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Joint Policy Hearing

Pennsylvania's Drug Epidemic

The use of opiates and their derivatives has been carried out for centuries, and since that time, it has been a juggling act trying to balance the medicinal properties of the drug versus the effects that lead to its abuse. All of the classic civilizations that we are familiar with have utilized opium. The Egyptians cultivated poppy fields, which they would trade later to the peoples surrounding the Mediterranean Sea. The ancient Greeks would continue the practice of cultivating, trading, and smoking the drug. Hippocrates, the "father of medicine," recognized its usefulness as a narcotic in treating diseases. Through the trade routes of these groups, opium traveled throughout Europe and Asia. Arab traders would carry the drug to India and China.

It disappeared for a time in Europe, only to return during the Reformation. With its rebirth, it became known as "laudanum." Laudanum would continue for centuries, undergoing variations, and it would make its way to the United States with the colonization of the New World. Thomas Jefferson was among the drug's users, utilizing it for pain management in his older years. Mary Todd Lincoln also used this drug, eventually becoming an addict.

During its history, the opiates have gone through several permutations. A German pharmacist's assistant, Friedrich Serturner, isolated a yellowish-white crystalline compound from crude opium. After neutralizing it with ammonia, morphine was born. Morphine was touted as "God's own medicine" because it was "reliable, long-lasting, and safe." Morphine was commonly used as an analgesic during the Civil War, which led to an extremely high incidence of soldiers who became addicted. This was known as the "soldier's disease." When the addictive properties of morphine became too much, a chemist working for Bayer found that if you diluted morphine with acetyls, you could produce a drug that would offer the benefits of morphine without the common side effects. With that, heroin was born, and marketed as a cure for morphine addiction. In its early inception, heroin was found in several common household medications such as children's cough medicine and asthma medicine.

At the turn of the 20th century, the issues surrounding the abuse of opiates came to the forefront of legislation. In 1905, U.S. Congress banned opium. The following year, the Pure Food and Drug Act was passed, which required pharmaceutical companies to list the contents of the item on the label. This caused a decline in the availability of

opiates. The passage of the Harrison Narcotics Act of 1914 required doctors and pharmacists to register and to pay a tax for prescribing narcotics.

In more modern times, the creation of the synthetic opioids rose and were released with approval from the Food and Drug Administration. Demerol was the first in 1932 and since then, we have had a slew of new drugs, methadone, fentanyl, tramadol. These also include the names that we are familiar with today: Vicodin, Percoset, Oxycontin, Hydrocodone. These drugs arose from the necessity to treat chronic pain, and as the need for these drugs increased, so did the rate at which they were abused.

This bring us to today. And what can we learn from my ramblings about the past? Perhaps it's that the issue at hand is nothing new. Trying to strike a balance utilizing the drug is something that humanity has been dealing with for years. Perhaps it's that we are continually trying to deal with opiates and opioids in a way that will decrease it's propensity for abuse or addiction. Perhaps, instead of trying to figure out how to chemically alter the drug to make it less addictive, we should be considering how to treat the addiction, from both a psychological and biological perspective.

The main point that I want to address is that drug addiction/abuse has permeated every corner of life. The situation we find ourselves in today is that this issue knows no subsets. We all have an image of what we believe addicts or those that overdose look like. However, that stereotype is no longer applicable. The problem reaches to all age ranges, all genders, all racial groups. Deaths resulting from some form of drug are claiming individuals from all ranges of life.

For the year 2015, in Pennsylvania, the ages of those reported with a cause of death that was drug-related ranged from 3 month to 94 years. While both men and women have the same issues, men comprise two-thirds of deaths. The racial "profile" is predominantly white, however, the percentages of death by race follow the percentages of the population as a whole across the Commonwealth. Addiction and drug-related deaths are no longer relegated to larger cities and their populations. Drug issues can be found in our counties, including the extremely rural ones. The drug problem is everywhere.

To perhaps paint a better picture of drug-related deaths, let's discuss overall numbers. In 2014, coroners across the state reported 2,489 drug-related deaths. This was an increase of about 20% from 2013. With this number, in 2014, 7 people a day died from drugs. In 2015, the total number of deaths reported was 3,505, a 30% increase. As of last year, 10 people a day died from a drug related cause. Across the Commonwealth, we have seen a steady increase in drug-related deaths and we expect to see this trend continue through 2016.

Here in Venango County, for the past several years, our drug-related death numbers have held steady, right around 10, give or take. While in comparison to some neighboring counties this doesn't seem to be a high number, drug related deaths comprise about 10% of the total calls that the coroner handles.

