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NOT FOR BATHING: BATH SALTS AND THE NEW MENACE OF SYNTHETIC DRUGS

JAKE SCHALLER*

I. INTRODUCTION

The package of “bath salts” looks harmless enough, and its name—“Ivory Wave”—conjures up images of a relaxing day at a spa.¹ The substance inside the package, however, is not harmless, and it is not being sprinkled into a hot bath for some aromatherapy.² Unlike the bath salts made of actual salt and fragrances that one would find at Bed, Bath & Beyond,³ these “bath salts” are synthetic drugs in disguise, and during the last three years they have infiltrated American culture.⁴ In 2011, use of bath salts—which can mimic the effects of cocaine, LSD, and methamphetamine⁵—led to 6,072 calls to poison control centers across the country, up from just 303 in all of 2010.⁶ The drugs can be smoked, snorted, injected, or

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1. Bath salts such as “Ivory Wave” can be purchased online. *See, e.g., Ivory Wave 1 Legal Worldwide*, <http://am-hi-co.com/acatalog/ivory-wave-1-worldwide.html> (last visited Apr. 14, 2013).

2. *See The Dangers of Synthetic Cannabinoids and Stimulants: Hearing Before S. Caucus Int'l Narcotics Control*, 112th Cong. 2 (2011) (written statement of Joseph T. Rannazzisi, Deputy Assistant Adm’r, Office of Diversion Control, Drug Enforcement Admin.) [hereinafter *Dangers*] (“Substances that are just as dangerous as their controlled substance counterparts are marketed as harmless sundry items in an attempt to protect the manufacturers, distributors and retail sellers from criminal prosecution.”).

3. *See, e.g., Love Notes Healing Aromatherapy Bath Salts Tote*, BED, BATH & BEYOND, <http://www.bedbathandbeyond.com/product.asp?SKU=117204> (last visited Apr. 14, 2013).

4. *See Pam Louwagie, Bath Salts Hit U.S. ‘Like a Freight Train’*, MINNEAPOLIS STAR-TRIB., Sept. 18, 2011, at 1A; *see also* Schedules of Controlled Substances: Temporary Placement of Three Synthetic Cathinones into Schedule I, 76 Fed. Reg. 174 (Sept. 8, 2011) (to be codified at 21 CFR pt. 1308) (“[S]ynthetic cathinones are becoming increasingly prevalent and abused throughout the United States.”); *Dangers*, *supra* note 2, at 1.

5. *See* Edward Ross et al., Correspondence, “*Bath Salts*” Intoxication, 365 NEW ENG. J. MED. 958, 967 (2011) (describing bath salts as “possessing the worst characteristics of” LSD, PCP, ecstasy, cocaine, and methamphetamine).

6. Terry Hillig, *Synthetic Drugs are Seized from Jerseyville Wholesaler*, ST. LOUIS POST-DISPATCH, Mar. 28, 2012 at A4; *see also* Leanne Sullivan, *Internet Fueling Growth of Designer Drugs*, INTERNAL MED. NEWS, Jan. 1, 2012, at 52 (citing Dr. Mark B. Mycyk’s statements at the annual meeting of the American College of Emergency Physicians). Mycyk noted that in the past decade there

taken orally or rectally, and reactions include increased blood pressure and heart rate, along with “severe panic attacks, agitation, paranoia, hallucinations, and violent behavior.”⁷ Not only can the drugs be incredibly dangerous, controlling them has been “a losing battle” for the Drug Enforcement Administration (DEA).⁸ Despite legislative efforts, drug makers’ ability to alter slightly the chemical makeup of drugs helps them skirt bans on certain substances.⁹

So what can be done to curb the abuse in America of yet another dangerous substance? The answer might lie not only in more aggressive legislation that attempts to close loopholes exposed by those who make and sell bath salts, but also in increased awareness and education about the dangers of the drugs.¹⁰ The Internet has provided those who sell the drugs with a forum that can be accessed easily by increasingly tech-savvy teenagers and young adults.¹¹ Intense efforts should be made to inform the public about the existence of the drugs and their dangers, and to combat false information and false notions of legality and safety.¹² This article encourages federal, state, and local governments to become more aggressive with their legislation and, perhaps more importantly, with advertising and education aimed at scaring straight segments of the public that underestimate the destructive power of these substances.¹³

