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Regulation of Synthetic Drugs

Synthetic Drugs and Impact on Public Health

Synthetic drugs are chemically produced and mimic or enhance the effects of illicit drugs. These drugs fall into two categories:

- *Synthetic cannabinoids*, also known as synthetic marijuana, are designed to elicit the same “high” that users get from the THC (tetrahydrocannabinol) contained in marijuana. The synthetic cannabinoid is sprayed onto plant material, which is dried for smoking or oral ingestion. These products are typically sold in retail stores as herbal incense, potpourri or herbal smoking blends.
- *Synthetic cathinones* function as synthetic stimulants, designed to affect the central nervous system similar to the impact of drugs such as cocaine and amphetamines. These drugs are laboratory produced. They are sold in powder form for snorting and may be injected intravenously or taken by mouth. These products are typically sold in retail stores as bath salts or jewelry cleaner.

Companies selling synthetic drugs as legal products, like incense or bath salts, attempt to avoid liability for harm from use of the products as drugs by labeling the products as not intended for human consumption. These labels have no impact on the applicability of local, state or federal laws that limit or prohibit the sale of synthetic drugs. Just like cocaine may not be sold as a kitchen cleaner, banned synthetic drugs may not be sold as incense. These labels do, however, hinder enforcement efforts as law enforcement and health officials may not be able to identify the products being used as drugs and creating public health problems.

Because they are relatively new and vary in chemical composition, there is limited research on the short-term and long-term health effects of these drugs and even less research on the impact on public health. The research and data available, however, give good reason for concern. Synthetic cannabinoids were originally produced to assist in research on the impact of cannabinoids on brain function and pain management. The effects of the synthetic drugs, however, may be ten times higher than of THC. For example, from 2010 to 2012, Poison Control Centers across the country received approximately 9,000 calls related to bath salt use and bath salts were responsible for over 20,000 drug-related emergency department visits in 2011. In 2010, synthetic cannabinoids led to over 11,000 emergency department visits, 75% of which involved patients between the ages of 12–29. Synthetic cannabinoids are popular among high school students. Evidence suggests that youth are the primary consumers of synthetic cathinones.

Popular synthetic cannabinoid product names include K2, Spice, Blaze and Black Mamba.

Popular synthetic cathinone product names include Ivory Wave, Bloom, Vanilla Sky and White Lightning.

Reported harmful effects of synthetic cannabinoids include nausea, increased agitation, elevated blood pressure and acute kidney injury.

Synthetic cathinones may cause chest pain, increased heart rate, hallucinations, paranoia and delusions; and they may create deep cravings like their natural counterparts.

Detailed charts on relevant state legislation are available from the National Conference of State Legislatures. <http://www.ncsl.org/issues-research/justice/synthetic-drug-threats.aspx>

Federal Laws Applicable to Synthetic Drugs

Federal law—the Controlled Dangerous Substances Act—regulates the sale of a variety of drugs, including imposing prescription requirements for certain substances and banning the sale and use of others. The level of regulation is determined by the schedule on which the drug is listed. At the

For example, Ocean City, Maryland, a popular tourist destination that attracts teens and young adults, bans “cannabimimetic agents” as well as “noncontrolled substance[s] that the person reasonably believes is a hallucinogenic chemical substance.” *Ocean City, Maryland, Code, Title IV, §§58-181 to 58-183.*

high end of the scale, Schedule I drugs present significant risk of addiction and serve no medical purpose; these drugs may not be sold or used. At the low end, Schedule V drugs present little risk of abuse and may be used effectively as medicine. Recognizing that chemical substances similar to controlled substances present health risks, Congress passed the Controlled Substances

Analogue Enforcement Act of 1986, Subtitle E of the Anti-Drug Abuse Act of 1986 (P.L. 99-570). The Act includes in Schedule I drugs that are substantially similar to listed drugs; however, the definition of analogue drug is somewhat restrictive. In 2012, Congress passed the Synthetic Drug Abuse Prevention Act, Subtitle D of Title XI of the Food and Drug Administration Safety and Innovation Act (P.L. 112-144), directly adding several synthetic substances to Schedule I. The Drug Enforcement Agency has added more synthetic substances to Schedule I; these are temporary listings that must be approved by Congress within three years. As a result of these laws, those who produce, sell, use or possess many synthetic drugs may be subject to federal criminal prosecution.

