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Public Health Outbreaks—Recent Emergency Department Experiences with Designer Drugs of Abuse

Q: Can you sort of explain your presentation title?

A: So, what has been happening recently is there have been clusters of outbreaks of patients who had very bad side effects from using the drug of abuse typically called “Spice”; bath salts were also involved. There have been clusters in Texas, in Colorado, in Georgia and overall in the states and the concern is that there are newer agents that are substantially more agonistic to the cannabinoid receptors, but they also have substantial side effects, such as kidney failure and even cause death in some cases. So, this really is a public health issue that we have to focus on in order to prevent further injury.

Q: So, how advanced is this? Is it just in the past year you have seen these increases?

A: Spice and bath salts have really been around for the last ten years. It’s something that over time has grown in terms of how substantial the use has evolved over time. We really have only seen a lot of these cases since 2007, when this use was introduced in the United States. What is happening though as many of these drugs go under the DEA scheduling authorities as Schedule 1, chemists are making more of these drugs, different analogs, different types and as you sort of mix and match these chemicals, you end up with substances that you have no knowledge of what the side effects are or what the impact will be on the individual. This has really become something that’s a bit alarming actually.

Q: What do you want people to know about this issue?

A: First, it’s a big business; there is a huge trade in synthetics, not just in older individuals and adults, but also children. In a recent *Time* magazine report, it was quoted that up to 8% of the 10th graders that were interviewed had actually used synthetic cannabinoids. So, it’s a real issue. What I think people ought to know is that these drugs are dangerous—no one knows what they do, and we don’t know the long-term psychological effects. We do know there are some devastating clinical side effects that we have to be concerned about.



A: (continued) Unfortunately, law enforcement and even legislative practices have not been sufficient to keep up with what we consider a scourge. These are very dangerous drugs, dangerous classes of drugs, and people need to stay away from them.

Q: So, what is the government doing? Are they just getting their teeth into what it's all about?

A: Government legislation on controlled substances has been around for a very long time. The challenge with these new substances is that whenever a single agent is put under Schedule 1 by the DEA, then chemists actually come up with a new analog or an entirely new class of substances that:

1. may not be detectable
2. might not fall under the classification of an agent that is actually outlawed
3. the likelihood of actually prosecuting individuals who are selling these agents is actually fairly low

So again, it is sort of like computer viruses in that the folks who are manufacturing these synthetics are one step ahead of the government. There are legislative efforts, especially when you look at things like the "analog law" which looks to schedule any substances that might be an analog to a known substance already under DEA regulation. Of course, there is also law enforcement activity. One main issue is to take the drugs off the street and another is the public service announcements that I think need to go out, warning citizens, warning students, warning young individuals, that these agents and chemicals are not worth going with for a high.

Q: Is there anything that you would like to add from your lecture or your experience?

A: We have seen this personally in Gainesville, so we have had a fairly large cluster within the last two weeks, similar to what happened in Texas in early May of this year, and we are a college campus. We know that there is probably a high degree of utilization of synthetic cannabinoids amongst the college students. I think we are very lucky not to have had a much bigger outbreak, and it is very concerning because of the types of problems people actually arrive to the Emergency Room with. In our own personal experience now, having seen Spice utilization over a period of time, what is particularly alarming is that if you have a bad substance or a bad chemical or one that is too heavily concentrated, it can send a lot of people to the Emergency Department seeking medical care. It is a major issue and something that we have now seen personally and we have to respond and take action.

Q: Are there any warning signs that you should look for?

A: Just like with any psychoactive agents, patients arrive with a plethora of symptoms; anywhere from euphoria to agitation; they can develop fairly substantial clinical side effects like tachycardia or present unresponsive. At times they may require intubation and ventilator management because they are not able to support their own breathing. In the rash of patients we saw recently, a significant number of them had seizure activity and the age range was significant—all the way from teens to 60 years old. So this is a real issue and these are not benign chemicals. The concern is that with an unregulated manufacturing process, bad things can happen. You go all the way back to 1985, when the street analog to meperidine was being synthesized and someone made an error and created MPTB which is a known industrial contaminant and something that caused brain damage in a number of people. It was just a difference in how the substance was synthesized. The problem is that these chemists are playing with individuals and using individuals as guinea pigs because we have no idea what these chemicals will do by changing a small piece of the chemical structure. It's a real problem and that is the big concern—it's not knowing what could be next.

Q: Everyone said, "Stay away from tobacco", so people went to synthetics thinking it was safer and it's not.

A: The problem is people need to understand and be informed about the danger of these illicit substances. The problem with synthetics like bath salts and cannabinoids is that they have been sold as essentially a "legal" high; they are easy to access, they are cheap, they are marketed in a way so folks would pick it up as a less risky way to gain access to something that would otherwise be illegal and that has been the thing that has captured peoples' imagination and they are not realizing how dangerous these substances are. The take-home point is that we have to make sure that we educate the public about this and we need to make sure that these drugs stay off the street.