



2016 Advisory #20

Increase in synthetic cannabinoid (K2)-related adverse events and emergency department visits, New York City

July 14, 2016

The New York City Department of Health and Mental Hygiene (DOHMH) continues to monitor daily emergency department (ED) visits related to synthetic cannabinoids (K2). Following multi-agency enforcement at stores selling synthetic cannabinoid products last year, DOHMH observed an 85% decrease in K2-related ED visits, with the month of June 2016 marking the fewest number of K2-related ED visits in over a year. However, from July 11 through July 13, 130 individuals experienced adverse events and were transported to EDs after suspected ingestion of synthetic cannabinoids. There is a notable geographic clustering of these K2-related ED visits; nearly half (46%) of the ED visits were among residents of two Brooklyn neighborhoods: Bushwick – Williamsburg and Bedford Stuyvesant – Crown Heights.

Since January 2015, DOHMH surveillance has detected more than 8,000 synthetic cannabinoid-related ED visits in NYC. Males account for approximately 90% of the visits; patients have a median age of 37. Nearly all (99%) patients are aged 18 and older.

Provisional mortality data show 10 K2-involved fatalities in 2015. Nine of these deaths involved multiple substances, including: cocaine, benzodiazepines, heroin, and/or alcohol.

Clinical information

- Synthetic cannabinoids are referred to by different names, including: K2, Spice, synthetic marijuana, or “legal” marijuana.
- Common brand names include: Geeked Up, Smacked, Scooby Snax, Green Giant, Red Giant, Mr. Bad Guy, Trippy, Ice Dragon, AK-47, and Kick.
- Type and severity of symptoms are variable, but two common clinical patterns occur:
 - Patients may appear sluggish and have some symptoms similar to an opioid overdose, including: lethargy, confusion, respiratory depression, bradycardia, vomiting, seizure, loss of consciousness, or unresponsiveness.
 - Patients may appear highly agitated and have symptoms similar to those of phencyclidine (PCP) use, including: elevated heart rate, hallucinations, aggressive behavior, paranoia, or psychosis.
- More patients have lethargy-like symptoms than agitation or aggressive behavior.
- No antidote is presently available for synthetic cannabinoid intoxication; however, symptoms are usually short-lived and self-limited.
- Synthetic cannabinoids are not detected by standard urine toxicology screens; therefore, synthetic cannabinoid exposure should not be ruled out based on negative screening results. Consult your laboratory for preferred testing methods.
- Because the exact compounds contained in synthetic cannabinoid products change frequently, risks and adverse consequences are unpredictable.
- Treatment of agitation and restlessness with benzodiazepines is an acceptable and effective

intervention.

- Scientific evidence for treatment of individuals with chronic use is lacking, but motivational counseling and cognitive behavioral therapy might be effective.

Legal information

- It is illegal in New York State to possess, sell, offer to sell, or manufacture synthetic cannabinoids.¹ In October 2015, Mayor Bill de Blasio signed legislation in law to make the sale of K2 products a misdemeanor offense that can carry both criminal and civil penalties. Continuing or repeat violation may result in closure of the retail establishment and entities.

You can educate your patients about the undesirable effects of synthetic cannabinoids and inform them that these drugs are illegal. Drug treatment locators are available at: www.oasas.ny.gov. Referrals for treatment are available at 1-800-LIFENET.

ED providers and staff serving populations at increased risk should be aware of the recent increase in adverse events associated with synthetic cannabinoids in New York City. We would like to remind medical providers that they are required to report suspected or confirmed cases of poisoning (including overdose) by drugs or other toxic agents within 24 hours to the Poison Control Center at 1-800-222-1222 or 212-764-7667 (POISONS). These reports are critical in detecting and preventing overdose outbreaks. The Department of Health and Mental Hygiene can arrange for testing of product that is associated with adverse health events due to K2. If a patient has substance that may be a synthetic cannabinoid, call the Poison Control Center to arrange pick up and testing of product.

If you become aware of stores selling synthetic cannabinoid products we encourage you to report them to 311.

Please share this with any providers you know working with substance users in New York City.

Sincerely,

Hillary Kunins

Hillary Kunins, MD, MPH
Assistant Commissioner
Bureau of Alcohol and Drug Use Prevention, Care and Treatment

¹Public Health Law Section 225, Title 10, Part 9 states “It shall be unlawful for any individual or entity to possess, manufacture, distribute, sell or offer to sell any synthetic phenethylamine or synthetic cannabinoid or product containing the same”