Part II of the article explains what these substances masquerading as “bath salts” actually are. It also discusses where they are created, and compares them to synthetic marijuana—another synthetic drug which became a problem in America shortly before the arrival of bath salts. Part III explores the rapid increase in the popularity and use of bath salts and other synthetic drugs and explores potential reasons for the increase. Part IV documents the dangers associated with the drug and relates some of the stories about disturbing overdoses experienced by some users. Part V looks at the government response to the drugs and the loopholes in laws that drug manufacturers attempt to exploit. Part VI suggests what more can be done at the federal, state, and local levels to stop spread of synthetic drugs.

had been a twenty-nine to forty-eight percent increase in emergency department visits stemming from use of “older drugs of abuse” like LSD and cocaine and a far larger increase—from 187% to 5,846%—in visits resulting from the use of “nontraditional, emerging, and web-based” drugs. *Id.*

7. Ross et al., *supra* note 5, at 967; Theodore Decker, *Docs Glad ‘Bath Salts’ Are Banned*, COLUMBUS DISPATCH, Oct. 18, 2011, at 1A.

8. James Walsh, *Cops Just Can’t Keep Up With Latest Designer-Drug Threats*, MINNEAPOLIS STAR-TRIB., Nov. 20, 2011, at A1.

9. Jessica Vander Velde, *A Killer with a Friendly Name*, TAMPA BAY TIMES, Oct. 14, 2012, at 1A; *see also* Fran Spielman, *City Advances Plan to Target Sellers of Hallucinogenic Bath Salts*, CHICAGO SUN-TIMES, Feb. 15, 2012, at 3 (statement of Cara Smith, Deputy Chief of Staff, Illinois Attorney General noting that “[t]he bad guys can change the chemical structure to get around the law”).

10. John Ramano, *Synthetic, Legal and Scarier than Pot*, TAMPA BAY TIMES, Jan. 17, 2012, at 1B.

11. *See infra* Part III.B.2.

12. *See infra* Part VI.

13. *See infra* Part VI.

II. CATHINONES IN DISGUISE

Drugs marketed as “bath salts” or “plant food” are synthetic cathinones, which are central nervous system stimulants.¹⁴ They are similar, chemically, to cathinone,¹⁵ which is an active ingredient in the leaves of the khat plant,¹⁶ and has been classified as a Schedule I substance by the Drug Enforcement Administration.¹⁷ Synthetic cathinones, which have no known medical uses, reportedly have been abused in Europe since the turn of the century.¹⁸ Cathinone compounds are addictive and can cause psychosis and aggression, among other adverse effects, if used frequently.¹⁹ When using smaller doses, users typically feel full of empathy or confidence, “[b]ut when they take too much, the brain’s receptors get overloaded, . . . [t]he heart races, and blood pressure spikes.”²⁰ According to Steve Carrel, the executive director of Muskingum Behavioral Health in Ohio, “[t]here’s an emotional rush similar to cocaine, and delusions or hallucinations that occur usually in a blackout and the person doesn’t remember what went on.”²¹ Carrell added that synthetic cathinones also create an immense craving in users that lures them back.²²

Among the drugs that fall within the category of synthetic cathinones are MDPV (3,4-methylenedioxypropylvalerone) and mephedrone, *N*-methylcathinone (also known as methcathinone or cat), 4-fluoromethcathinone (also known as flephedrone or 4-FMC), and 3,4-methylenedioxy-*N*-methylcathinone (also known as methylone, MDMC, bk-MDMA, or M1).²³ The National Drug Intelligence Center (NDIC) refers to the synthetic cathinones packaged and sold as “authentic commercial products” as synthetic cathinone products.²⁴ According to the NDIC, the products are sold as “bath salts” with names like Bliss, Blizzard, Blue Silk, Charge+, Hurricane Charlie, Ivory Snow, Ivory Wave, Ocean Burst, Pure Ivory,

14. NAT’L DRUG INTELLIGENCE CTR., U.S. DEPT. OF JUSTICE, PRODUCT NO. 2011-S0787-004, SITUATION REPORT: SYNTHETIC CATHINONES (BATH SALTS): AN EMERGING DOMESTIC THREAT 3 (2011), available at <http://www.justice.gov/archive/ndic/pubs44/44571/44571p.pdf>.

