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Den 2315 Pharmacology

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Midwest 2

(Kansas, Iowa, Michigan, Indiana, Missouri, Illinois, Ohio)

Opioid abuse has been on the rise and is currently a major issue in the U.S. The Midwest-ern region had an increase of opioid overdoses by a whopping 70% from July 2016- September 2017. In Kansas, Iowa, Michigan and Ohio the primary opioids being abused are hydrocodone, oxycodone, methadone, fentanyl, carfentanyl and heroin.

Brand names for hydrocodone, a semi synthetic hydrogenated codeine derivative, are Norco, Vicodin and Lorcet. Street names include 357's, bananas, dro, fluff, hydro, norco, vics, vikes and watsons. A brand name for oxycodone, a semi synthetic derivative of codeine, is Oxy-Contin. Street names include blues, oxy and ox. It is produced by the pharmaceutical company Purdue Pharma. A brand name for methadone is Dolophine and street names for methadone include dollies, junk, and metho. It is produced by multiple licensed pharmaceutical companies. Fentanyl, a synthetic opioid and carfentanyl, it's analog, (an analog of fentanyl) are drugs that were first approved by the FDA in 1960 and became a common misused drug in the 70's being called lollipop. Fentanyl is an opioid agonist that is used parenterally or through a transdermal patch and activates the mu receptor producing an analgesic effect, to relieve the constant pain for the terminally ill. It is usually given during or after general anesthesia. It goes to the receptors in

the brain and spinal cord altering the pain perception. This is used for moderate to severe pain and can have its effects in 10 minutes through an IV, and 10-15 minutes by inhaling it. Some common used street names are fatty, fatty wrap, or fire, and brand names include Onsolins, Actiq, Abstral and Fentora. Heroin, a synthetic opioid otherwise known as smack, junk, mud, and dope is an illegal drug without any medical use. It lowers the release of neurotransmitters into the synaptic cleft and lasts for 3-5 hours.

Opioids act on the specific receptors in the body and inhibit release of the neurotransmitter into the synaptic cleft. They all have common side effects that include bradycardia, hypotension, anxiety, a lowered blood temperature, urinary retention, delirium, nausea, vomiting, constipation, and drowsiness. There are some interactions with other medications such as CNS depressants that can cause an additive effect. For example, alcohol and anti-anxiety drugs. All the opioids listed above are schedule II narcotics that are legal for medical use with prescription only except for heroin which is a a schedule I drug. All of them have a high potential for abuse.

Common signs of recognizing an overdose are pinpoint pupils and lower levels of consciousness. All of these opioids that are abused in the Midwest can be reversed with the antagonist naloxone/Narcan. It acts as an antagonist on the receptors mu, delta and kappa. It can be administered intravenously, intramuscularly and subcutaneously.

In Kansas, hydrocodone and oxycodone are obtained either through direct prescription or through friends and family that were prescribed it. Socioeconomically, White people had the highest death rates in Kansas due to opioid overdoses with people aged 35-44 having the highest mortality rate according to age, followed by those aged 25-34. Kansas has a very high prescrip-

tion distribution compared to the rest of the U.S. Providers in Kansas wrote 86.2 opioid prescriptions per 100 persons and the U.S. average was at 70 per 100 persons. Prescription drug monitoring programs (PDMP) are now required and in addition to that, Kansas implemented their own system called K-TRACS. In response to this growing crisis, government funds were put forward. A grant of \$3,114,402 was put into research and facilities to help Kansas solve their opioid crisis.

Iowa faces a problem with prescription opioids as well. Those 25-49 years of age make up a majority of opioid related deaths. Iowa has a lower rate than national average when it comes to opioid prescriptions. They've dispensed 73.6 per 100 persons as opposed to the national average of 82.6 per 100 persons. In 2016 there were 183 opioid related deaths in Iowa. That's a rate of 6.2 deaths per 100,000 persons. The national rate was 13.3 per 100,000. Due to the opioid crisis hitting them, they have made naloxone kits accessible to the public. This is possible due to the grant they have been given of \$2,728,077.

