivery of Medication Assisted Treatment (MAT) for opioid use disorder. MAT is any treatment for opioid use disorder that includes medication that is FDA-approved for detoxification or maintenance treatment, in combination with behavioral health services. Federal agencies and consensus panels have recommended that the pharmacologic intervention of

¹⁴ DOL Reg. §2590.712(c)(4)(i). Non-quantitative treatment limitations include: (1) medical management standards limiting or excluding benefits based on medical necessity or medical appropriateness or based on whether treatment is experimental or investigative; (2) formulary design for prescription drugs; (3) network tier design for plans with multiple network tiers; (4) standards for provider admission to participate in a network, including reimbursement rates; (5) plan methods for determining usual, customary and reasonable charges; (6) refusal to pay for higher cost therapies until it can be show that lower-cost therapy is not effective; (7) exclusions based on failure to complete a course of treatment; and (8) restrictions based on geographic location, facility type, provider specialty and other criteria that limit the scope or duration of the benefits for services provided under the plan.

¹⁵ Proposed MHPAEA FAQs.

MAT be delivered in conjunction with a number of other services, including a comprehensive psychosocial assessment, initial and yearly medical assessment, medication dispensing, drug tests, identification of co-occurring disorders and neuropsychological problems, counseling to stop substance abuse and manage drug craving and urges, evaluation of and interventions to address family problems, HIV and hepatitis C virus (HCV) testing, education, counseling, and referral for care, and referral for additional services as needed.

As a result of recommendations like these and understandable concerns relating to diversion, many health plans have developed prior or continuing authorization requirements for the prescription drug service element of MAT that require the documentation of engagement in some or all of the recommended support services as a condition of continued access to the prescription. Unfortunately, this type of NQTL is rarely, if ever, applied to medical or surgical prescription drugs and if it is not, it is a per se MHPAEA violation because the NQTL comparability and stringency test cannot be applied to nothing.

Possible Solution: As such, plans should explore alternative mechanisms for medical management system design to ensure utilization of evidence-based comprehensive treatment for MAT. The most straightforward approach would be to apply more frequent authorization procedures for MAT when the patient is not utilizing the other ancillary support services, provided that this NQTL is supported by a properly staffed diagnostic and treatment committee.

Eating Disorders

With respect to eating disorders, the DOL released a FAQ on June 16, 2017, about MHPAEA implementation and the 21st Century Cures Act, Part 38. In the FAQ, the DOL confirmed that eating disorders are mental health conditions and thus treatment of the disorder is covered under MHPAEA. Thus, group health plans should be designed in a manner to ensure eating disorder benefits comply with QTLs and NQTLs. In the Proposed MHPAEA FAQs released on April 23, 2018, under Question 9 a plan that excludes inpatient, out-of-network treatment for eating disorders but provides inpatient, out-of-network care for medical or surgical benefits violates MHPAEA by imposing a setting-specific exclusion for MH/SUD benefits that is not comparably imposed on medical and surgical benefits.¹⁶

Plan Sponsor Disclosure Obligations

MHPAEA places disclosure obligations on plan sponsors. Group health plans and health insurance issuers must disclose QTLs and NQTLs to plan beneficiaries and authorized representatives upon request. On June 16, 2017, the DOL and HHS created a draft model form, which was updated and released on April

¹⁶ Coverage restrictions based on facility type are NQTLs under MHPAEA.

23, 2018, that plan beneficiaries and their authorized representatives may use to request information on MH/SUD benefits and treatment limitations from group health plans.¹⁷ The form is presented as a tool to assist beneficiaries in requesting information related to denial or possible denial of MH/SUD benefits. Users may request detailed explanations regarding denial or restrictions of MH/SUD benefits. The form provides notices to group health plans regarding the different types of information that it must be ready to provide in the event of an MH/SUD coverage denial or even a government audit. Plan sponsors should be prepared for increased obligations created by the form. Employers should be aware that providers may use the form to obtain information regarding claim denials or reimbursement rates related to MH/SUD benefits.

Currently, many providers obtain authorizations from patients to pursue claims and appeals on their behalf. Providers may take advantage of this form by requiring patient authorizations for all MH/SUD claims and submitting the form in order to negotiate claim denials or reimbursement rates.¹⁸ Because the burden is on the plan sponsor and issuer to provide the requested information, plan sponsors will need to ensure compliance with the request.