15. *Id.*

16. Thomas M. Penders, *How to Recognize a Patient Who’s High on “Bath Salts”*, 61 J. FAM. PRAC. 210, 210–11 (2012) (explaining that people in East Africa and the Arabian Peninsula have used the leaves of the khat plant “[f]or centuries” for its “amphetamine-like properties”).

17. See 21 U.S.C. § 812(b)(1) (2011). Schedule I is reserved for the most dangerous and most addictive substances classified by the DEA. *Id.*

18. See *Dangers*, *supra* note 2, at 9.

19. See Larry Oakes, *Users Play Chemical Roulette*, MINNEAPOLIS STAR TRIB., Sept. 4, 2011, at 1A; Penders, *supra* note 16, at 211 (noting that the Israeli government banned products containing khat plant extracts following evidence that they could cause cardiovascular and neurologic complications).

20. Oakes, *supra* note 19 (quoting David Ferguson, a professor of medicinal chemistry at the University of Minnesota).

21. Holly Richards, *Bath Salts 2.0 on the Rise*, ZANESVILLE TIMES RECORDER (Jan. 22, 2012), <http://www.zanesvilletimesrecorder.com/article/20120122/NEWS01/201220302/Bath-salts-2-0-rise>.

22. *Id.*

23. NAT’L DRUG INTELLIGENCE CTR., *supra* note 14, at 3.

24. *Id.*

Purple Wave, Red Dove, Snow Leopard, Star Dust, Vanilla Sky, White Dove, White Knight, White Rush, and White Lightning,” and also marketed as “plant food/fertilizer, insect repellent, pond cleaner, and vacuum fresheners.”²⁵ Bath salts and other synthetic cathinones come in powder, crystal, or liquid forms and are available as tablets and capsules.²⁶ The substances typically are snorted, smoked, or injected, but users also have dissolved them in water and then placed drops into their eyes and noses or heated the water into a vapor to inhale.²⁷

According to the DEA’s notice of intent to place mephedrone, methyldone, and MDPV in Schedule I, which was released in early September of 2011, the U.S. Customs and Border Protection—at just one United States port of entry—had encountered more than 100 shipments containing those substances and others like them.²⁸ For the most part, the shipments originated in China or India and were being sent to destinations across the United States.²⁹ The DEA believes the substances are “manufactured in bulk quantities in countries such as China, Pakistan, and India, and some of the actual products may be packaged for wholesale distribution in intermediate locations such as Eastern Europe.”³⁰

Synthetic cathinones have followed synthetic marijuana, which has for several years been marketed in the United States as a legal product providing a high that mimics marijuana.³¹ Synthetic marijuana, which initially appeared in the United States in late 2008, typically consists of plant material laced with synthetic cannabinoids: chemicals that claim to provide the same effect as the active ingredient in marijuana, Δ 9-tetrahydrocannabinol (THC).³² The products are marketed as “herbal incense”—just as synthetic cathinones are marketed as “bath salts” or “plant food”—and they go by names like “Spice,” “K2,” “Blaze,” and “Red X Dawn.”³³ According to the American Association of Poison Control Centers, people who smoked synthetic marijuana products in 2011 placed 6,955 calls to poison control centers nationwide, more than doubling the number of calls received in 2010.³⁴ The numbers, along with the increase in calls regarding

25. *Id.*

26. *Id.*

27. *Id.*

28. Schedules of Controlled Substances: Temporary Placement of Three Synthetic Cathinones into Schedule I, 76 Fed. Reg. 174 (proposed Sept. 8, 2011) (to be codified at 21 CFR pt. 1308).

29. *Id.* Destinations include Arizona, Alaska, Hawaii, Kansas, Louisiana, Oklahoma, Oregon, Pennsylvania, Missouri, Virginia, Washington, and West Virginia. *Id.*

30. *Dangers*, *supra* note 2, at 8.