Michigan is ranked number four among the states with the drug abuse problems. The most common drugs of abuse in Michigan are marijuana, followed by heroin and opioid prescription drugs. Heroin is easily available in all of the Detroit area and other densely populated areas of Michigan. Heroin is brought into Michigan from different parts of the world from different countries like South America, Mexico and Africa. See Appendix 1. Despite the fact that the number of issued prescriptions and dispensed drugs that are falling under categories Schedule II — V have been stabilizing or decreasing during 2017 fiscal year, the number of deaths from overdoses are increasing. According to the report, 59% of prescribers are primary care providers, 9% of opioid prescriptions are issued by pain management prescribers, and 15% of sedative prescrip-

tions are written by psychiatric specialists (10% of all prescribers). See Appendix 2. The Michigan opioid-related overdose death rate in 2016 was 18.5 deaths per 100,000 people comparatively to the average states' level 13.3 deaths per 100,000 people. 30% or more drug related overdose deaths happened in 2015 comparatively to 2013. The largest number of male overdoses occurred in people 26-35 years old and 46-55 years old and in women 46-55 years old. The heroin overdose death rates for those in their 20s and 30s increased faster than those for other age groups since 2010.

From 1999 to 2008, the number of drug overdose deaths with opioid analgesics increased from about 4,000 to 14,800. There is a tendency in all states that the abused prescription opioids and heroin are densely populated amongst the poor. Statistics from the CDC indicates that as of 2011 the rate of overdose deaths from opioid prescription drugs, including popular pain relievers containing oxycodone (OxyContin, Percocet), hydrocodone (Vicodin, Norco), and hydromorphone (Dilaudid) were highest in states with higher poverty levels. Michigan and Indiana are ranked 34th and 36th by median household income. Illinois is 19th in line with a similar level of poverty. Detroit is the region with the highest death rate. Although there is a connection between poverty and opioid abuse, addiction to prescription opioids and illegal drugs like heroin, affects people with different socioeconomic status and income level as well.

The Michigan Department of Licensing and Regulatory Affairs (LARA) is one of the first state government agencies in USA to use a new tool recently developed by Appriss Health in effort to defeat the opioid crisis. Elaborated tools allow public health officials, state administrators, and policy makers to understand drug trends and allows healthcare providers to quickly assess a patient's electronic prescription history in order to predict a risk of overdose death. According to

the report "Statewide Opioid Assessment: Michigan. Identify, Prevent, and Manage Substance Use Disorders" by Appriss Health dated March 29, 2018, more than 7.5 million patients who were prescribed 103.2 million prescriptions over the five years of prescription drug monitoring program history were linked to 5,261 overdose deaths. This program is already in use in Connecticut, Ohio, Indiana, Virginia, South Carolina, Michigan, Arizona, Colorado, Nevada, Idaho, West Virginia, & New Jersey. Soon it will be implemented in Texas and Pennsylvania.

The Michigan Automated Prescription System (MAPS) serves as the State's controlled substance prescription monitoring program within the Bureau of Professional Licensing (BPL), Michigan Department of Licensing and Regulatory Affairs (LARA). They issue annual report stating the number of prescribed drugs of Schedule II-V dispensed for the particular year. For example, in 2017 total number of Schedule II drug prescriptions was 9,587,171, Schedule III, IV, V - 1,564,036; 7,821,019; 970,977 respectively, 48.49% of which were opioids. Michigan Board of Pharmacy Guidelines for the Use of Controlled Substances for the Treatment of Pain establishes minimum standards of practices for pharmacists working with the patients in need for prescription drugs of abuse (Schedule II-V). The report also contains drug utilization report data with inventory for every drug on Schedule II-V dispensed during the controlled time frame. For example, oxycodone (with the last two columns – prescription count number and prescription quantity number) – see Appendix 3.

The huge rise in unintentional overdose related deaths caused by opioid addiction in Ohio is directly related to the rise of fentanyl use. Fentanyl and its analog, carfentanyl, have replaced heroin as the most popular drug of abuse. Ohio is in the top five states with the highest death rates from drug overdoses. There are still high rates of cocaine and heroin abuse but the synthetic

opioids now hold the highest death rate. In 2016, the death rate in Ohio was 3,613, double the national rate since 2010. The number of overall drug overdose related deaths declined in 2016 for a fifth straight year and are fewest since 2009. It went down 15.4% since 2015.

