

BUTLER COUNTY'S RESPONSE TO THE OPIATE EPIDEMIC: A CALL TO ACTION

EXECUTIVE SUMMARY

An opioid epidemic has shattered families and frayed the fabric of Butler County communities on an unprecedented scale. Evidence of the epidemic is overwhelming. Consider the following:

- In Butler County, drug overdose deaths, primarily involving opiates, increased from 92 in 2012¹ to 189 overdose deaths in 2015, with 149 of the 2015 deaths linked to heroin.² This was a 105% increase just from 2012 to 2015. Of the cases investigated by the Butler County Coroner's office in 2015, drug overdose cases exceeded the number of natural death cases.³
- Heroin is often mixed with fentanyl, a synthetic and short-acting opioid analgesic that is 30-50 times more potent than morphine. Among the deaths referenced above, Butler County saw 49 fentanyl related overdose deaths in 2014.⁴ Only three Ohio counties recorded a greater number of deaths that year.
- At the Butler County Jail, 80% of inmates have histories of substance abuse and 30% experience heroin withdrawal symptoms.⁵
- Butler County had 763 reported cases of Hepatitis C in 2014. This is a 166% increase over the number of reported cases in 2005.⁶ Hepatitis C is often transmitted via sharing needles among injection drug users.

Several factors fuel the epidemic. Opiate painkillers such as OxyContin and Vicodin are harder to obtain due to cost and to law enforcement efforts to curtail prescription drug abuse. Conversely, heroin is cheap, potent, and easily obtained. According to a recent Ohio Substance Abuse Monitoring Network Report, heroin is "highly available" in the Cincinnati region.⁷

Yet, while the epidemic grew, public funding for addiction treatment overall has decreased year after year. The Butler County Alcohol and Drug Addiction Services Board, from 2010 to 2014, has experienced a 22% reduction in state and federal funds available for treatment and prevention services. Medicaid expansion and the Affordable Care Act (ACA) have offset some of the reductions. However, some aspects of treatment are not covered by these sources. House Bill 483, signed by Governor Kasich in June 2014, requires local officials to work with the Ohio Department of Mental Health and Addiction Services to ensure the availability of a full continuum of care for addicted Ohio residents. Although this helps drive a comprehensive system of care that takes into consideration the multiplicity of problems addicts have, it has also created an unfunded mandate for the local system of care to fulfill.

Butler County's Response

The Butler County Mental Health and Addiction Recovery Services Board is the local government planning entity responsible for funding, monitoring and evaluating alcohol and other drug prevention and treatment services. The vision of the Board, in partnership with the community, is to provide a comprehensive recovery-oriented system of care and prevention. In addition, the Board will continue to improve the quality of life of Butler County citizens through the support of addiction and mental health recovery services. Our mission is to ensure a system of care that is best-practice based, financially stable, and publicly funded.

In response to the public health crisis being experienced locally, the Butler County Mental Health and Addiction Recovery Services Board has developed the following action plan. Ongoing collaboration with many partners in the community has helped shape this work including the Butler County Opiate Task Force, a grassroots group comprised of various professionals, and concerned citizens from all walks of life. This plan is presented with the following ultimate aims in mind:

- To reduce opioid overdoses and deaths in Butler County;
- To increase the number of Butler County residents who maintain long-term recovery from addictions to opiates and other substances;
- To prevent more Butler County residents from ever engaging in any misuse of prescription opiates or in any use of illicit opiates; and
- To reduce the spread of infectious diseases such as HIV and Hepatitis C

We propose the following activities to address the opiate epidemic in Butler County:

1) INCREASE THE AVAILABILITY OF TREATMENT AND RECOVERY SUPPORTS: The state requires each county to offer a comprehensive continuum of care for substance abuse treatment. Each person's entry into Butler County's continuum of care begins with an assessment conducted by a qualified professional. Clients are most likely to succeed if the full array of treatment and related services are available in their geographic area and if these services are evidence based.

More resources must be deployed to sustain existing services in Butler County and make treatment more available. Removing barriers to recovery must include, but not be limited to:

- Making detoxification beds available in our county for indigent or low-income persons.
- Establishing an additional 40 units of recovery housing for individuals and families; and
- Increasing residential treatment beds by 38% (32 beds), including the development of an adolescent residential facility.

2) PREVENT USE: Immediate steps must be taken to prevent residents of all ages from misusing opiates and other drugs, including alcohol. These steps include but are not limited to:

- Informing the public about the opiate problem via media, community forums, dissemination of printed materials, and other means.
- Supporting education/prevention initiatives targeted to school age children.

3) REDUCE HARM: Harm reduction activities have two main purposes – to stop the spread of infectious diseases and to keep people alive so they can eventually benefit from addiction treatment and health care. Harm reduction activities will include, but not be limited to:

- Supporting the dissemination of Narcan (naloxone); and
- Improving drug dependent persons' access to syringe exchange, infectious disease detection, and other health services.

4) SUPPLY REDUCTION - Reducing the supply of opiates is a vital part of addressing the epidemic, but is not currently addressed within the scope of this plan. We fully support local law enforcement agencies in their efforts to reduce the supply, and welcome current and future collaboration with law enforcement.

Countering a powerful disease requires ongoing collaboration and sufficient funding. Fully implementing this plan will require an investment of around \$3,600,000 a year.

Addiction is a disease. Addiction and other chronic illnesses share features such as a tendency to run in families. Like other chronic illnesses, addiction has an onset and a course that is influenced by the environment and by behavior. Plus, the treatment of addiction requires substantial lifestyle changes, just as people make significant lifestyle accommodations to treat or control other diseases such as diabetes. Drug trends change over time and although this plan is clearly driven by a health crisis in our community, addiction to varied substances trend over time and the community drug problem may change to another substance over subsequent years. We must stay vigilant in this battle.

Like other diseases, addiction knows no boundaries. Opiate addiction has impacted every conceivable race, ethnicity, income level, and religious background in Butler County. As a result, the economic impact is profound. It is estimated that local governments across the U.S. spend about 9% of their local budgets on issues related to substance abuse and addiction.⁸ However, adequately investing in addressing this problem will in the long run produce a cost savings to the community, in addition to saving lives and restoring our families.

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Join the war against heroin. The heroin epidemic has proven to be a relentless, insidious enemy that must be stopped. Each of us has a stake in the outcome of this conflict. Each of us will suffer directly or indirectly a loss of life, liberty, happiness or public treasure as a result of heroin abuse, related property crimes and criminal justice costs. Each of us has the ability to become a soldier in this fight, armed with the ability to communicate, reason, educate and, when necessary, intervene with your children, spouse, brother, sister, friends and co-workers. When each of us answers the call to arms, becomes a soldier and takes this fight personally to our homes, workplaces, schools and community, we will then become an overwhelming force and victory will be ours.

The Honorable Keith M. Spaeth
Judge, Butler County Court of Common Pleas

SECTION ONE

THE EPIDEMIC'S IMPACT ON BUTLER COUNTY

What Caused the Current Epidemic?

In the past, people who misused or abused prescription painkillers could obtain them rather easily from some physicians or from the black market. However, a disproportionate number of painkiller prescriptions in Ohio came from “pill mills,” clinics where painkillers were routinely prescribed inappropriately or for non-medical reasons. Laws that shut down these pill mills and made access to opiate prescription drugs more difficult unfortunately did not end the addiction of those misusing these drugs. Indeed, opiate painkillers can be a gateway drug to heroin - approximately 80% of recent heroin addicts originally used prescription pain pills before turning to heroin.⁹

After numerous people became addicted to these prescription drugs, pharmaceutical companies began making their painkillers more difficult to crush or dissolve. This, in turn, caused the price of black market prescription painkillers to rise. One milligram of OxyContin can be sold for as much as \$1 on the black market, which means a single 80mg tablet can cost \$80. Someone addicted to OxyContin may be using as much as 240mg a day. One addicted surveyed reported using up to 900mg a day, requiring up to \$900 a day to sustain her habit.

However, before prescription painkillers became so expensive on the black market, illegal drug cartels were trafficking cheap, potent heroin into the U.S. Over time, it became clear to law enforcement that a lot of the traffickers and the heroin were coming from one particular small town in the Mexican state of Nayarit.¹⁰ These traffickers operated in a decentralized fashion, transported heroin in relatively small quantities, and tended to avoid violence in order to avoid detection.¹¹ Not surprisingly, once prescription opioids became too difficult and expensive to obtain, these traffickers filled the void with even more cheap, potent heroin. As a result, the number of people addicted to heroin and other opioids grew rapidly within a few years.¹²

Heroin can be obtained for approximately \$10 - \$20 per 1/10 gram. Many patients at local treatment centers report using at least a gram of heroin daily, which means they had to obtain at least \$120 a day to sustain their addiction.