In 2014 & 2015, the majority of the overdoses in this county were the result of what we term "combined drug toxicity." This means that there were multiple drugs in the decedent's system, and typically, these drugs, taken in combination resulted in the death. The most common drug "pairing" that I encounter is a type of opioid or opiate with a benzodiazepine. These opioids/opiates may come in the form of a prescribed medication from a physician or dentist, methadone, buprenorphine, or heroin. Commonly, the same physician who wrote the prescription for the opioid will also write the prescription for the benzodiazepine.

While Venango County, for the most, part has been relatively sheltered from the heroin problem in the surrounding counties, in 2016, we have had an increase in deaths associated with heroin. As it stands now, of the drug deaths investigated this year, 50% of them have involved heroin. A known shipment of heroin that came into the county has resulted in numerous overdoses and at least 2 deaths, one of which was investigated within the county and one that was transported out and became a case for the Erie County Coroner. This heroin was laced with fentanyl, an extremely potent narcotic analgesic. Typically, because of its potency, it is found in a transdermal patch so that it's release into the body can be done slowly and over an extended period of time. If taken quickly or in high dosages, it is almost always fatal.

From a drug-related death perspective, what should we be looking at for prevention purposes? Perhaps it's easiest to break it down into four categories. The first category being those under the age of 18. This group includes infants born to mothers who are addicted or on prescription opioids; children who have access to these drugs as the result of a parent utilizing them; or the teenage group who has access to drugs for experimentation through their own prescriptions, a parent's prescription, or a friend. Here in this county, in speaking with a hospital representative, we have a higher birth rate of babies born to addicted mothers than Allegheny County. In 2015, I handled 5 infant deaths. Of those, 2 were with mothers who were on prescription opioids. The one was ultimately ruled as SIDS, but it is unclear if the prescribed buprenorphine passed on to the infant via breastmilk played any sort of role.

The second group of people to examine is the adult population, from ages 18 to 65. It is within this group that we have the highest incidence of drug-related deaths. The age range of 30-49 produces the highest percentage of drug-related deaths in Pennsylvania. Most of these individuals are addicts, including those who use illegal drugs, who see no real road to recovery or have no access to the help they require. It is not uncommon for these individuals to ask for help, only to have no space available to them in a treatment facility or to have the "hurdles" so daunting that they simply give up their attempts to obtain treatment.

The third group of people is the elderly population. Typically, this population accidentally overdoses due to a large amount of prescriptions. Speaking from experience, the worst case regarding over-prescribing of medication that I have seen was a woman who had 23 different prescriptions. As a coroner, it becomes difficult to discern what exactly led to her death, the numerous medical conditions that she was diagnosed with or any of the potential drug interactions that would have been as a result of her prescriptions. In this older subset, you encounter those individuals who may be a

bit more forgetful and take too much of their medication. Of concern, also, is that with this older group, their cardiorespiratory systems may already be compromised. Add in a combination of an opioid and a benzodiazepine which produces decreased respiratory function, and you have a formula for death.

Lastly, the group we need to examine is our veterans. We have these men and women who have done incredible things to ensure our safety and freedom. As they return home, they may be dealing with physical as well as mental pain. With inadequate VA facilities, they may encounter what I term the "band-aid" treatment, a physician who prescribes the medication to alleviate the physical symptoms without taking into consideration the drug interaction or other treatment options. What you end up with is a cocktail of opioids, anti-anxiety medications, anti-depression medications, sleeping medications, all of which lead to a potentially fatal combination.

In summary, this is just a brief discussion of the history and the parameters of this epidemic facing us. While dealing with addiction and overdosing is nothing new, I believe that we are at an important crossroads. We must acknowledge the fact that the problem is completely surrounding us. We must take a very critical look at what leads to addiction and be willing to expand the current treatment options. With a growing number of individuals who are addicted, we must acknowledge that there needs to be an equal growth in the possibilities for treatment. I believe that the current "one size fits all" approach to treatment is no longer applicable. Without a serious examination of this, I fear that the number of deaths related to drugs will just continue its upward climb.

In closing, I would be pleased to try to answer any of your questions pertaining to drug-related deaths in my jurisdiction. I can also assure you that I, along with the Coroners of this Commonwealth, are willing to work with you to try to reach some solutions, in order to provide meaningful assistance to those individuals who are addicted, to the families who are impacted by this addiction, and to reduce the number of unnecessary deaths. Thank you for the opportunity to participate in these crucial hearings. I look forward to being able to make an impact on this issue moving forward.