These synthetic opioids are so dangerous because they are much stronger than heroin, and derivatives such as carfentanyl are even stronger. Carfentanyl is so rampant because it is disguised to look like a common prescription such as alprazolam (Xanax). A lot of the data, reports cocaine used with fentanyl. In 2016 there was a 32.8% increase in opioid overdose related deaths since 2015 in Ohio. Of that number, 58.2% of the deaths were caused by fentanyl. This increase corresponded with the rising number of drug seizures reported by law enforcement in 2016. The number of cocaine overdoses rose significantly as well in 2016 with a total of 1,109 deaths with 685 in 2015. Of these cocaine overdoses, 55.8% of them were mixed with fentanyl. Heroin overdoses stayed relatively flat from 2015 to 2016, it went from 1,424 to 1,444. The overall deaths in 2016 were 2,357 from fentanyl, 340 from carfentanyl, and non-synthetic opioids were 1,693.

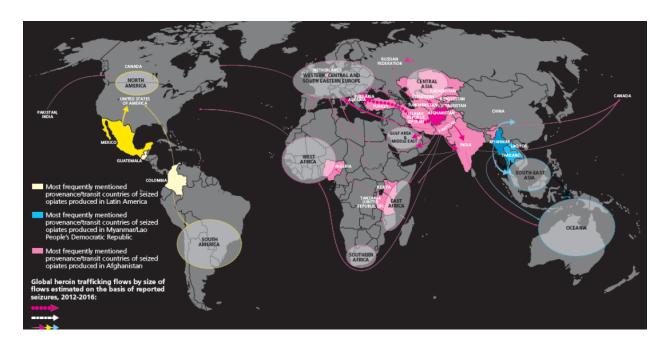
The demographic for these drugs used is significantly more male dominant, with 525 males and 225 females overdosing. The predominant age of overdose is between 25-34, and still some deaths until age 44. A lot of the fentanyl has been traced back to a lab in Mexico and some of it is coming from Canada and China. In May 2018, there was a news report that found ties with fentanyl being smuggled and the Mexican Sinaloa drug cartel, being crossed over the border in hidden traps in cars driving along the Ohio state highway. These cartel members were also sneaking in cocaine and heroin as well as synthetic opioids into the state of Ohio. The state of Ohio has given their drug overdose problem a lot of attention through new legislation, media coverage, and initiatives to solve the issues that relate to the crisis. In May 2018, Governor John

Kasich announced new rules, that will act as checkpoints for doctors prescribing opioids when a patient's prescription increases to the morphine equivalent dose (MED) of 50, 80, and 120. The total number of opioids dispensed to Ohio patients has decreased by 162 million doses between 2012 and 2016. This is due to the Ohio state efforts to reduce prescription supply, the enacting opioid prescribing guidelines, and using the drug monitoring program, Ohio Automated Rx Reporting System (OARRS). Governor Kasich also sued pharmaceutical companies because he claimed they are misleading doctors about the dangers of pain medications in order to increase their sales and in turn harming many, many Ohioans. As of 2018, the legislation in Ohio has expanded in trying to prevent and work with the opioid crisis. Firstly, they enacted Common Sense reforms that will be put into effect as of November 2018. These will be a set of new rules regarding state regulatory boards enacting prescribing opioids to manage or prevent usage of illegal opioids. New stronger regulations for pharmaceutical wholesalers that sell to companies in Ohio (over 500) are also being put into effect. New regulations by Ohio state board of pharmacy is demanding the pharmacies have to uniformly and electronically report all orders, report any suspicious orders to the FDA and not to ship these orders without reviewing the risk first. There are also higher penalties for trafficking and possession of fentanyl and carfentanyl due to 71% of overdose deaths from it in 2017. A four-year grant of 8.2 million dollars was given for prevention initiatives in high risk counties. More funds are being given to purchase naloxone and other reversal drugs, for first responders like EMS, law enforcement and project DAWN- Deaths Avoided With Naloxone. Scientific breakthroughs to battle addiction, for example in September the Ohio third frontier commission offered 2.4 million dollars to 12 innovative projects that offered to diagnose and help prevent the opioid abuse and overdose crisis. Connecting people to