Butler County, the state of Ohio, and the Opioid Epidemic

A number of troubling trends in Butler County and in the state of Ohio as a whole have been noted by The State Epidemiological Work Group of the Ohio Department of Mental Health and Addiction Services (OMHAS).

Unintentional Drug Overdose Deaths – Butler County vs. the state of Ohio

Unintentional deaths from drug overdoses have been occurring in large numbers for many years. The number of Ohioans who died from drug overdoses between 2003 and 2008 was 50% higher than the number of U.S. soldiers killed throughout the entire Iraq War.¹³ However, as the chart below indicates, overdose deaths from opiate and non-opiate drugs have steadily increased in both Butler County and Ohio since 2012.

Unintentional Drug Overdose Deaths
Sources: Butler County Coroner's Office¹⁴, Ohio Department of Health^{15 16 17 18}

	2012	2013	2014	2015
Butler County	92	118	137	189
Ohio	1,914	2,110	2,482	Not available

Butler County recorded 565 unintentional drug overdose deaths from 2009-2014.¹⁹ As the table below indicates, the rate of Butler County deaths was significantly higher than Ohio's rate in both the 2008-2013 and 2009-2014 5-year periods:

Unintentional Drug Deaths of Ohio Residents: Average Crude and Age-Adjusted Annual Death Rates
Per 100,000 population, Butler County vs. Ohio^{20 21}

Sources: Ohio Department of Health, 2014 Ohio Drug Overdose Preliminary Data: General Findings;
Unintentional Drug Overdose Death Rates for Ohio Residents by County, 2008-2013

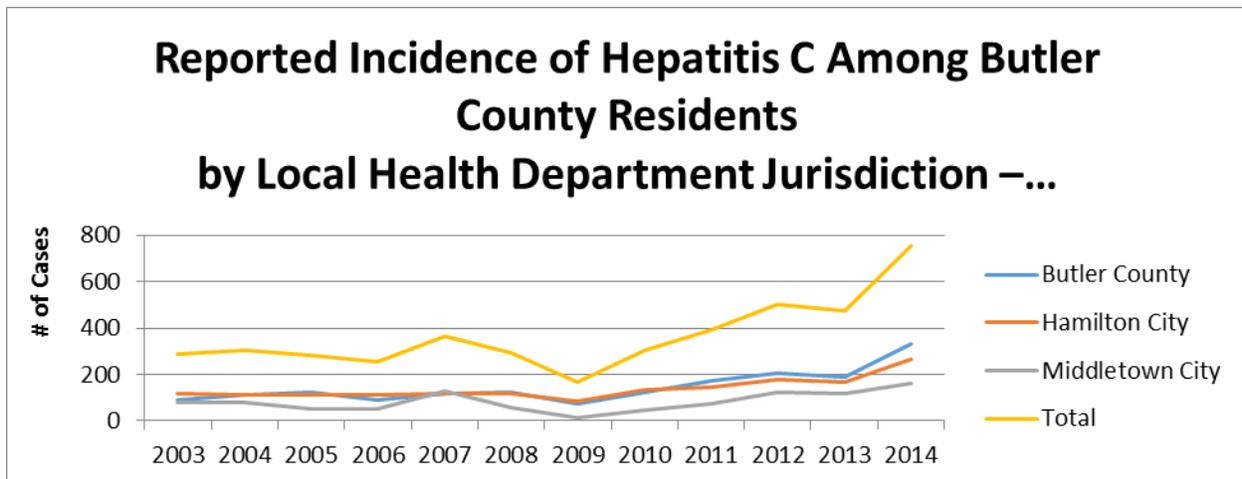
	Number of Unintentional Drug Deaths 2008-2013	2008-2013 Average Crude Rate	2008-2013 Age Adjusted Rate	Number of Unintentional Drug Deaths 2009-2014	2009-2014 Average Crude Rate	2009-2014 Age Adjusted Rate
Butler County	472	21.5	21.8	565	25.5	26.5
Ohio	10,231	14.8	15.0	11,245	16.2	16.9

Butler County's 2008-2013 age adjusted unintentional drug death rate of 21.8 was the 11th highest among Ohio's 88 counties. In the 2009-2014 period, Butler County age-adjusted rate of 26.5 had climbed to 7th in the state. In addition, drug overdoses among Ohio women rose 448% from 2000 to 2012, and the rate of drug overdoses among Ohio men quadrupled during the same time period.²² Officials attributed many of these deaths to opiates.

Hepatitis C

Hepatitis C is a viral infection of the liver. It can result in a serious lifelong illness that may involve cirrhosis and cancer. The Hepatitis C virus is spread primarily through contact with the blood of an infected person. Most people with an acute Hepatitis C infection go on to develop chronic Hepatitis C. An estimated 3.2 million people in the United States are infected with the chronic form.

Injection drug users are the group with the highest risk for contracting the Hepatitis C infection. They contract Hepatitis C primarily through sharing infected needles with other injection drug users. Hepatitis C can also be sexually transmitted. Each injection drug user infected with Hepatitis C is likely to infect 20 additional people.²³ In Butler County, Hepatitis C cases rose from 500 in 2013²⁴ to 763 in 2014.²⁵ At the same time, the number of Hepatitis cases statewide rose from 10,020 in 2013 to 15,887 in 2014²⁶. Butler County had 4.8% of Ohio's Hepatitis C cases in 2014, but only 3.2% of Ohio's population. The chart below documents the upward trend in Hepatitis C cases in the county²⁷:



In addition to the tremendous health implications, Hepatitis C has a far reaching economic impact. A 2013 article described Hepatitis C as “a public health and health care expense time bomb.”²⁸ The average lifetime cost to treat one patient is approximately \$100,000.²⁹ This figure excludes the cost of a liver transplant or Harvoni, the once-a-day pill that recently received FDA approval. At the time of this writing, Harvoni cost \$1,125 a pill, or \$94,500 for a 12-week treatment regimen.³⁰ A study of almost 340,000 workers found that employees with Hepatitis C had significantly more work days lost than other employees, resulting in lost productivity.³¹ Furthermore, all healthcare benefit costs were significantly higher (\$8,352 per year) for infected employees than for non-infected employees.³²

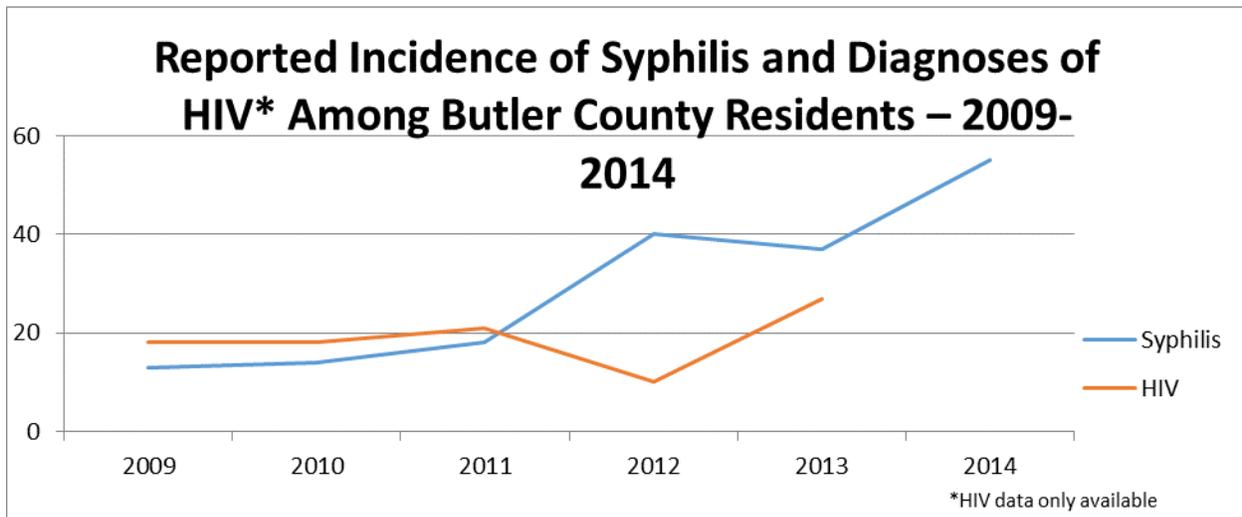
Pregnancy Complications and Cost

Neonatal abstinence syndrome (NAS) is the term used to define a group of behavioral and physiological symptoms that occur in newborn infants born addicted to substances the mother used while pregnant. Between 2004 and 2011, the number of newborns hospitalized in the state of Ohio for NAS increased by a staggering 529%.³³ Locally, the Cincinnati area saw the number of babies born dependent on drugs rise from 11 per 1,000 births in 2009 to 36 per 1,000 births in 2012.³⁴ Seven Cincinnati area hospitals documented a six-fold increase in drug exposed infants from fiscal year 2009 through fiscal year 2014.³⁵

