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Senate Judiciary Committee
Subcommittee on Crime and Terrorism

April 10, 2018

Honorable Committee Members:

I appreciate the opportunity to submit this written document in advance of my testimony on April 11, 2018 to the Senate Judiciary Committee's Subcommittee on Crime and Terrorism hearing, entitled "Defeating Fentanyl: Addressing the Deadliest Drugs Fueling the Opioid Crisis."

These remarks are based upon my experience as a physician, caring for patients impacted by opioids, both in the community and behind bars at the Rhode Island Department of Corrections for nearly a quarter of a century. They are also based upon my training in Internal Medicine, Infectious Diseases, HIV/AIDS, Addiction and Public Health, as well as my experience as a clinical researcher.

Fentanyl is a highly potent and more rapidly acting opioid than other commonly available opioids, such as heroin or prescription opioids including oxycodone and hydrocodone. There are many related fentanyl analogues (chemically related compounds) that have varying potency. They typically have a rapid onset and then rapid offset. They are fully synthetic, meaning that they can be manufactured from chemical compounds, and do not require someone to grow poppy plants. They are therefore easier to manufacture and transport (smaller amounts needed), and cheaper than heroin. They have been found in heroin, in counterfeit pills, and in cocaine – sometimes as the only active substance in illicit drugs. In order to appreciate the impact of fentanyl, and address what approach to take, it is important to first discuss opioids in general.

Opioid addiction, or what we now call opioid use disorder, is generally a poorly understood disease. Both the disease and its treatments have long been highly stigmatized in our society. This combination of a lack of understanding and stigma has resulted in misdirected resources and contributed to a worsening of the problem. (1)

Opioids can alleviate pain and suffering and also induce a state of euphoria. Opioids have two physiologic properties, which distinguish them from most other addictive substances and lead to many of the adverse outcomes: tolerance and the withdrawal phenomenon. When opioids are taken regularly, on a daily basis, tolerance and withdrawal can develop rapidly (days to weeks). Tolerance refers to the need to continually increase the dose in order to achieve the same effect. Said another way, the more one uses, the more one needs to use. Tolerance also can be lost quickly when opioid use is interrupted for as little time as days to weeks.

Withdrawal is an incredibly uncomfortable feeling that occurs when someone who has developed tolerance attempts to stop abruptly. Withdrawal has been described as about the

worst feeling that a human can feel. A patient said "imagine the worst flu you have ever had, combine that with the worst stomach bug you ever had and multiply them both by a thousand."

When too much opioid is consumed, the person loses consciousness and eventually stops breathing, resulting in an overdose death. With increasing and decreasing tolerance and fluctuating potency, quantity and purity of opioids, it can be very difficult to predict when an overdose can occur. An overdose occurs when there is a discrepancy between the individual's tolerance and the amount and potency of the opioids that are consumed. Of course, additional sedatives such as alcohol or benzodiazepines also contribute to overdoses. Overdoses can be effectively reversed with the prompt use of naloxone. The difference for fentanyl is that naloxone has to be given much more rapidly and often in higher doses to be effective. (2)

Some people with exposure to opioids will go on to develop opioid use disorder, which is characterized as ongoing use despite adverse consequences. There is a strong situational component that contributes to the development of opioid use disorder. The situational component could be peer pressure, physical and social isolation, or often prior trauma. For example, several of my patients were molested and abused as children and were told "it didn't happen" and "if it did, it's all your fault" and "we don't talk about that." They carried this psychological burden into adulthood, and once exposed to an opioid, that whole psychological burden gets lifted briefly, and they feel happy. It is no wonder they would want to go back to that place where their psychological pain is relieved.

I think of the brain in two parts: the thinking brain, the cerebral cortex, and the primitive or reptilian brain, which is "hard wired" for survival. Most of our behavior and actions can be controlled by our thinking brains. For example, we can hold our breath for a long time, but there comes a time when the primitive brain kicks in and takes over; it forces us to breathe, even if we are in a burning, smoke-filled building.

This is the part of the brain that is damaged in opioid use disorder. The brain interprets symptoms of withdrawal as "we are going to die" and commands the body to do whatever it has to do to obtain and consume an opioid in order to survive and to avoid the feelings of dying.