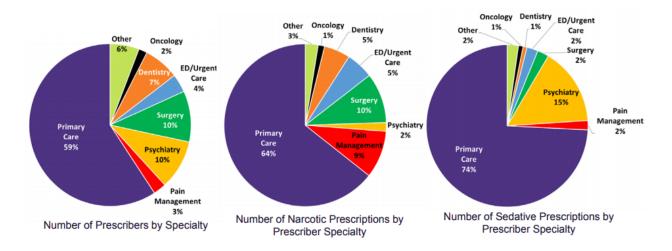
resources and protecting first responders. The Opioid Workplace Safety Program will provide 5 million dollars over 2 years to hire, manage and retain workers recovering from an opioid addiction. The Ohio Department of Health received a 5.1 million dollar federal grant to address the state and local response to the Ohio opioid crisis. The media has been really good with regard to catching people's attention about the opioid crisis. The news is constantly recording the different events and problems that have arisen as a result to the growing fentanyl problem. With catchy headlines and unfortunate stories of overdose from within the community pulling at people's emotions to spring them into action.

The opioid crisis in Missouri is predominantly caused by the drug abuse of synthetic opioids as well. The Missouri community is faced with many of the same problems and overdose related effects as the rest of the Midwest because of the opioid crisis.

This is a crisis that is growing and affects more than just the individual abusing the opioid. With the awareness being increased hopefully, we will see a decrease in dependence and deaths due to these substances.



Appendix 2. Number of Opioids and Sedatives prescribed depending on a doctor's specialty.



Appendix 3. An example of Drug Utilization Report Data for Michigan (Oxycodone)

A	В	O O	D	ш
675 OXYCODONE 5 MG TABLET	2	OPIATE AGONISTS	1	
676 OXYCODONE HCL 5 MG CAPSULE	2	OPIATE AGONISTS	1,849	134,58
677 OXYCODONE HCL 5 MG TABLET	2	OPIATE AGONISTS	134,521	8,797,49
678 OXYCODONE HCL 5 MG/5 ML SOL	2	OPIATE AGONISTS	1	21
679 OXYCODONE HCL 5 MG/5 ML SOLN	2	OPIATE AGONISTS	6,787	2,347,50
680 OXYCODONE HCL 10 MG ER TABLET	2	OPIATE AGONISTS	1	16
681 OXYCODONE HCL 10 MG TAB SA	2	OPIATE AGONISTS	1	21
682 OXYCODONE HCL 10 MG TABLET	2	OPIATE AGONISTS	56,266	5,145,03:
683 OXYCODONE HCL 15 MG TABLET	2	OPIATE AGONISTS	53,656	5,453,34
684 OXYCODONE HCL 20 MG TABLET	2	OPIATE AGONISTS	21,092	2,257,36
685 OXYCODONE HCL 30 MG TABLET	2	OPIATE AGONISTS	127,878	12,306,72
686 OXYCODONE HCL 40 MG ER TABLET	2	OPIATE AGONISTS	1	21
687 OXYCODONE HCL 100 MG/5 ML SOLN	2	OPIATE AGONISTS	1,857	120,90
688 OXYCODONE HCL CR 20 MG TABLET	2	OPIATE AGONISTS	4	24
689 OXYCODONE HCL ER 10 MG TABLET	2	OPIATE AGONISTS	5,106	258,58
690 OXYCODONE HCL ER 15 MG TABLET	2	OPIATE AGONISTS	22	1,25
691 OXYCODONE HCL ER 20 MG TABLET	2	OPIATE AGONISTS	4,541	280,91
692 OXYCODONE HCL ER 30 MG TABLET	2	OPIATE AGONISTS	21	1,56
693 OXYCODONE HCL ER 40 MG TABLET	2	OPIATE AGONISTS	6,570	447,12
694 OXYCODONE HCL ER 60 MG TABLET	2	OPIATE AGONISTS	31	1,91
695 OXYCODONE HCL ER 80 MG TABLET	2	OPIATE AGONISTS	4,993	441,05
696 OXYCODONE HCL POWDER	2	OPIATE AGONISTS	273	2,71
697 OXYCODONE-ACETAMINOPHEN 2.5-325 MG TAB	2	OPIATE AGONISTS	533	33,36
698 OXYCODONE-ACETAMINOPHEN 5-325 MG TAB	2	OPIATE AGONISTS	142,036	8,944,23.
699 OXYCODONE-ACETAMINOPHEN 5-325 MG TABLET	2	OPIATE AGONISTS	64,004	3,666,621
700 OXYCODONE-ACETAMINOPHEN 5-500 MG CAP	2	OPIATE AGONISTS	1	101
701 OXYCODONE-ACETAMINOPHEN 7.5-325 MG TAB	2	OPIATE AGONISTS	25,411	2,002,72
702 OXYCODONE-ACETAMINOPHEN 7.5-325 MG TABLET	2	OPIATE AGONISTS	68,675	5,541,48