Although the true toll of NAS can never be calculated, the financial impact is huge nevertheless. Newborn babies suffering from NAS stay in the hospital an average of 16.9 days, whereas newborns without NAS stay an average of 2.1 days.³⁶ Hospital costs for newborns with NAS average \$66,700, compared to \$3,500 for newborns without NAS.³⁷

Other Complications

Heroin users may also engage in high-risk behaviors such as sharing needles with other users and engaging in unprotected sex. Heroin may be a factor behind the increased rates of syphilis and HIV in Butler County, as depicted in the graph below:³⁸ In addition to Hepatitis C, HIV can be transmitted through shared needles, and the estimated lifetime cost to treat one person living with HIV is \$379,668 in 2010 dollars.³⁹



Fentanyl

The heroin epidemic has been worsened by Fentanyl, a synthetic, short-acting opioid analgesic that is 50-100 times more potent than morphine and 30-50 times more potent than heroin. It

is used to manage pain for patients with advanced cancer. Increasingly, it is also mixed with heroin and sold to users who may or may not be aware of this. As a result, the Drug Enforcement Administration issued an alert in 2015 identifying fentanyl as a public safety threat.⁴⁰

Although some legally manufactured fentanyl is being diverted for illegal use, most cases of fentanyl related deaths are associated with illegally manufactured fentanyl or fentanyl analogs.⁴¹ In Ohio, fentanyl related deaths jumped from 84 in 2013 to a staggering 502 deaths in 2014.⁴² Butler County saw 49 of those fentanyl deaths in 2014.⁴³ Only three Ohio counties recorded a greater number of deaths that year. Naloxone (Narcan) can be used to revive overdose victims with fentanyl in their system. However, due to the potency of illegally manufactured fentanyl in particular, a higher dose of naloxone or multiple doses of naloxone may be needed to revive victims.

Furthermore, Ohio recorded 1,245 Fentanyl drug seizures in 2014, the most of any state.⁴⁴ On an equally troubling note, Fentanyl also poses a high risk to first responders via accidental absorption through their skin or through inhaling airborne powder.⁴⁵

Opiates, first responders, and the criminal justice system

The opioid epidemic has placed an incredible strain on already overburdened first responders and criminal justice systems, statewide and locally.

At the Butler County Jail, where 80% of inmates have histories of substance abuse, the heroin epidemic has increased the workload of their medical staff.⁴⁶ As a result of the epidemic, they are seeing an increase in medical problems such as heart issues and bacterial infections.

In 2014, the City of Middletown Division of Police spent \$1.2 million investigating almost 1,500 heroin complaints and the Middletown Division of Fire spent over \$175,000 responding to 702 reported overdoses within the City limits.⁴⁷ EMS paramedics in Middletown administered naloxone 333 times in 2014, costing the city over \$14,000 for the medication alone.⁴⁸

Curtailling the influx of heroin into Butler County poses a number of challenges for law enforcement agencies. Often, heroin is transported, distributed, and sold in small quantities. The severity of the criminal charge is based on the amount of heroin bought or seized. Less than one gram of heroin is a 5th degree felony, the least severe felony charge classification.

Organized criminals and crime organizations are heavily involved in the heroin trade. Dealers falling in this category are almost never users of heroin or other opioids. For them, the heroin trade is strictly business.

However, a significant amount of the heroin is transported and/or sold by small-time dealers who do use heroin. Often, they are selling part of their heroin supply and keeping the rest for their own use or to share with other users. This type of offender poses a dilemma for law enforcement and criminal justice organizations. On one hand, they are selling a drug that potentially can, and sometimes does kill people. On the other hand, many dealers in this category are supporting their own addiction and need treatment.

In 2013, almost 1/4 of Ohio Department of Rehabilitation and Correction inmates from Butler County were incarcerated because of drug trafficking or drug possession offenses.⁴⁹ In 2013, 29% of Butler County offenders on Community Corrections Act Prison Diversion status had alcohol or other drug offenses.⁵⁰ These statistics do not include cases where an offender was charged with other types of offenses, but legal or illegal opioids clearly were a factor behind the offender's involvement in the criminal justice system.

“Heroin affects family, friends, and children. From a law enforcement standpoint, we have equipped our jail with both medical and mental health personnel to assist with treatment for addicts. I support any means to curb this crisis and I fully support this program.”

Sheriff Richard K. Jones
Butler County Sheriff

Heroin and Child Custody Cases

According to an analysis conducted by the Ohio Department of Job and Family Services, heroin was a factor in 6,827 Ohio child custody cases in 2013, an 83% increase from 2010 when there were 3,726 such cases.⁵¹ The average length of time kids stay in foster care is 70 days, but when parents are addicted to alcohol or other drugs, that number increases to 300 days.⁵² Furthermore, the words “heroin” and “cocaine” appeared in over 17,000 child welfare case reports in 2013.⁵³

In Butler County during the first half of 2014, 61% of the cases involving a child being placed out of the home due to allegations of abuse or neglect involved opiate use by a caregiver.⁵⁴ In the

first half of 2015, the caregiver was alleged to be using heroin in almost 30% of the intakes where caregiver substance use was alleged.⁵⁵

Prescription Opioids

Prescription opioid misuse and addiction remains problematic despite the best efforts of health care professionals, law enforcement, and others to curtail it.

Unfortunately, many people continue to view legally-obtained prescription drugs as somehow “safe,” especially in comparison to street drugs. However, opium based painkillers such as Percocet, OxyContin, and Vicodin kill approximately 17,000 Americans annually.⁵⁶ More than 12 million people reported using prescription painkillers for non-medical reasons in 2010.⁵⁷ These numbers are likely to remain high in the foreseeable future. U.S. health care providers wrote 259 million prescriptions for painkillers. This is enough for every American adult to have a prescription.⁵⁸

In their 2014 Drug Use Survey of students in grades 7-12, the Coalition for a Drug Free Cincinnati found that 4.3% of the students surveyed had used prescription drugs not prescribed to them in the 30 days prior to the survey. Of those who admitted to misusing a prescription drug, the average age of students’ first use of a substance was 13.3.⁵⁹ In Butler County, among those who admitted to misusing a prescription drug, the average age of students’ first use of a substance was 13.⁶⁰

She was only 18. Old enough to think she could conquer the world, but heroin stole her from me. My daughter Alison died of a heroin overdose in August, 2015. The anguish is overwhelming. I feel as though part of my soul was ripped away that day. I talk about how Alison died, despite the stigma, because I would like to prevent other parents from this suffering. Our community needs to have conversations about heroin and other opiates, even if those talks are awkward and complicated. Please be a part of helping our children, our neighbors, and our friends in Butler County to survive and thrive.

Dorothy McIntosh Shuemake

SECTION TWO – MOVING FORWARD

A Call to Action

To develop and carry out this call to action, the Butler County Mental Health and Addiction Recovery Services Board along with many other government entities, religious organizations, private citizens and other key stakeholders have been working to address this problem. A collaborative, multi-faceted approach that addresses, supply, demand, prevention and harm reduction is needed as the cause of this epidemic, and of addiction in general is complex and has many precipitating and sustaining forces. The Butler County Opiate Task Force, which is comprised of various professionals, staff from a number of organizations, and concerned citizens from all walks of life is one of the key stakeholder groups helping inform the development of this call to action which is presented with the following ultimate aims in mind:

- 1) To reduce opioid overdoses and deaths in Butler County;
- 2) To increase the number of Butler County residents who maintain long-term recovery from addictions to opiates and other substances;
- 3) To prevent more Butler County residents from ever engaging in any misuse of prescription opiates or in any use of illicit opiates; and
- 4) To reduce the spread of infectious diseases such as HIV and Hepatitis C via shared needles or accidental needle sticks

Implementing this plan will require ongoing, long-term collaboration between professionals, legislators, law enforcement officials, and concerned Butler County citizens. Some of the recommended steps will have an immediate effect on reducing the number of overdoses or curtailing the spread of infectious diseases. The implementation of other recommended steps may require more time to make a difference.

In any case, carrying out a comprehensive, evidence-based plan of action like the one outlined here will have much more effect than implementing only some, but not all of the recommended steps.

INCREASE THE AVAILABILITY OF TREATMENT AND RECOVERY SUPPORTS

Goals

Increase the number of addicted persons who receive treatment for their addiction.

Increase the number of addicted persons who enter into long-term recovery.