31. *Id.* at 1.

32. *Id.* at 1, 5.

33. *Id.* at 1.

34. Brian Bennett, *Terrorism-fighting Funds Go Far Afield*, CHI. TRIB., Feb. 7, 2012, at 16. According to the University of Michigan’s Monitoring the Future survey, “one in every nine high school seniors (11.4%) reported using” synthetic marijuana in 2011. Press Release, University of Michigan News Service, Marijuana Use Continues to Rise Among U.S. Teens, While Alcohol Use Hits Historic Lows (Dec. 14, 2011), available at http://monitoringthefuture.org/pressreleases/11drugpr_complete.pdf.

synthetic cathinones, indicate how quickly synthetic drugs have infiltrated communities.³⁵

III. RAPID RISE

In October of 2011, Dr. Paul Gabriel, the director of emergency medicine at Grant Medical Center in Columbus, Ohio, reported that his hospital had “seen a large uptick” in the number of visits from users of bath salts.³⁶ “It’s really become pretty endemic here in Columbus in the last six months or so,” he said.³⁷ This section explores the rapid proliferation of bath salts in the United States³⁸ and discusses the allure of these drugs.³⁹ Beyond chasing highs that are glamorized on some web sites, they are easy to acquire (and typically sell for about twenty-five dollars per 500 milligram packet).⁴⁰ Despite crackdowns nationally and at the local level,⁴¹ some products still find their way to shelves.⁴² In addition, the salts remain easy to find on the Internet for anyone with even a basic grasp of a search engine.⁴³ Another attraction is the mistaken notion that the drugs must be safe if they are available to buy in stores and contain no banned substances.⁴⁴ Finally, because

According to the study, synthetic marijuana use ranked second only to use of marijuana among illicit drugs in 2011. *Id.*

35. See Bennett, *supra* note 34; Hillig, *supra* note 6 (noting calls to poison control centers about bath salts increased from 303 in 2010 to 6,072 in 2011).

36. Decker, *supra* note 7.

37. *Id.*

38. See *infra* Part III.A.

39. See *infra* Part III.B.

40. See Richards, *supra* note 21 (quoting a health professional who claims the substances are “easy to get”); see also Penders, *supra* note 16 (noting that improved attention, energy, and euphoria are intended effects of the drugs and that twenty-five-milligram doses “produce these effects in most individuals [which] last for 2 to 3 hours, leading some users to compulsively re-dose to maintain the effects”).

41. In July of 2012, the Drug Enforcement Administration (DEA) and Immigration and Customs Enforcement spearheaded a nationwide crackdown on synthetic drugs, which included raids of stores across the country. See Larry Oakes, *Police Raid Duluth Store in National Drug Sweep*, MINNEAPOLIS STAR TRIB., July 26, 2012, at 1A. According to a DEA press release “[m]ore than 90 individuals were arrested and more than five million packets of finished designer synthetic drugs were seized.” Press Release, Drug Enforcement Admin., Nationwide Synthetic Drug Takedown (July 26, 2012), available at <http://www.justice.gov/usao/id/news/images/dearelease07262012.pdf>.

42. See Penders, *supra* note 16, at 211.

43. See Oakes, *supra* note 19 (“[O]btaining dangerous, even deadly synthetic drugs has become as simple as ordering books or movies online. Anyone with a computer and credit card can shop websites that peddle drugs innocuously described as bath salts, herbal incense, plant food and research chemicals.”).

44. See Nancy Barnes, *Synthetic-Drug Dangers Are Under Our Spotlight*, MINNEAPOLIS STAR TRIB., Jan. 15, 2012, at 3OP.

routine drug tests do not detect bath salts, there appear to be diminished consequences for their use.⁴⁵

A. Use of Bath Salts Has Skyrocketed

According to the 2010 National Survey on Drug Use and Health, conducted by the Substance Abuse and Mental Health Services Administration (SAMHSA), an estimated 22.6 million Americans ages twelve and over (approximately 8.9% of the population in that age group) had used an illicit drug (marijuana/hashish, cocaine, heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used non-medically) during the month prior to the survey interview.⁴⁶ Synthetic drugs provide yet another dangerous narcotic option for Americans, especially for the millions of youths who have experimented with illicit drugs.⁴⁷