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Part B: Impact Story

As I started my research on the opioid crisis in the State of Ohio I came across an infamous picture online. The photo depicts two parents in both the drivers seat and passenger seat of a car under the influence on the road with a small child in the back seat grinning. This was posted on Facebook and made headlines right away, showing the world the severity of the opioid crisis and its far reaching effects on communities at large.

On Wednesday afternoon September 10th 2016, a police officer in East Liverpool, Ohio, made this horrifying discovery while pulling over this couple for erratic driving. When he approached the car window he found 47 year old Mr. James Lee Acord in the drivers seat barely conscious and 50 year old Mrs. Rhonda L. Pasek turning blue with a little 4 year old boy in the back of the vehicle restrained in his car seat. The officer immediately contacted medical assistance, as soon as the EMTs arrived they administered the drug Narcan which reverses the overdose both the driver and passenger were revived and arrested. Police then contacted the Columbiana County Children's Services. Mr. Acord pleaded no contest and was sentenced to 180 days in prison for driving under the influence and endangering children. The passenger, Mrs. Pasek pleaded not guilty to the charges of disorderly conduct, seat belt violation, and endangering children.

A bystander who snapped photos at the scene, and posted it to the East Liverpool public facebook page, this picture of the child's guardians DUI got a lot of attention and raised awareness to the drastic state of how bad the opioid epidemic in Ohio. The city accompanied the photo on the facebook page with the caption "It is time that the non drug using public sees what we are

now dealing with on a daily basis", and "We feel we need to be a voice for the children caught up in this horrible mess. This child can't speak for himself but we are hopeful his story can convince another user to think twice about injecting this poison while having a child in their custody." This post received over 3,000 comments and was shared 22,000 times by Friday of that week.

Unfortunately this story is not a quondam event in the region and the many children who are orphaned or living under someone else's care due to their parents overdosing, or their prison stays because of their in opioid addiction. What struck me the most about this story is the picture on the front page. Like many others who saw the Facebook post, seeing the dark truth of how small children get caught up in caregiver's addictions is heartbreaking. This is the type of event that strikes a chord in families, tearing them apart; while leaving communities with orphaned children to take care of, who are left with all sorts of trauma and emotional problems which need to be dealt with. Another rising issue is schools filled with children who aren't properly cared for by their parents, while they are high on Fentanyl and Heroin. The rise of Fentanyl and Carfentanil over Heroin is extremely dangerous because it has a much stronger effect over Heroin, even one flake of Carfentanil can be deadly. According to the Ohio department of Health in 2016 there was 4,050 unintentional overdoses of Fentanyl and Carfentanil, 32.8% more than the 3,050 in 2015.

This unfortunate story does not stand alone with other news reports of vehicles found with adults unconscious with children in the car. Countless stories of children calling 911 after finding their caregivers, grandparents, parents, and babysitters "fell to the ground" in overdose. The crisis in Ohio is particularly bad, and we must make others more aware of what is going on and the severity of this crisis. We as a nation must provide recovery aid for those in need, reach

out to children who need help dealing with parents and caregivers struggling from addiction, and stop the crooked doctors and pharmacists who are prescribing non medical use of pain medications and opioids.

 $\underline{https://www.independent.co.uk/news/world/americas/heroin-overdose-parents-car-photo-boy-\underline{finds-new-home-ohio-a7307391.html}$

The story behind the photo of two heroin users and their four-year-old child

Police say: 'It is time that the non drug using public sees what we are now dealing with on a daily basis'

- Christopher Ingraham,
- Carolyn Y. Johnson
- Saturday 10 September 2016. 09:54



On Wednesday afternoon, a police officer in East Liverpool, <u>Ohio</u>, stopped a vehicle for driving erratically and made a shocking discovery: The driver was barely conscious. A woman was slumped across the passenger seat next to him, turning blue.

In the back of the vehicle, a 4-year-old boy sat restrained in a car seat, according to a police report.