Strategies

Increase timely access to treatment services

Expand recovery supports for individuals in recovery and for the family members of addicted persons

Develop access to treatment for dual-disorders (substance abuse and mental illness)

Opiates gave me a life without feelings or care, but pills were not enough, heroin was! My life was chaos, I couldn't go on. I owe my life to Sojourner and to A.A. Without the help of recovery, I would be dead. It really works!

Misty P, recovering addict and alcoholic

INCREASE THE AVAILABILITY OF TREATMENT AND RECOVERY SUPPORTS

Our recommendations are rooted in two assumptions:

#1 - Addiction is a treatable disease: Addiction to alcohol or other drugs is a complex disease, although many still believe it is caused by a lack of willpower or by one's morals. Quitting drug use is hard, even if the person wants to quit. This is partly because substance abuse changes the functioning and structure of the brain. In turn, this greatly affects the person's behavior and judgment, and continues to do so long after the person has stopped using drugs.

Like many other diseases, there are identifiable risk factors for addiction and there are evidence-based methods for screening and intervention. In this plan, we identify evidence-based practices to meet the needs of those affected by the opioid epidemic.

#2 - Treatment is a sound investment: For every \$1 spent on treatment, taxpayers save \$4 to \$15, depending on the number of factors studied.⁶¹ According to some estimates, every \$1 spent on addiction treatment results in a return of \$4 to \$7 just on reductions in drug-related crime, criminal justice costs, and theft alone.⁶² When healthcare related savings are added to the calculation, the savings can exceed \$12 for every \$1 spent.⁶³ Also, most clients need at least 90 days in treatment to significantly reduce or stop substance use, and the odds of better outcomes improve with even longer involvement in treatment.⁶⁴

The consequences of failing to invest in treatment can be disastrous. In 2005, for every \$100 of government spending on substance abuse and addiction, Ohio spent a mere \$2.21 on treatment, prevention and research combined, while spending a staggering \$90.44 to deal with the damage caused by substance misuse and addiction.⁶⁵

How many people need help?

Based on data from the Substance Abuse and Mental Health Services Administration⁶⁶, approximately 22,000 Butler County residents are either dependent on or abuse alcohol and 9,500 are dependent on or abuse illicit drugs, totaling 31,500 county residents. Hence, the need greatly exceeds the availability of services in the county, especially for low-income residents. On any given day, some 400 Butler County residents are receiving treatment services through the publicly-funded treatment system. More are using private insurance to receive care.

However, we must do more to combat the epidemic. The recommended strategies for increasing the assistance available to Butler County residents fall into two broad categories:

Strategy #1: Increase Timely Access to Treatment Services.

Longer waits to access addiction treatment are associated with a decreased likelihood of actually attending treatment services.⁶⁷ Research indicates that a wait of more than 24 hours greatly decreases the odds of the person attending the first appointment.⁶⁸ Furthermore, people who seek treatment and get it immediately have better outcomes than those who seek treatment but do not receive treatment or receive it on a delayed basis.⁶⁹ Potential clients can be lost when treatment is not readily accessible. Furthermore, as is the case with other chronic diseases, offering treatment earlier in the disease process is associated with better outcomes.⁷⁰

Removing barriers to recovery and helping individual's access treatment in a timely manner must include:



Establishing a single point of entry for drug dependent individuals to access Butler County's continuum of addiction treatment services in order for those individuals to receive engagement services within 48 hours after their initial call: Butler County needs a single point of entry - an agency or an office that would serve as the first contact for all opiate addicted individuals in Butler County and their family members.

Currently, people needing help often have to make multiple phone calls to find out what options are available. Individual treatment agencies in Butler County are normally knowledgeable of each other's services in general terms, but have no realistic way of knowing all the details about each other that a prospective client would want to know.

Establishing a single point of entry helps to address the epidemic by getting people into the appropriate treatment more quickly. Establishing a treatment broker to help individuals navigate the system and engage in the recovery process will assist those in need at a point in time where they are desperate, have a crisis of some sort and are significantly impaired in their judgment. As a result of implementing a single point of entry system, we plan to increase by 20% the overall number of admissions into some form of treatment.

Increasing access to "sub-acute" (residential, but not hospital based) detoxification by 210 persons per year for a total of 220: Butler County has no residential detoxification program accessible for indigent or low-income persons, or individuals on Medicaid. Fort Hamilton Hospital closed the county's detoxification unit over ten years ago. Since Medicaid will not pay for residential detoxification unless it is offered in a hospital, Butler County must use extremely limited funds to send only 10 county residents a year to the Center for Addiction Treatment (CAT) in Cincinnati.

Yet, detoxification is a very important part of any continuum of care. Residential non-hospital based detoxification provides a safe place for clients to undergo withdrawal from opiates and other substances. It is more cost effective than expensive hospital care and offers a window of opportunity to connect the client to longer-term treatment, support groups, and other services they may need. Detoxification is not designed to be the sole intervention for drug addiction – most clients stay in detoxification programs for 7 days or less. Instead, it is supposed to be an important step, but only the first step to treat the client's addiction.⁷¹

Increasing adult residential treatment beds by 38% (32 beds): Although residential services do exist in Butler County with a total of 84 adult beds for residential services (26 for men and 58 for women), a wait of approximately 45 days exists with an average of 60 individuals waiting on a daily basis. In addition, the County has no adolescent residential treatment. We propose 16 additional beds for adult men partly because current regulations prohibit residential addiction treatment providers from billing Medicaid if they have more than 16 beds in a single facility.

Expanding the availability of residential treatment in the county is absolutely vital to addressing the epidemic. People addicted to opiates always have at least one or more of the following problems - poverty; homelessness; unstable or no work history; involvement in the criminal justice system; no high school diploma or GED; medical problems; and/or histories of being physically or sexually abused. Some of these problems may have occurred as a direct result of opiate use, but in many cases these problems existed prior to the client's opiate use. Clients with multiple problems often need a controlled residential treatment environment in which to safely address their opiate use while also addressing the additional problems they face.

Increasing the availability of Medication Assisted Treatment (MAT) slots for low-income clients by 200. Medication Assisted Treatment (MAT) is the use of approved medications such as Suboxone and Vivitrol to help treat substance use disorders. Research shows that opioid addiction is a medical disorder that can be effectively treated when MAT is administered in conjunction with counseling.⁷² Furthermore, in a long-term follow-up of patients treated with buprenorphine/naloxone (Bp/Nx) for addiction to opioid pain relievers, half reported being abstinent from the painkillers 18 months after starting MAT.⁷³ After 3½ years, 61% of patients reported being abstinent. MAT should be administered only when a comprehensive assessment indicates MAT is appropriate for that particular client. Not all clients addicted to opioids are appropriate for MAT. The benefits of MAT include increased patient retention in treatment, decreased drug use, and decreased transmission of infectious diseases⁷⁴.

Create 60 additional specialized outpatient and intensive outpatient treatment slots for clients with co-occurring substance use disorders and mental illnesses. In this context, the term “co-occurring disorder” refers to instances where a client has both a diagnosed substance use disorder and a diagnosed psychiatric disorder. One type of disorder does not necessarily cause the other type, but treatment is less likely to succeed if both types of disorders are not addressed.

Although treating all types of mental health issues is important, we have identified a need to serve more clients with co-occurring substance use disorders and severe mental illnesses such as thought and mood disorders. Approximately half of those diagnosed with a severe mental illness have a co-existing substance use disorder.⁷⁵ Furthermore, these co-occurring disorders are associated with negative outcomes such as higher rates of relapse and homelessness.⁷⁶ To more adequately provide the specialized care needed in Butler County, we propose adding 30 outpatient treatment slots and 30 intensive outpatient treatment slots for clients with co-occurring disorders.

Strategy #2 – Expand recovery supports for individuals in recovery and for the family

members of addicted persons: Even though addiction is a chronic disease, it has often been treated on more of an acute basis, where services are delivered in a relatively short period of time. Adequately funding of front-end interventions such as detoxification and residential treatment is vital, but the effectiveness of these interventions will be limited without an investment in services that help clients sustain the changes they have made long after they have left treatment. Support groups such as Narcotics Anonymous are a vital part of this strategy, but may not always be sufficient by themselves.

Expanded recovery supports for individuals in recovery include, but are not limited to:

Providing comprehensive wraparound services for 50 addicted pregnant or postpartum

women: “Wraparound” refers to a philosophy of care that focuses on connecting individuals, families, schools, and community partners in effective problem solving relationships. It is more of a process than a service, where a family’s needs are addressed by a full range of services, with flexibility in funding. Women’s addiction treatment outcomes are improved when needs such as child care, employment assistance, and mental health care are addressed through wraparound services.⁷⁷ To address the unique issues faced by pregnant or postpartum women addicted to opiates, we propose offering wraparound services to 50 clients annually.