State and Local Laws Applicable to Synthetic Drugs

States have also responded with legislation: 43 states have passed laws prohibiting certain synthetic cannabinoids and 44 states have passed laws prohibiting certain synthetic cathinones. Some state laws identify particular chemical compounds that are unlawful. For example, Arizona law contains an extensive list of prohibited chemical compounds. *Arizona Revised Statutes, §13-1401.* Other state laws use generic language so as to include any number of synthetic drugs. For example, Colorado law lists specific prohibited compounds but also prohibits cathinones generally, defined as “any synthetic or natural material containing any quantity of a cathinone chemical structure, including any analogs, salts, isomers, or salts of isomers of any synthetic or natural material containing a cathinone chemical structure.” *Colorado Revised Statutes, §18-18-102.* There is a trend toward these more generic definitions. As with federal law, these provisions typically add the

new substances to existing prohibitions on production, sale, use or possession and require criminal prosecution for enforcement. The advantage of the generic definition is that the law is able to keep pace with the creativity of those manufacturing the products. With narrow definitions of prohibited drugs, manufacturers need only make a modest change to the chemical composition of the product to avoid regulation.

Local legislatures have also taken action, typically with respect to a particular product of concern. Some jurisdictions have taken action broadly or with respect to a particular retailer under the local jurisdiction’s nuisance abatement power. Because many states preempt local legislation of controlled dangerous substances to some extent, interested local policymakers should consult with counsel before pursuing legislation to better understand in what ways the local legislature may regulate synthetic drugs.

Public Health Response to Synthetic Drug Use

Federal and state laws prohibiting the production, sale, use or possession of synthetic drugs are an important element in the public health response to this burgeoning problem. But law enforcement officials face significant hurdles in pursuing criminal charges against those who sell synthetic drugs. Even with the generic or catch-all language, expert testimony about the chemical composition of the product and its effect on the human body are likely required. Additionally, labeled as legal products like incense or bath salts, enforcement officials struggle to identify and punish retailers. These difficulties coupled with the dynamic nature of these drugs require a public health response. Because synthetic cannabinoids and cathinones are relatively new products, informing the public about the risks of use is imperative. This includes incorporating information about synthetic drugs into youth drug education programs as well as broader public education so that retailers, parents and other adults are aware of these products. This is particularly true as many of the popular products are marketed in a deceptive manner, with labeling as herbal incense or bath salts not intended for human consumption. Assuring that the medical community and health departments are aware of the availability of these drugs and know how to treat a user is particularly important in communities in which the drugs are just starting to emerge. Supporting research into the effects of the drugs will contribute to the ability of the public health community to respond to this emerging and dangerous problem.

Sources

Synthetic Drugs: Overview and Issues for Congress, Congressional Research Service (2013), available at www.fas.org/sgp/crs/misc/R42066.pdf.

Synthetic Drugs (a.k.a. K2, Spice, Bath Salts, etc.), Office of National Drug Control Policy, available at www.whitehouse.gov/ondcp/ondcp-fact-sheets/synthetic-drugs-k2-spice-bath-salts.

“Bath Salts” Were Involved in Over 20,000 Drug-Related Emergency Department Visits in 2011, The DAWN Report, Substance Abuse and Mental Health Services Administration, September 17, 2013, available at www.samhsa.gov/data/spotlight/spot117-bath-salts-2013.pdf

Drug-Related Emergency Department Visits Involving Synthetic Cannabinoids, The DAWN Report, Substance Abuse and Mental Health Services Administration, December 4, 2012, available at www.samhsa.gov/data/2k12/DAWN105/SR105-synthetic-marijuana.htm.

Drug Facts: Spice (Synthetic Marijuana), National Institutes of Health, National Institute on Drug Abuse (2012), available at www.drugabuse.gov/publications/drugfacts/spice-synthetic-marijuana.

Acute Kidney Injury Associated with Synthetic Cannabinoid Use—Multiple States, 2012, Centers for Disease Control and Prevention, Morbidity and Mortality Weekly Report, February 15, 2013, available at www.cdc.gov/mmwr/preview/mmwrhtml/mm6206a1.htm.

Synthetic Drug Threats, National Conference of State Legislatures (2012), available at www.ncsl.org/issues-research/justice/synthetic-drug-threats.aspx.

Bath Salts—Emerging and Dangerous Products, Messages from the Director, National Institute on Drug Abuse (2011), available at www.drugabuse.gov/about-nida/directors-page/messages-director/2011/02/bath-salts-emerging-dangerous-products.



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This document was developed by Kathleen Hoke, JD, Director of the Network for Public Health Law - Eastern Region and Mathew R. Swinburne, Staff Attorney, Network for Public Health Law - Eastern Region, University of Maryland Francis King Carey School of Law. The Network for Public Health Law provides information and technical assistance on issues related to public health. The legal information and assistance provided in this document does not constitute legal advice or legal representation. For legal advice, please consult specific legal counsel.