The officer called an ambulance, and when the EMTs arrived, they administered the lifesaving drug Narcan, used to reverse opioid overdoses. After 47-year-old James Lee Acord and 50-year-old Rhonda L. Pasek were revived, police arrested them and contacted Columbiana County Children's Services.

Acord pleaded no contest and was sentenced to 180 days in jail on charges of driving under the influence and endangering children, according to a local news report. Pasek pleaded not guilty to charges of disorderly conduct, endangering children and a seatbelt violation.

It seemed like just another day of near-tragedy on the front lines of America's opioid epidemic. But the East Liverpool incident was unique in one key respect: Someone at the scene snapped photos of the adults passed out in the car with the grim-faced child sitting in back. The city of East Liverpool then took the surprising step of posting those photos to its public Facebook page.

"It is time that the non drug using public sees what we are now dealing with on a daily basis," the city wrote in the accompanying post. "We feel we need to be a voice for the children caught up in this horrible mess. This child can't speak for himself but we are hopeful his story can convince another user to think twice about injecting this poison while having a child in their custody."

The post has spread like wildfire on Facebook in the day since it went up, shared more than 22,000 times and eliciting more than 3,000 comments by Friday evening.

Commenters were split on the merits of the photo, with some saying the child's face should have been blurred out, while others expressed gratitude to the city for showing what the effects of opioid use look like.

Brian Allen, the city's director of public service and safety, said the city received a public records request for the photos from a local TV station. After discussion involving Allen's office, the

mayor's office and the city's legal council, they decided to release the photos without blurring the child's face.

Allen said authorities in East Liverpool, a city of 11,000 people, are dealing with heroin-related cases on a daily basis.

"We had two overdoses yesterday," he said. "Today we raided a dealer's house and arrested a user."

Ohio is in the throes of a heroin and opioid epidemic that shows no sign of abating. Last year, a record 3,050 people in Ohio died of drug overdoses.

The crisis affects all parts of the state, but it has been particularly severe in small cities such as East Liverpool, and in other rural areas in the eastern and southern parts of the state near the Ohio River. Once a mighty industrial artery for Middle America, the Ohio River is now dotted with communities that have lost much of their economic strength as factories have closed and jobs have vanished.

East Liverpool is in Columbiana County, which ranks 57th among Ohio's 88 counties on health outcomes, as measured by the County Health Rankings compiled by the University of Wisconsin and the Robert Wood Johnson Foundation. The rankings take many factors into account, including premature deaths, obesity and smoking.

Kathleen McCoy, a chemical dependency specialist at the Counseling Center of Columbiana County said that heroin is a big problem in the county. She said that there are resources to help people struggling with substance abuse, but that a big barrier is getting people to seek help.

She said when she looks at the photographs of Acord and Pasek, she sees a depiction of a terrible illness.

"I have an understanding of how addiction is a disease in the brain; it's a chronic illness that can be treated," McCoy said. "So you're looking at two individuals, in the car with a child. And you're looking at — once people get addicted, it's more of a sickness that needs to be treated, versus these are terrible people."

It's not clear exactly what drug Pasek and Acord had taken.

Ohio recently has been overwhelmed by a new wave of fentanyl, an extremely powerful synthetic opioid that killed the pop singer Prince. Fentanyl was responsible for more than a third of the state's overdose deaths in 2015, according to state data.

More recently, the state has seen a rise of carfentanil use, an elephant tranquilizer so dangerous that a tiny flake can trigger an overdose. Carfentanil has been implicated in the explosion of overdose cases late last month in Cincinnati. At least eight people have died of carfentanil overdoses, the Hamilton County coroner determined, according to CNN.

Acord has been arrested for multiple offenses across several states, according to public records, including driving under the influence, public intoxication and unarmed robbery. Many of the alleged offenses occurred in the 1990s.

Court records indicate Pasek was arrested for a number of offenses in the early- and mid-2000s, including menacing, intoxication, resisting arrest and leaving the scene of an accident.

Allen, the public safety director, said the county has been overwhelmed by the opioid problem and doesn't have enough places to send people who have become addicted to the powerful drugs.

"We have no place to send them," Allen said. "We arrest them, they go back out and they do it again."

Other small cities are facing similar pressures. The city of Huntington, W.Va., (pop. 49,000) recently saw 26 heroin overdose cases in a span of four hours.