Establishing an additional 40 recovery housing beds in Butler County for individuals and

families: Sober housing facilities offer alcohol and drug free living arrangements for people in recovery from addiction. This housing can be in the form of a group home or individually leased apartments at one or more sites.

Recovery housing can serve as a stepping stone between residential treatment and a full return to a person’s previous living environment. In many cases, sober housing serves as a permanent home if the person lacks family support or would otherwise have to live in a neighborhood not conducive to recovery. Sober housing will benefit clients over a longer period of time while increasing the stock of affordable rental housing in the county.

Currently, there are only 20 beds of recovery housing in the county with another 12 beds for pregnant and post-partum women that just became available. Creating additional recovery housing beyond these planned will require several steps such as obtaining suitable, affordable sites; completing renovations; and ensuring the housing will meet standards set forth by Ohio Recovery Housing. Once operational, the vast majority of units will be leased to low-income individuals who cannot afford to pay high rent. Currently, the Ohio Department of Mental Health and Addiction Services is making available through a competitive process some funds to support the cost of purchasing or renovating recovery housing.

Promoting a comprehensive approach that enhances treatment and recovery through vocational services, peer support, family inclusion, and continuing care services. Offering a full continuum of care is essential to address the opiate epidemic and it offers a better return on the overall investment to do so. For example, people who abuse substances are more likely to be unemployed or underemployed than people who do not abuse substances. Plus, by the time most opiate addicted clients come to treatment, they already have a criminal record, and even a misdemeanor can limit job options.

Yet, extensive research shows that one of the best predictors of successful treatment outcomes is gainful employment.⁷⁸ Increasing the availability of employment related services is a vital part of our response to the epidemic.

Another good predictor of success is family support.⁷⁹ The Butler County Mental Health and Addiction Recovery Services Board, in collaboration with the Butler County Opiate Task Force has recommended securing resources to establish a family response center, where family members can call for support and get referrals to appropriate service providers.

Remaining in treatment for an adequate amount of time is critical to success in the earliest stages of recovery, as the best recovery outcomes are associated with longer stays in treatment.⁸⁰ Since residential treatment programs are often very time limited, investing in long-term post-treatment recovery supports is critical to addressing the opioid epidemic.

Treatment providers have a long history of collaborating with 12-Step fellowships such as Alcoholics Anonymous and Narcotics Anonymous to get their clients the long-term support they need to remain sober. Clients needing an alternative form of sober support now have options such as SMART Recovery® available. Mutual help groups and peer support networks have played a vital role in helping many people remain sober and must remain available and easily accessible to all who need them.

Total cost for implementing Treatment & Recovery Supports: \$2,983,500 (See Services Table on p. 20)

Service	Total Estimated Annual Cost	Amount Estimated from Medicaid	Additional Estimated Amount Needed from Other Sources
Single-point of entry Utilizing the BC MHARS Board's existing crisis line, employ navigators/engagement specialists	\$125,000/yr.	\$0	\$125,000/yr. for single-point of entry
Detoxification services (sub-acute, residential) \$480/day average cost x 3 beds x 365 days a year, benefiting around 220 county residents a year	\$525,600/yr.	\$0	\$525,600/yr. for detox services
Medication Assisted Treatment (MAT) for 200 low-income clients annually Expand the number of providers who prescribe medications used to assist addictions treatment	\$390,000/yr.	\$331,500/yr.	\$58,500/yr. for MAT
Dual-diagnosis intensive outpatient and outpatient treatment 60 clients per year with average length of stay of 9 months	\$396,000/yr.	\$336,600/yr.	\$59,400/yr. for dual-diagnosis services
Adolescent residential addiction treatment - establish a 16-bed adolescent residential addiction treatment facility in Butler County \$250/day x 16 beds x 365 days a year annually serving approximately 80 Butler County residents	\$1,460,000/yr.	\$730,000/yr.	\$730,000/yr. for adolescent residential treatment
Adult residential addiction treatment - establish a 16-bed residential addiction treatment facility in Butler County \$250/day x 16 beds x 365 days a year. Approximately 80 Butler County residents would be served.	\$1,460,000/yr.	\$730,000/yr.	\$730,000/yr. for adult residential treatment
Wraparound services for pregnant or postpartum women Assumes a 12-month length of stay in wraparound services for 50 women at a time	\$55,000/yr.	\$25,000/yr.	\$30,000/yr. for wraparound Services
Recovery housing for 40 individuals Those eligible would be completing addictions treatment and beginning long-term recovery	\$375,000/yr.	\$0	\$375,000/yr. for housing
Peer support, vocational services and post-treatment recovery support To assist in obtaining employment	\$350,000/yr.	\$0	\$350,000/yr. for recovery support services
TOTAL	\$5,136,600	\$2,153,100	\$2,983,500

PREVENTING OPIOID MISUSE

Goals

Reduce the number of Butler County residents who misuse opiates

Increase the number of Butler County residents who view prescription drug misuse as harmful

Strategies

Inform the public about the opiate problem via all forms of media, and other means

Support local community coalitions

Educate prescribers about the dangers of opioid prescriptions.

Increase the occurrence of school-based prevention services

“Heroin is highly addictive and this addiction will kill you. Heroin does not discriminate. I have been called to every corner of Butler County for heroin related deaths. Some of the dead are young, some are old, most of the dead are in their 30’s. The Coroner’s office is the last stop on a very bad journey for the person addicted to heroin. But the impact of that journey continues for those around that person who have lost a daughter, a brother, a mother, father or son. Use of prescription opioid pain-relievers increases the risk of heroin addiction. Heroin addiction is difficult to treat; there are many agencies in the county that can help. Prevention is key.”

Lisa K. Mannix, MD, Coroner, Butler County Ohio

PREVENTING OPIOID MISUSE

Sustaining and expanding the capacity of current prevention programs in Butler County is one of the most effective and cost effective ways to combat the opiate epidemic. Research shows that \$1 spent on school-based substance use prevention programs can potentially save an estimated \$18 in costs stemming from substance use.⁸¹

Effective prevention efforts must be comprehensive, address all forms of drug misuse or abuse, and address both individual and environmental influences associated with drug abuse. To prevent opiate abuse, we must create and promote a culture conducive to Butler County residents making healthy choices.

School-based prevention programs have been, and will continue to be, an important part of prevention efforts in Butler County. However, reversing the epidemic requires prevention and outreach activities that impact Butler County residents of all ages. Recommended strategies include the following:

Environmental Strategies - Up to 50% of medications are not taken as prescribed.⁸² Furthermore, this is often not perceived as a problem in the first place. According to PreventionFIRST!, almost 13% of Butler County students in grades 7-12 do not perceive that using someone else's prescription drugs is potentially harmful.⁸³ The Mayo Clinic identifies a lack of knowledge about prescription drugs as a risk factor for prescription drug abuse.⁸⁴

Recommended environmental prevention efforts include:

- Social marketing campaign to include varied efforts to communicate with the public about the dangers of opiate misuse and dependence e.g. utilize at least two social media sites devoted to addressing the opiate epidemic in Butler County, write letters to the editor or articles quarterly to local newspapers
- Increase the number of permanent locations and prescription drug drop boxes in the community by 25%.
- Increase community awareness through use of billboards throughout the county
- Facilitate physician training in pain management and best-practices and state prescribing guidelines related to opiate prescriptions.
- Encourage prescribers to participate in the Ohio Automated Rx Reporting System (OARRS). This is the state's prescription monitoring program, where prescribers can see if patients are potentially misusing their prescription drugs.
- Collaborate with emergency room providers to improve and standardize e-coding, resulting in more accurate tracking of overdoses in Butler County.

Universal Education Strategies – Support local community coalitions in education/prevention initiatives targeted to school age children.

Although school-based prevention programming exists in Butler County, more is needed to combat an epidemic of this magnitude.

Recommendations include advocating for funding dedicated solely to prevention programming in Butler County, and identifying and purchasing evidence-based prevention programs and curricula for use by various groups and organizations in the county.

Providing information is necessary, but not sufficient by itself. To reduce the incidence of opioid misuse in Butler County, providers of prevention services must build the skills of professionals, parents, youth, and others in the community. Developmental Assets⁸⁵ are among the areas of focus. In 1990, the Search Institute identified 40 Developmental Assets that adolescents need to succeed in life. These include external assets, such as family support and a caring school climate, and internal assets such as interpersonal competence and skills to resist negative peer pressure. We encourage services and activities that promote the development of these assets in Butler County youth.

Recommended universal prevention efforts include:

- Conduct an overall inventory of any and all prevention services that occur in Butler County in order to map needs, gaps and any duplication
- Partner with local school districts to assure and assist with planning for and implementation of, prevention activities into the overall school curriculum at all grade levels.
- Increase the number of students who receive evidence-based curriculum to improve coping, decision-making and refusal skills.