Under the most recent DOL FAQs, the DOL specifically addressed employer obligations to disclose information regarding in-network and out-of-network MH/SUD providers.¹⁹ The DOL points out that such information should be included in the SPD and the employer will not be deemed to have satisfied its disclosure obligations if it provides an outdated provider directory. However, plan sponsors would be permitted to provide a hyperlink or URL with the plan's enrollment materials to find current MH/SUD providers.²⁰

MULTI-AGENCY ENFORCEMENT REGIME

MHPAEA's application to particular types of insurance or health plan markets varies and has evolved since its original passage. This history, in addition to the general complexity in the multi-agency, federal/state regulation of insurance and health plans has resulted in a convoluted MHPAEA enforcement regime. Further, insurance and group health plan members and their treating providers have standing under certain circumstances to sue employers, issuers, and third-party administrators directly, adding additional layers to consider.

The original MHPAEA statute only applied to group health plans and group health insurance cover-

¹⁷ The Draft Model Form was published by the agencies under the ACA implementation FAQs Part 38, a Paperwork Reduction Act Notice.

¹⁸ One strategy to limit assignments of claims by plan participants to providers is to include plan language rendering assignments between plan participants and providers as unenforceable against the plan.

¹⁹ Proposed MHPAEA FAQs, Q/A 11.

²⁰ Proposed MHPAEA FAQs, Q/A 12.

age for groups with more than 50 employees and to certain Medicaid coverage plans offered through managed care delivery systems. It was subsequently amended by the Patient Protection and Affordable Care Act (ACA)²¹ to also apply to individual health insurance coverage and then by HHS²² through the definition of the essential health benefits to both the individual and small-group insurance markets, including those on the Marketplace insurance exchanges. The three agencies responsible for implementing MHPAEA (DOL, HHS, and Treasury) issued joint final regulations in November 2013.²³ Finally, the Centers for Medicare and Medicaid Services (CMS) within HHS issued regulations applying MHPAEA to other aspects of the Medicaid program in 2016.²⁴

The DOL and the Treasury have jurisdiction over ERISA group health plans and the DOL enforces MHPAEA for 2.2 million private employment-based group health plans covering 130.8 million participants and beneficiaries. The DOL has authority to require the plan to make changes to address any plan provisions that violate MHPAEA and pay any improperly denied benefits. Although DOL investigations are generally triggered by plan participant complaints and focus on the particulars of a specific plan participant or beneficiary, the DOL will also generally seek a global correction, working with the plans' service providers to find improperly denied claims and correct the problem for other plans administered by the same employer, issuer, or third-party administrator. On April 23, 2018, the DOL released a Report to Congress summarizing the DOL's efforts to implement MHPAEA since the 2016 Report to Congress, including a detailed discussion of the EBSA investigation process and a roadmap for the DOL's activities in the future. These global corrections represent a significant financial risk to plans, employers, and administrators likely to be greater than any penalties that could be imposed.²⁵

For health insurance issuers, states have primary enforcement authority. HHS also has secondary enforcement authority to impose civil penalties on insurance issuers when the state elects not to enforce MHPAEA or CMS determines that the state has failed to substantially enforce MHPAEA. As of December 2017, CMS is enforcing MHPAEA with respect to insurance issuers in four states: Missouri, Oklahoma, Texas, and Wyoming. In these states, CMS reviews policy forms of issuers in the individual and group markets for compliance with MHPAEA prior to the products being offered for sale in the states.

In addition, with regards to the application of MHPAEA to Medicaid programs, CMS has enforcement

authority over state Medicaid agencies. Further, state Medicaid agencies have the primary enforcement authority over Medicaid managed care organizations, prepaid inpatient health plans, and prepaid ambulatory health plans.

Finally, participants and beneficiaries in ERISA group health plans may bring suit under ERISA §502(a)(1) and/or §502(a)(3). As discussed below, these participant or provider-led suits, including class actions, have been a major focus of MHPAEA enforcement activity.

MHPAEA LITIGATION

As discussed above, according to the 2016 report on EBSA's enforcement activity, EBSA reviewed 187 plans (out of 2.2 million plans) for MHPAEA compliance and cited 92 violations.²⁶ The violations break down as follows:

- 48.91% NQTLs,
- 28.26% financial limitations or QTLs,
- 8.7% cumulative financial requirements or treatment limitations,
- 5.43% coverage in all classifications,
- 8.7% annual dollar limits.