In the southern Ohio town of Portsmouth, "pill mills" where doctors dispense opioids promiscuously have become common, leading to a government crackdown. Between 2011 and 2014, the state revoked the licenses of 61 doctors and 15 pharmacists.

But the addictions — the craving for the high that comes from opioids — remained. Many addicts switched to cheaper heroin, much of it coming in from Mexico.

Nationally, heroin overdose deaths have risen sharply, from 1,960 in 1999 to 10,574 in 2014, according to the Centers for Disease Control and Prevention.

Ohio's drug overdose death rate has been one of the highest in the nation. In particular, Ohio heroin deaths jumped more than tenfold between 2003 and 2014, from 87 to 1,196, according to the Ohio Department of Health.

In Columbiana County, the death rate for all drug overdoses stood at 22.3 deaths per 100,000 in 2014, adjusted for age, according to the CDC. That's slightly lower than Ohio's overdose death rate of 24.6 per 100,000, but significantly higher than the national rate of 14.7.

Allen says more people need to understand what the front lines of that epidemic actually look like to the people responding to it.

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"Sometimes the truth is hard to see," he said, "and that's what this photo is. The truth."

Joel Achenbach and Alice Crites contributed to this report.

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Den 2315 Pharmacology

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Part C: Role of the dental hygienist

Treating patients who are under the influence of drugs can be difficult, and special care must be taken when interacting with them. As a hygienist one must be aware of the possible effects opioids or other drugs of abuse can have on a patients mental state and changes they can have on the brain. Drugs can have short or long term effects on the brain, some of these effects include paranoia, depression, anxiety, and hallucinations. A person who is under the influence of drugs is two times more likely to suffer from a mood or anxiety disorder. Opioids like Fentanyl causes mental confusion, nausea, constipation, drowsiness, respiratory depression and a feeling of euphoria. This is important to know when interviewing a patient on their health history because if the patient is not in a normal state of mind, or having hallucinations they may not give accurate answers regarding their medical or dental history. Communicating with a patient who is known to abuse drugs may be a struggle because the patient may be suffering from anxiety or another mood disorder. The patient may also be very tired or confused, and managing them in the chair can be a challenge. A patient who is regularly abusing drugs may not be reliable and might

be prone to missing appointments. Because they aren't in a stable state of mind, it is possible they wouldn't remember that they scheduled an appointment. It is important to make sure the treatment plan is clearly written up with the patient and explained, so that they fully understand the procedures and process of care. Confirming a patient who is a known drug user's appointment more than once, or a a few hours before the appointment is a good idea to make sure they are aware they have an appointment, and that they show up. Once the patient is seated and their medical history is reviewed it is important to look for different clinical signs of an overdose, to see if they are under the influence at that present time that they are in the dental chair. Some signs of overdose are a patients eyes, they would have miosis, slurred speech or shallow breathing.

If I worked in a region that frequently had patients that are known drug abusers I would make sure my office had the drug Narcan or Naloxone is readily accessible to reverse the effects of drug abuse in an emergency situation if a patient is overdosing in the dental chair. I would also find out if the patient took any drugs in the past 24 hours and know the effects it can cause on the patient. For example If the patient is abusing Fentanyl, I would then watch them throughout the appointment to make sure they do not fall unconscious.

As oral health care providers and educators we must be aware of the trends in society that relate to oral health and the status of our patients in the dental chair. It is imperative that we stay educated about current drug trends and their effects of the oral cavity. Part of being a good hygienist is knowing how to recognize and identify lesions in a patient's mouth, especially if it is related to drug use, especially if it is a key problem in your office and community. Oral education is a part of you're job as a hygienist and we must educate patients on the effects of drug use, discuss drug

abuse and and advise them on how to get help. A hygienist is a partner in a person's health care team therefore we as a part of this bigger team have to be proactive to protect, identify, and educate our patients about the effects of drug abuse on one's mouth. Having pamphlets and information on hand about getting help, rehab centers, and becoming clean is a way to show the patient and talk to them about the dangers and risks of drug abuse. I believe we cannot be forceful when discussing the topic of cessation with our patients because it is a sensitive topic and we must remember that these people are suffering from an addiction. It is important to educate about different treatment options, and advocate getting clean, but in a gentle and empathetic way.