Selective/Indicated Education Strategies – Ensure that at-risk youth receive, timely, relevant evidence-based prevention services on a consistent basis throughout the course of their youth.

Recommended selective/indicated prevention efforts include:

- Increase the occurrence of evidence-based services for children of addicts with concurrent, age appropriate groups including parents/caregivers

The total estimated cost of implementing prevention services will be \$525,000 a year.

REDUCE THE HARM CAUSED BY THE OPIOID EPIDEMIC

Goals

Decrease the number of unintentional overdoses due to opioid use

Decrease the number of new Hepatitis C, HIV, and other infections caused by intravenous drug use

Decrease the transmission of Hepatitis C, HIV, and other infections through accidental needle sticks.

Strategies

Support the dissemination of 300 naloxone kits

Collaborate with 2 additional pharmacies regarding the availability of naloxone without a prescription

Implement syringe exchange and expand infectious disease detection and other health services

Educate 300 drug dependent persons about overdose and other health risks

"In 2014, the City of Middletown was able to track \$1.5 million in local tax dollars expended in public safety, the courts and the Health Department directly tied to opiate addiction. This did not include emergency room costs at Atrium Medical Center, our local hospital. The current opiate epidemic is on a scale and diversity never seen by city officials and law enforcement before. The cost in lives, crime, transmission of communicable diseases such as Hepatitis C, and in broken families is taxing communities financially, in our schools and in the fabric of living safe, productive lives. There is simply not a more pressing issue facing Middletown, Ohio at this time."

Doug Adkins, City Manager, City of Middletown

REDUCING THE HARM CAUSED BY THE OPIOID EPIDEMIC

“Harm reduction” refers to a set of practices and strategies designed to reduce the negative consequences associated with drug use. One of the main goals of harm reduction is to keep people alive long enough to eventually benefit from addiction treatment or medical care. Harm reduction practices and strategies are guided by the following principles and beliefs:

- ▶ Significant harm is done to others as a byproduct of addiction. Harm reduction protects others in the community from some of these consequences of addiction in our midst.
- ▶ While striving to minimize the harmful physical effects of drugs, harm reduction strategies are not meant to trivialize or deny the tragic harm that licit and illicit drug brings to those who use drugs and to those who love them.
- ▶ The realities of poverty, class, racism, social isolation, past trauma, sex-based discrimination and other social inequalities affect both people’s vulnerability to and capacity for effectively dealing with drug-related harm.
- ▶ Providing services and resources in a non-judgmental, non-coercive manner benefits people who use drugs and the communities in which they live.
- ▶ Harm reduction acknowledges that some ways of using drugs are safer than others.
- ▶ Harm reduction strategies strive to minimize the harmful effects of licit and illicit drug use rather than ignoring or condemning them.

To decrease the number of overdoses, overdose deaths, and infectious disease transmissions in Butler County, we recommend the following strategies:

Strategy #1: Support the dissemination of 300 naloxone kits to first responders, family members, and friends of those addicted to opiates.

With this strategy, our aim is to keep drug dependent persons alive long enough to eventually benefit from treatment, health care, and other services that put them on the road to recovery. Although police and other emergency personnel are frequently the first in a position to revive someone who has overdosed, all too often it is family members or friends who are the actual first responders. Data from several pilot projects indicate that non-professionals can and do successfully administer naloxone to overdose victims.⁸⁶

Strategy #2: Collaborate with two additional pharmacies in Butler County regarding the availability of naloxone without a prescription.

A recent state law allows pharmacists or pharmacist interns to dispense naloxone without a prescription in accordance with the approved protocol. Pharmacies have been slow to engage in providing this service. Even though Gov. Kasich signed HB 4 in July 2015, only one Butler County pharmacy, Community First Pharmacy, operated by Community First Solutions demonstrated a commitment to being a certified site. Within the first year of this plan's implementation, we aim to help two Butler County pharmacies become certified to distribute naloxone without a prescription.

A group of researchers concluded, "Naloxone is an eminently safe and nonabusable substance that has 1 pharmacological function: to reverse the effects of opioids on the brain and respiratory system...one can purchase dozens of more dangerous and abusable substances over the counter at a local drug store."⁸⁷

Strategy #3: Implement syringe exchange and improve access to disease detection, and other health services.

On November 10, 2015, the Middletown Board of Health declared a health emergency to prevent the further spread of infectious diseases such as HIV and Hepatitis C. This has resulted in a proposal to have the Cincinnati Exchange Project (CEP) make syringe exchange, infectious disease testing, and other services available for four hours a week in Middletown. The Butler County Mental Health and Addiction Recovery Services Board supports the implementation of syringe exchange programs in the county.

Although controversial, syringe exchange is an effective harm reduction strategy supported by the Centers for Disease Control and Prevention.⁸⁸ Injection drug use accounts for approximately 20% of all HIV infections and the majority of Hepatitis C cases.⁸⁹ Accordingly, Scioto County in southern Ohio has experienced a drop in Hepatitis C attributed partly due to syringe exchange and education for injection drug users.⁹⁰

In Hamilton County, the CEP began operations in early 2014. The CEP is an advocacy organization that promotes education and the harm reduction model. The program allows IV drug users to exchange used needles for clean ones, since Hepatitis C can remain infectious on inanimate surfaces for up to 9 weeks. Participants receive information about addiction treatment, health care services, and other topics. Pregnancy testing and rapid HIV and Hepatitis C testing are available.

The estimated cost of bringing the CEP to Middletown for four hours a week is \$45,000 a year.⁹¹ In contrast, the estimated lifetime cost of treating a single HIV infected person is \$379,668.⁹² According to the organization's website,⁹³ the CEP had served almost 600 people as of October 2015. Of these, 10% had either gone to treatment or stopped using with the help of the CEP. They had distributed more than 275 naloxone kits, with more than 70 known instances of lives saved with these kits. CEP had referred 113 people to mental health services and referred 98 people to Hepatitis C treatment.

Strategy #4: Educate 300 drug dependent persons about overdose and other health risks.

Educating drug dependent persons about overdose and other health risks is an essential part of harm reduction. Such efforts are clearly needed. For example, according to the CEP, almost all (265 out of 272) of the program participants they interviewed reported using ineffective methods of cleaning injection equipment. Many people are not aware that a person's tolerance for opiates can drop after a period of abstinence, which puts them at risk for an overdose if they resume using the same dose of opiates as before. The Butler County Mental Health and Addiction Recovery Services Board supports efforts to provide this type of education to at least 300 drug dependent persons annually in Butler County treatment centers, jails, public health centers, and other sites.

The total cost of implementing all listed harm reduction activities will be \$120,000 a year.

IN CLOSING

Again, our recommendations are rooted in two assumptions:

#1 - Addiction is a treatable disease: Addiction is a chronic brain disease. As a result, quitting drug use is hard, even if the person wants to quit. Since the effects of chronic drug use can linger long after the person has stopped using, we must offer a comprehensive array of services that increase the odds of each person's success in the end. Implementing and sustaining funds for evidence-based screening and interventions is a must.

#2 - Treatment is a sound investment: For every \$1 spent on treatment, taxpayers save \$4 to \$15, depending on the number of factors studied.⁹⁴ According to some estimates, every \$1 spent on addiction treatment results in a return of \$4 to \$7 just on reductions in drug-related crime, criminal justice costs, and theft alone.⁹⁵ When healthcare related savings are added to the calculation, the savings can exceed \$12 for every \$1 spent.⁹⁶ Also, most clients need at least 90 days in treatment to significantly reduce or stop substance use, and the odds of better outcomes improve with even longer involvement in treatment.⁹⁷

#3 – Prevention is a sound investment: Sustaining and expanding the capacity of current prevention programs in Butler County is one of the most effective and cost effective ways to combat the opiate epidemic. Research shows that \$1 spent on school-based substance use prevention programs can potentially save an estimated \$18 in costs stemming from substance use.⁹⁸ Effective prevention efforts must be comprehensive, address all forms of drug misuse or abuse, and address both individual and environmental influences associated with drug abuse. To prevent opiate abuse, we must create and promote a culture conducive to Butler County residents making healthy choices.

With adequate funding for treatment, prevention, and harm reduction activities, we can improve the overall quality of life of many Butler County residents, improve the health and safety of our community, reduce costs in two governments, and alleviate suffering among family members, friends, and addicts themselves.