These findings reflect the fact that the DOL has significantly increased the rigor in which it cites violations as the number of citations (92 through 187 investigations) is more than double those found in 2016 from a similar number of investigations (44 through 191 investigations). In addition, NQTLs continue to be the most complex area of MHPAEA compliance. As discussed above, NQTLs require data collection and analysis of compliance across an enormous range of operational activity, in many cases covering areas previously subject to limited, if any, regulation.

Although EBSA enforces MHPAEA with respect to private employment-based group health plans (which can be self-insured, fully-insured, or a combination of both), EBSA is statutorily precluded from directly enforcing MHPAEA against insurance companies. This includes when EBSA determines that the insurance company is the party responsible for the parity violation. In the 2018 Report to Congress, the DOL highlighted that both the Mental Health Parity and Substance Use Disorder Parity Task Force and the President's Commission on Combating Drug Addiction and the Opioid Crisis have recommended that Congress enact legislation to allow direct enforcement against health insurance issuers to ensure compliance with the law.²⁷ On April 24, 2018, as a part of the consideration of the Opioid Crisis Response Act of 2018 by the Senate Health, Education, Labor and Pensions (HELP) Committee, Sen. Chris Murphy (D-

²¹ Pub. L. No. 111-148.

²² 45 C.F.R. §156.115(a)(3).

²³ 78 Fed. Reg. 68,240 (Nov. 13, 2013).

²⁴ 81 Fed. Reg. 18,389 (Mar. 30, 2016).

²⁵ DOL 2018 Report to Congress, Pathway to Full Parity, <https://www.dol.gov/sites/default/files/ebsa/laws-and-regulations/laws/mental-health-parity/dol-report-to-congress-2018-pathway-to-full-parity.pdf>.

²⁶ FY 2017 MHPAEA Enforcement, *see* n.8, above.

²⁷ DOL 2018 Report to Congress, Pathway to Full Parity at 7.

Conn.) introduced an amendment that would have implemented this recommendation.²⁸ The amendment failed on a party-line vote of 11–12. Murphy will probably propose the amendment again during the Senate floor debate or as a part of future legislation. Such an expansion in the DOL’s enforcement authority would fundamentally alter the dynamic of MHPAEA enforcement by empowering them to take action against insurers directly.

Litigation by ERISA participants and beneficiaries involving claims based in MHPAEA have continued at a steady pace over the years since the release of the final rule. Conversely, there has been relatively limited litigation or enforcement activity initiated by state insurance commissioners or attorneys general, although additional funding appropriated in 2016 for the Health Insurance Enforcement and Consumer Protections Grant Program for MHPAEA enforcement may lead to greater activity in the coming year as activity ramps up.

Most ERISA plan participants suing under ERISA §502(a)(1) and/or §502(a)(3) have been parents acting on behalf of dependent children with behavioral health conditions, especially autism-spectrum conditions and eating disorders. Class action attempts have been a common characteristic of these cases. Further, courts have allowed limited provider and provider association standing for assigned post-service claims. Third-party administrators have frequently been made party to suits, especially when they are substantially in control of plan design and operations.

The most common subjects of these ERISA plan participant claims under MHPAEA include (1) plan policies for excluding coverage of a service as being experimental or investigational (especially applied behavior analysis (ABA), a treatment for autism spectrum disorder); (2) age restrictions in medical necessity criteria for certain behavioral health services; (3) categorical exclusions for residential behavioral health treatment, especially for eating disorders (as either QTL or NQTL); (4) disparate quantitative visit limits; and (5) disparate medical management in practice (more stringent review of behavioral health prior authorization requests, etc.).

Select MHPAEA Cases Against Group Health Plans

*Rea v. Blue Shield of California.*²⁹ The Court of Appeal of California held that the California Parity Act requires Knox-Keene Act health care service plans to provide residential treatment for eating disorders where medically necessary, even when not set

forth in the plan. The court said the California Parity Act expanded the scope of the coverage mandate to mental health benefits.

*R.H. v. Premera Blue Cross.*³⁰ An ERISA class action suit in the U.S. District Court of the Western District of Washington alleging that the defendant group health plan violated MHPAEA and Washington state parity law in applying age and visit limits on neurodevelopmental therapy (NDT) and applied behavior analysis (ABA) services. A settlement resulted in an unprecedented expansion of coverage for NDT and ABA services for class members prospectively and allows all class members to seek damages for past claims denials on an individual basis.