The popularity of the drugs has increased rapidly, as illustrated by the increase in calls Poison Control Centers have fielded about the drugs during the last few years.⁴⁸ According to data from the American Association of Poison Control Centers, calls to poison control centers in forty-seven states and the District of Columbia skyrocketed in 2011.⁴⁹ After recording no bath salts-related calls in 2009 and just more than 300 in 2010, the centers took in 2,237 calls in less than six months in 2011 (January 1 through May 12).⁵⁰ This rapid increase in use mirrors the quick increase in use of synthetic marijuana.⁵¹ The American Association of Poison Control Centers reported 112 calls to U.S. poison control centers from fifteen states during 2009 and the first two months of 2010.⁵² During just the next nine months, there had been 2,700 calls from forty-nine states and the District of Columbia.⁵³

45. See Penders, *supra* note 16 (noting that routine urine tests for synthetic cathinones are not available); see also Spielman, *supra* note 9 (commenting on the substance's popularity with student athletes who are drug tested because routine drug tests are not available for the substance).

46. SUBSTANCE ABUSE & MENTAL HEALTH SERVS. ADMIN., U.S. DEP'T OF HEALTH & HUMAN SERVS., RESULTS FROM THE 2010 NATIONAL SURVEY ON DRUG USE AND HEALTH: SUMMARY OF NATIONAL FINDINGS 11 (2011).

47. See generally NAT'L DRUG INTELLIGENCE CTR., *supra* note 14, at 2, 4 (noting that the drugs are sold at "head shops" and "skateboard shops" and detailing the "violent" reactions experienced by two fifteen-year-olds as a result of using the drugs).

48. See *id.* at 5.

49. *Id.*

50. *Id.*

51. See *Dangers*, *supra* note 2, at 5.

52. *Id.*

53. *Id.*

B. Synthetic Drugs' Allure

1. Young Adults Seem to Be Targeted

SAMHSA found that about a fifth of those aged eighteen to twenty-five had taken an illicit substance within the month prior to being surveyed—a higher rate of use than any other age group.⁵⁴ It is perhaps no surprise, then, that manufacturers of bath salts seemingly have targeted teenagers and young adults.⁵⁵ The drugs are given names inspired by the language of the drug counter-culture, like “Eight Ballz” and “Rave On.”⁵⁶ In addition, the packaging and descriptions of the drugs hint that they are conducive to partying and clubbing—one “novelty powder” sold on a web site is called “Pump-It! Powder,” and features silhouettes of two people dancing.⁵⁷ “Scooby Snax,” called a “potpourri product,” is a synthetic marijuana smoked by users to produce a marijuana-like high, and its packages feature Scooby Doo, the popular cartoon dog, looking stoned.⁵⁸ The packaging is marketed, some posit, for young people who are “possibly eager to use cannabis, but who are afraid of the legal consequences and/or association with illicit drugs.”⁵⁹ Users of synthetic cathinones seek “euphoria, general stimulation, empathy, enhanced music appreciation, hallucinations, increased insight, elevated mood, decreased hostility, improved mental function, and mild sexual stimulation.”⁶⁰ A popular British dance magazine’s survey of readers claimed mephedrone gave a better high than cocaine.⁶¹ At one site reviewing bath salts, “Drone IV Bath Salts” are said to

54. SUBSTANCE ABUSE & MENTAL HEALTH SERVS. ADMIN., *supra* note 46, at 14–15. According to the survey, the rate of use dropped to 14.8% among those between the ages of twenty-six and twenty-nine, 12.9% among those aged thirty to thirty-four, and 8.1% among those between thirty-five and thirty-nine. *Id.*

55. Decker, *supra* note 7 (quoting DEA spokesman Jeffrey Scott, who said the drugs are “clearly being marketed and targeted at young adults as a kind of safe or legal stimulant. ... They’re clearly not safe, at least not from the data that we’ve been seeing”).