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- ¹ Ohio Department of Health, “2014 Ohio Drug Overdose Preliminary Data: General Findings.” <http://www.healthy.ohio.gov/~media/HealthyOhio/ASSETS/Files/injury%20prevention/2014%20Ohio%20Preliminary%20Overdose%20Report.pdf>
- ² Mannix LK. “Butler County Coroner: ‘We have a rampant killer in our community.’” *Hamilton Journal-News*, 3/28/16/ <http://www.journal-news.com/news/news/local/butler-county-coroner-we-have-a-rampant-killer-in-/ngtFP/>
- ³ Ibid
- ⁴ Ohio Department of Health, “2014 Ohio Drug Overdose Preliminary Data: General Findings.” <http://www.healthy.ohio.gov/~media/HealthyOhio/ASSETS/Files/injury%20prevention/2014%20Ohio%20Preliminary%20Overdose%20Report.pdf>
- ⁵ Data provided by Butler County Jail
- ⁶ McCrabb, R. “Butler County rise in hepatitis C tied to heroin use, experts say.” *Hamilton-Journal News*, 9/23/15. <http://www.journal-news.com/news/news/butler-county-rise-in-hepatitis-c-tied-to-heroin-u/nkzh/>
- ⁷ Ohio Substance Abuse Monitoring Network. “Drug Abuse Trends in the Cincinnati Region,” OSAM Drug Trend Report June 2015. <http://mha.ohio.gov/Portals/0/assets/Research/OSAM-TRI/June2015-Cincinnati.pdf>
- ⁸ “Shoveling Up II: The Impact of Substance Abuse on Federal, State, and Local Budgets.” National Center on Addiction and Substance Abuse at Columbia University, May 2009.
- ⁹ Muhuri PK, Gfroerer M, Davies C. “Associations of nonmedical pain reliever use and initiation of heroin use in the United States.” *SAMHSA CBHSQ Data Review*, August 2013.
- ¹⁰ Quinones S. (2015). *Dreamland: The True Tale of America’s Opiate Epidemic*. New York: Bloomsbury Press
- ¹¹ Ibid
- ¹² Picher J, Bernard-Kuhn L. “Across the US, an explosion of addiction.” *Cincinnati Enquirer*, 6/15/14.
- ¹³ Quinones S. (2015). *Dreamland: The True Tale of America’s Opiate Epidemic*. New York: Bloomsbury Press
- ¹⁴ Email correspondence with Butler County Coroner’s Office
- ¹⁵ Ohio Department of Health, “2012 Ohio Drug Overdose Deaths.” http://www.healthy.ohio.gov/~media/HealthyOhio/ASSETS/Files/injury%20prevention/2012%20overdose%20data/1finalCB_2012_Bullets%20for%20reporters%20on%20drug%20related%20poisoning.pdf
- ¹⁶ Ohio Department of Health, “2013 Ohio Drug Overdose Data: General Findings.” <http://www.healthy.ohio.gov/~media/HealthyOhio/ASSETS/Files/injury%20prevention/2013OhioDrugOverdoseSummary.pdf>
- ¹⁷ Ohio Department of Health, “2014 Ohio Drug Overdose Preliminary Data: General Findings.” <http://www.healthy.ohio.gov/~media/HealthyOhio/ASSETS/Files/injury%20prevention/2014%20Ohio%20Preliminary%20Overdose%20Report.pdf>
- ¹⁸ Mannix LK. “Butler County Coroner: ‘We have a rampant killer in our community.’” *Hamilton Journal-News*, 3/28/16/ <http://www.journal-news.com/news/news/local/butler-county-coroner-we-have-a-rampant-killer-in-/ngtFP/>
- ¹⁹ Ohio Department of Health, “2014 Ohio Drug Overdose Preliminary Data: General Findings.” <http://www.healthy.ohio.gov/~media/HealthyOhio/ASSETS/Files/injury%20prevention/2014%20Ohio%20Preliminary%20Overdose%20Report.pdf>
- ²⁰ Ohio Department of Health, “2014 Ohio Drug Overdose Preliminary Data: General Findings.” <http://www.healthy.ohio.gov/~media/HealthyOhio/ASSETS/Files/injury%20prevention/2014%20Ohio%20Preliminary%20Overdose%20Report.pdf>
- ²¹ Ohio Department of Health, “Unintentional Drug Overdose Death Rates for Ohio Residents by County, 2008-2013.” <http://www.healthy.ohio.gov/~media/HealthyOhio/ASSETS/Files/injury%20prevention/CountyDrugData2013.pdf>
- ²² Poturalski H. “Drug overdose rate among women skyrockets.” *Dayton Daily News*, posted 8/4/14. <http://www.drugabuse.gov/publications/research-reports/heroin/why-are-heroin-users-special-risk-contracting-hiv-aids-hepatitis-b-c>
- ²³ Poturalski, H. “Spike in transmittable diseases tied to needle sharing.” *Hamilton Journal-News*, 8/19/14. <http://www.journal-news.com/news/news/spike-in-transmittable-diseases-tied-to-needle-sha/ng5c5/>
- ²⁴ McCrabb, R. “Butler County rise in hepatitis C tied to heroin use, experts say.” *Hamilton-Journal News*, 9/23/15.
- ²⁵ Crane, M. “Hepatitis C surge in central Ohio may spur needle-exchange program.” *Columbus Dispatch*, 7/6/15. <http://www.dispatch.com/content/stories/local/2015/07/06/disease-may-spur-needle-program.html>
- ²⁶ Graph provided by Butler County Health Department, 11/5/15
- ²⁷ Marmor and Miller, 2013. A public health and healthcare spending time bomb: Hepatitis C. *Forbes Magazine*, as retrieved from <http://www.forbes.com/sites/henrymiller/2013/06/19/a-public-health-and-healthcare-spending-time-bomb-hepatitis-c>
- ²⁸ The C. Everett Koop Institute, Dartmouth Medical School. <http://www.epidemic.org/thefacts/theepidemic/USHealthCareCosts/>
- ²⁹ Pollack A. “Harvoni, a Hepatitis C drug from Gilead, wins F.D.A. approval.” *New York Times*, 10/10/14. http://www.nytimes.com/2014/10/11/business/harvoni-a-hepatitis-c-drug-from-gilead-wins-fda-approval.html?_r=1

-
- ³¹ Su J, Brook RA, Kleinman NL, Corey-Lisle P. 2010. The impact of hepatitis C virus infection on work absence, productivity, and healthcare benefit costs. *Hepatology*, 52(2): 436-42.
- ³² Ibid
- ³³ Law J. "I'm pregnant and I'm a heroin addict." Cincinnati mother describes struggle to get clean." <http://www.wcpo.com/news/local-news/i-team/im-pregnant-and-im-a-heroin-addict>
- ³⁴ Taylor K. "Tri-state hospitals drug testing mothers prior to delivery." <http://www.fox19.com/story/23344359/cincinnati-area-sees-increase-in-babies-born-addicted-to-drugs>
- ³⁵ Perinatal News & Events (newsletter of the Cincinnati Children's Perinatal Outreach Program). July 2014, Vol VIII, Issue 4.
- ³⁶ National Institute on Drug Abuse. "Dramatic Increases in Maternal Opioid Use and Neonatal Abstinence Syndrome." <http://www.drugabuse.gov/related-topics/trends-statistics/infographics/dramatic-increases-in-maternal-opioid-use-neonatal-abstinence-syndrome>
- ³⁷ Ibid
- ³⁸ Graph provided by Butler County Health Department, 11/5/15
- ³⁹ <http://www.cdc.gov/hiv/prevention/ongoing/costeffectiveness>
- ⁴⁰ U.S. Drug Enforcement Administration. Headquarters News, "DEA issues nationwide alert on fentanyl as threat to health and public safety." 3/18/15. <http://www.dea.gov/divisions/hq/2015/hq031815.shtml>
- ⁴¹ Centers for Disease Control Health Alert Network. "Increases in fentanyl drug confiscations and fentanyl-related overdose fatalities." 10/26/15 <http://emergency.cdc.gov/han/han00384.asp>
- ⁴² Ohio Department of Health, "2014 Ohio Drug Overdose Preliminary Data: General Findings." <http://www.healthy.ohio.gov/~media/HealthyOhio/ASSETS/Files/injury%20prevention/2014%20Ohio%20Preliminary%20Overdose%20Report.pdf>
- ⁴³ Ibid
- ⁴⁴ Centers for Disease Control Health Alert Network. "Increases in fentanyl drug confiscations and fentanyl-related overdose fatalities." 10/26/15 <http://emergency.cdc.gov/han/han00384.asp>
- ⁴⁵ Ibid
- ⁴⁶ Data provided by Butler County Jail
- ⁴⁷ Document: "Heroin Summit Results and Phase I of a Community Plan to Address Heroin Addiction in Middletown." 10/5/15
- ⁴⁸ Ibid
- ⁴⁹ Ohio Department of Rehabilitation and Correction. <http://www.drc.ohio.gov/web/Snapshots/butler%202013.pdf>
- ⁵⁰ Ibid
- ⁵¹ "Heroin use soars in Ohio child custody cases, <http://www.wlwt.com/news/heroin-use-soars-in-ohio-child-custody-cases/25976910>
- ⁵² Ibid
- ⁵³ Letter to the editor from Gayle Channing Tenenbaum, Public Children Services Association of Ohio. "Bill brings some help for opiate addiction, but more is needed." *Columbus Dispatch*, 5/17/14. <http://www.dispatch.com/content/stories/editorials/2014/05/17/bill-brings-some-help-for-opiate-addiction-but-more-is-needed.html>
- ⁵⁴ Data provided by Butler County Children's Services
- ⁵⁵ Ibid
- ⁵⁶ Essex R. "Here's how to get Rx drugs off the streets." *Cincinnati Enquirer*, 3/12/14. <http://www.cdc.gov/homeandrecreationalafety/rxbrief/>
- ⁵⁷ <http://www.cdc.gov/vitalsigns/opioid-prescribing/>
- ⁵⁸ Coalition for a Drug Free Greater Cincinnati. <http://www.drugfreecincinnati.org/pages/coalitionstrategies/subcat/11/>
- ⁶⁰ Data provided by PreventionFIRST!
- ⁶¹ Institute for Research, Education, and Training in Addictions. *Addictions Treatment: When Knowing the Facts Can Help*. <http://files.ireta.org/today/05.pdf>
- ⁶² National Institute on Drug Abuse (2012). *Principles of Drug Addiction Treatment: A Research-Based Guide (3rd edition)*. NIH Publication No. 12-4180. http://www.drugabuse.gov/sites/default/files/podat_1.pdf
- ⁶³ Ibid
- ⁶⁴ Ibid
- ⁶⁵ National Center on Addiction and Substance Abuse at Columbia, 2009. *Shoveling Up ii: The Impact of Substance Abuse on Federal, State, and Local Budgets*.
- ⁶⁶ Substance Abuse and Mental Health Services Administration. *Behavioral Health Barometer, Ohio, 2014*. HHS Publication No. SMA-15-4895OH. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2015. http://www.samhsa.gov/data/sites/default/files/State_BHBarometers_2014_2/BHBarometer-OH.pdf
- ⁶⁷ Redko, C., Rapp, R. C., & Carlson, R. G. (2006). Waiting Time as a Barrier to Treatment Entry: Perceptions of Substance Users. *Journal of Drug Issues*, 36(4), 831-852.