*New York State Psychiatric Association, Inc. v. UnitedHealth Group.*³¹ The Court of Appeals for the Second Circuit found that a provider association had standing to bring suit on behalf of plan participants for MHPAEA violations under ERISA §502(a)(1) and §502(a)(3). The providers had accepted assignment and therefore had standing. The third-party administrator was the appropriate defendant because it “exercised total control over the plan’s claims process.”

*Am. Psychiatric Ass’n v. Anthem Health Plans, Inc.*³² Individual providers and provider associations alleged MHPAEA violations in reimbursement practices (alleging lower rates). The Second Circuit found that providers and provider associations do not have third-party standing to bring suit on behalf of plan participants for MHPAEA violations under ERISA §502(a)(1). The court cited *Griswold v. Connecticut*,³³ holding that providers have standing to raise constitutional, but not statutory claims on behalf of patients, and said that the provider claims were not on their own behalf pursuant to assignment. The Second Circuit distinguished *AMA v. Anthem* by stating that the providers here alleged third-party standing, not standing based on assigned claims. The court held that plan-wide reimbursement rate policies do not constitute fiduciary acts under ERISA.

Although litigation to date has been focused on third-party providers and provider associations, as compared to single-employer group health plans, the enforcement activity report from EBSA indicates that many group health plans, insurers, and administrators have potential liability related to MHPAEA, especially with regards to the application of NQTLs. Recent decisions certifying class actions and recognizing provider standing further increases the risk of litigation. Finally, the increased demand for addiction treatment arising from the ongoing opioid epidemic, especially costly services like residential, partial hospitalization, and intensive outpatient therapy, and associated pressure from political leaders, is likely to result in increased activity in the coming year.

²⁸ Press Release, Sen. Chris Murphy, Republicans Reject Murphy’s Amendment to Enact Trump Opioid Commission Recommendations to Hold Insurance Companies Accountable (Apr. 24, 2018).

²⁹ 226 Cal. App.4th 1209, 172 Cal. Rptr.3d 823 (2014), as modified on denial of reh’g (July 9, 2014). Extends the decision *Harlick v. Blue Shield of California*, 686 F.3d 699, 713 (9th Cir. 2012), which came to a similar ruling for an ERISA plan.

³⁰ No. 2:13-cv-00097-RAJ, 2014 BL 222434 (W.D. Wash. Aug. 6, 2014).

³¹ 798 F.3d 125 (2d Cir. 2015).

³² 821 F.3d 352 (2d Cir. 2016).

³³ 381 U.S. 479 (1965).

STEP-BY-STEP COMPLIANCE PROCESS

Set forth below is a checklist of the step-by-step process for plan sponsors to use in determining compliance under their group health plans with MHPAEA. The MHPAEA analysis process is itself complex and must be performed regularly if benefit design or administration policies are changed in a manner that may affect the MHPAEA analysis. In fact, the plan

should have policies and procedures in place prior to making any benefit design or administration policy changes to ensure that the changes are made in compliance with MHPAEA, especially the NQTL requirements. In addition, on April 23, 2018, DOL, HHS, and Treasury jointly released a much more detailed self-compliance tool for group health plans, plan sponsors, plan administrators, issuers, regulators, and other parties.

MHPAEA CHECKLIST

Preparation

1. Identify benefit packages
2. Identify and classify services

Data Collection

1. Financial Requirements
 - Identify financial requirements that apply and organize by type of financial requirement
 - Identify amount of M/S spending subject to financial requirement in classification
 - Identify predominant financial requirement level
2. Quantitative Treatment Limitation (QTL)
 - Identify QTLs that apply
 - Identify amount of M/S spending subject to QTL in classification
 - Identify predominant QTL level
3. Non-Quantitative Treatment Limitation (NQTL)
 - Provide plan language describing NQTL and identify applicable services
 - Identify the factors (and source) used to determine that it is appropriate to apply the NQTL
 - Identify the source for the evidentiary standard for each of the factors
 - Identify the processes and strategies used to design the NQTL as written in the plan language
 - Describe the operation of the NQTL process in practice

Analysis

1. Financial Requirements and QTLs
 - Substantially all test
 - Predominant test
2. NQTLs
 - Comparability and stringency under the plan document terms
 - Comparability and stringency in operation