When someone gets hooked on opioids, as their tolerance increases, they need to consume ever increasing amounts to stay out of withdrawal. They are being squeezed like a boa constrictor. Every time they breathe out they get squeezed tighter and cannot breathe back in. This puts a strain on their resources, which for many can lead to stealing, and/or involvement in the sex and/or drug trades.

We know what needs to be done to stop this epidemic. A public health approach based on sound science and evidence based practices. (1) First of all, we need to provide effective treatment wherever possible. Medications for Addiction Treatment (MAT), which include methadone, buprenorphine (Suboxone) and depot-naltrexone (Vivitrol) are the most proven effective therapies to reduce overdose deaths. An increase in MAT in Baltimore dropped the overdose rate by 80%. (3) In France, where buprenorphine is widely available, fatal overdose is nearly non-existent. (4)

However, in the US, much of the discussion of "treatment" involves going to a detox, a place where you can stay until you are detoxified. A bed.

There is a problem with "detox" as drug treatment: Up to 90% of the time, patients relapse to opioid use. And because they have lost their tolerance, now that much of the illicit opioid supply is contaminated with fentanyl and related compounds, there is an even greater risk of fatal overdose. It has never been so dangerous to relapse to illicit opioid use. Thus, MAT approaches have a far superior track record at promptly reducing overdose deaths than does the antiquated use of detox.

For those who are not interested in or aware of MAT, there are many things that can be done to engage them in care, including outreach programs for syringe services, safe consumption spaces, naloxone distribution and other services that build trust and reduce stigma.

A crucial problem with fentanyl is that both sellers and consumers often have no idea what is in what they are buying, selling and consuming, or how powerful or concentrated it is. Drug checking services are a promising strategy that can be helpful (5). In the US, what has prevailed over a public health approach is a punitive approach, such as increasing penalties for distribution of dangerous substances. The problem is that, although it seems like that approach should work, the fact is that it does not. (6) What it will do is increase incarceration rates and incarcerate a lot of low level dealers who mostly are involved in the drug trade as a way to address their own addiction.

The punitive approach can have the opposite effect and drive people away from needed services. For example, the Good Samaritan laws in many states have strongly encouraged people to call 911 for help in the event of an overdose. The heroic work being done by police and firefighters in getting naloxone into overdose victims are excellent examples of changing attitudes to further engage people struggling with opioid use disorder. Further increasing penalties will only squander those successes and drive people underground, further away from desperately needed treatment. It has not worked with the war on drugs. The National Research Council panel, of which I was the only physician member, examined the Causes and Consequences of High Rates of Incarceration and found that "the best empirical evidence suggests that the successive iterations of the war on drugs –through a substantive public policy effort-are unlikely to have markedly or clearly reduced drug crime over the past 3 decades." (7)

The Pew Charitable Trusts recently documented, in a nationwide study, that increased imprisonment does not reduce drug problems. (6)

Opioid use disorder is not something that can be treated effectively with punishment or threat of punishment. If it did, we would have already solved the problem.

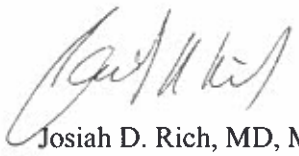
Increasing penalties for smaller amounts of drugs, including fentanyl, could make the situation a lot worse. It would incentivize the dealers to stay below a certain milligram amount, and they could do that by increasing the purity of the fentanyl they are selling. That would substantially increase the danger associated with fentanyl. On the other hand, having more dilute drugs in circulation would be much safer.

Increasing the penalties for selling fentanyl will most likely capture predominantly low level dealers who are unlikely to know what they are selling and not have the ability to sell any other drugs, and will be easily replaced by other desperate individuals.

In Rhode Island, Governor Raimondo chose to invest in MAT for people with opioid use disorder and started with those passing through the prison and jail. Within a year of implementation, there was a statewide drop in overdose deaths of 12%, and for those recently released from incarceration, a 61% drop in overdose deaths. (8) This highlights the fact that increasing MAT availability will drive down opioid overdose deaths.

In summary, opioid use is poorly understood. The black market is unregulated, leading to opioids with highly variable potency, which challenges efforts to control the damage done by them. What is needed is a strong public health and medical approach with a dramatic up-scaling of high quality MAT and strategies to engage people with opioid use as well as give them tools to reduce harmful use as much as possible. Further punitive measures may make people feel like tough action is being taken. But out in the world where people are dying, such an approach will only make matters worse, and distract attention and resources away from what needs to be done.

Thank you,



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