-
- ⁶⁸ Festinger DS, Lamb RJ, Kountz MR, Kirby KC, Marlowe D. (1995). Pretreatment dropout as a function of treatment delay and client variables. *Addictive Behavior*, 20(1), 111-15.
- ⁶⁹ Moos RH, Moos BS (2006). Rates and predictors of relapse after natural and treated remission from alcohol use disorders. *Addiction*, 101(2), 212–222. As cited in White WL. (2008). *Recovery Management and Recovery-Oriented Systems of Care: Scientific Rationale and Promising Practices*. Pittsburgh, PA: Northeast Addiction Technology Transfer Center, Great Lakes Addiction Technology Transfer Center, Philadelphia Department of Behavioral Health & Mental Retardation Services.
- ⁷⁰ National Institute on Drug Abuse (2012). *Principles of Drug Addiction Treatment: A Research-Based Guide (3rd edition)*. NIH Publication No. 12-4180. http://www.drugabuse.gov/sites/default/files/podat_1.pdf
- ⁷¹ National Institute on Drug Abuse. Treatment Approaches for Drug Addiction Retrieved from <http://www.drugabuse.gov/publications/drugfacts/treatment-approaches-drug-addiction> on November 23, 2015
- ⁷² Center for Substance Abuse Treatment. *Medication-Assisted Treatment for Opioid Addiction in Opioid Treatment Programs*. Treatment Improvement Protocol (TIP) Series 43. HHS Publication No. (SMA) 12-4214. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2005.
- ⁷³ National Institute on Drug Abuse. “Long-Term Follow-Up of Medication Assisted Treatment for Addiction to Pain Relievers Yields ‘Cause for Optimism.’” Retrieved from <http://www.drugabuse.gov/news-events/nida-notes/2015/11/long-term-follow-up-medication-assisted-treatment-addiction-to-pain-relievers-yields-cause-optimism>
- ⁷⁴ National Institute on Drug Abuse. “Topics In Brief: Medication-Assisted Treatment for Opioid Addiction – April 2012.” https://www.drugabuse.gov/sites/default/files/tib_mat_opioid.pdf
- ⁷⁵ Center for Substance Abuse Treatment. *Substance Abuse Treatment for Persons with Co-Occurring Disorders*. Treatment Improvement Protocol (TIP) Series 42, DHHS Publication No. (SMA) 05-3992, Rockville, MD. Substance Abuse and Mental Health Services Administration, 2005.
- ⁷⁶ Ibid
- ⁷⁷ Oser C, Knudsen H, Staton-Tindall M, & Leukefeld C (2009). The Adoption of Wraparound Services among Substance Abuse Treatment Organizations Serving Criminal Offenders: The Role of a Women-Specific Program. *Drug and Alcohol Dependence*, 103(Suppl 1), S82–S90. <http://doi.org/10.1016/j.drugalcdep.2008.12.008>
- ⁷⁸ Center for Substance Abuse Treatment. Integrating Substance Abuse Treatment and Vocational Services. Rockville (MD): Substance Abuse and Mental Health Services Administration (US); 2000. (Treatment Improvement Protocol (TIP) Series, No. 38.) Executive Summary and Recommendations. Available from: <http://www.ncbi.nlm.nih.gov/books/NBK64276/>
- ⁷⁹ Ibid
- ⁸⁰ National Institute on Drug Abuse (2012). *Principles of Drug Addiction Treatment: A Research-Based Guide (3rd edition)*. NIH Publication No. 12-4180. http://www.drugabuse.gov/sites/default/files/podat_1.pdf
- ⁸¹ Miller T, Hendrie D. *Substance Abuse Prevention Dollars and Cents: A Cost-Benefit Analysis*, DHHS Pub. No. (SMA) 07-4298. Rockville, MD: Center for Substance Abuse Prevention, Substance Abuse and Mental Health Services Administration, 2008.
- ⁸² <http://www.theatlantic.com/health/archive/2012/09/the-289-billion-cost-of-medication-noncompliance-and-what-to-do-about-it/262222/>
- ⁸³ PreventionFIRST!, 2014 Student Drug Use Survey, Alcohol and Drug Consumption by Youth in Butler County.
- ⁸⁴ <http://www.mayoclinic.org/diseases-conditions/prescription-drug-abuse/basics/risk-factors/con-20032471>
- ⁸⁵ <http://www.search-institute.org/research/developmental-assets>
- ⁸⁶ Kim D, Irwin KS, & Khoshnood K. (2009). Expanded Access to Naloxone: Options for Critical Response to the Epidemic of Opioid Overdose Mortality. *American Journal of Public Health*, 99(3), 402–407. <http://doi.org/10.2105/AJPH.2008.136937>
- ⁸⁷ Ibid
- ⁸⁸ http://www.cdc.gov/idu/facts/aed_idu_syr.pdf
- ⁸⁹ Ibid
- ⁹⁰ Kenning C. “Kentucky looks at needle exchange success in Ohio city.” *USA Today*, 3/10/15 <http://www.usatoday.com/story/news/nation/2015/03/10/ky-ohio-needle-exchange-heroin/24726605/>
- ⁹¹ Richter E. “Middletown takes step toward needle exchange program.” *Hamilton Journal-News*, 11/18/15. <http://www.journal-news.com/news/news/middletown-takes-step-toward-needle-exchange-progr/npQMm/>
- ⁹² <http://www.cdc.gov/hiv/prevention/ongoing/costeffectiveness/>
- ⁹³ <http://cincyp.org/local-information/>
- ⁹⁴ Institute for Research, Education, and Training in Addictions. *Addictions Treatment: When Knowing the Facts Can Help*. <http://files.ireta.org/today/05.pdf>
- ⁹⁵ National Institute on Drug Abuse (2012). *Principles of Drug Addiction Treatment: A Research-Based Guide (3rd edition)*. NIH Publication No. 12-4180. http://www.drugabuse.gov/sites/default/files/podat_1.pdf
- ⁹⁶ Ibid
- ⁹⁷ Ibid
- ⁹⁸ Miller T, Hendrie D. *Substance Abuse Prevention Dollars and Cents: A Cost-Benefit Analysis*, DHHS Pub. No. (SMA) 07-4298. Rockville, MD: Center for Substance Abuse Prevention, Substance Abuse and Mental Health Services Administration, 2008.