56. See Jaclyn O’Malley, *The New High? ‘Bath Salts’*, RENO GAZETTE-JOURNAL (Mar. 20, 2012), <http://www.rgj.com/article/20120320/NEWS/303160112/The-new-high-bath-salts-> (“Washoe County Crime Laboratory criminalist Diane Machen said bath salts are intentionally marketed toward teens because pushers try to convince youth they can get high without doing anything wrong.”). See also WICKED SALTS ONLINE STORE, <http://www.wickedsalts.com/> (marketing bath salts online as “Eight Ballz” and “Rave On”) (last visited, Apr. 14, 2013).

57. LEGAL KUSH SALT, http://legalkush-salts.com/product.php?id_product=43 (last visited Apr. 14, 2013).

58. Julie Scharper, *Risky Synthetic Highs May Come in Cartoon Packages*, BALTIMORE SUN, Sept. 15, 2012, at 1A; see also POWERS RIDER, http://www.powersrider.com/Scooby_Snax_Herbal_Potpourri_10Gram_p/herb-ss10.htm (last visited Apr. 14, 2013) (advertising Scooby Snax for sale, undoubtedly without the blessing of Hanna-Barbera, the animation studio that produced the cartoon).

59. *Dangers*, *supra* note 2, at 5.

60. OFFICE OF DIVERSION CONTROL, DRUG ENFORCEMENT ADMINISTRATION, BACKGROUND, DATA AND ANALYSIS OF SYNTHETIC CATHINONES 8 (2011).

61. *Id.*

provide “a great deal of energy, some euphoria and a lasting power of 5 hours or so, maybe longer depending on quantities added to your bath.”⁶²

2. *The Internet Fuels Bath Salts’ Spread*

The bath salts that turned a party in Oklahoma into a frightening and deadly night⁶³ allegedly were “researched” on the Internet by the college student who purchased them.⁶⁴ The drug, 2C-E, was described on the Internet as “a sensory-enhancing psychedelic similar to LSD,” giving users warm and happy highs.⁶⁵

The Internet can be a marketplace for bath salts, as plugging the search terms “buy bath salts” into Google reveals multiple sites that sell bath salts and offer delivery.⁶⁶ The Internet also provides a forum in which users can tout their experiences and rebut the warnings of parents, schools, government agencies, and other web sites—a kind of cyber peer pressure that was evident in the “comments” section below a “review” for “Ivory Wave” bath salts.⁶⁷ Among the comments are one by “Tony Montana,” which reads, “[e]asily one of the absolute best salts around, bar none.”⁶⁸ Another commenter asks if Ivory Wave can be smoked.⁶⁹

3. *Easy to Acquire and Seemingly Legal*

An additional reason for bath salts’ allure is their accessibility.⁷⁰ Despite recent crackdowns, the drugs still can be found in some stores.⁷¹ In mid-February of 2012, the Chicago City Council’s Finance Committee moved to block bath salts, which already were illegal under state law, but still were “sold with impunity.”⁷²

62. BATH SALTS REVIEWS, <http://bathsaltsreviews.net/buy-bath-salts/drone-iv-bath-salts-review/> (last visited Apr. 14, 2013).

63. See *infra* Part IV.B.

64. See Pam Louwagie, *New Drugs Fuel Wave of Violence and Death*, MINNEAPOLIS STAR TRIB., July 24, 2011, at 1A.

65. *Id.*

66. The first site listed was bath-salts-direct.com, which boasted the “[b]est prices on bath salts in USA,” and “[l]egal bath salts.” BATH SALTS DIRECT, <http://bath-salts-direct.com/> (last visited Apr. 14, 2013). The second site, k2bathsaltsonline.com, notes that all its products “are for legal use only.” K2 INCENSE ONLINE, <http://k2bathsaltsonline.com/> (last visited Apr. 14, 2013).

67. *Ivory Wave Ultra Review*, BATH SALTS REVIEWS, <http://bathsaltsreviews.net/buy-bath-salts/ivory-wave-ultra-review/> (last visited Apr. 14, 2013).

68. *Id.*

69. *Id.*

70. See, e.g., Scharper, *supra* note 58 (reporting that despite federal bans on some synthetic drugs, many Baltimore gas stations and small stores still sell synthetic marijuana).

71. See Karen Gavin, ‘Zombie Attacks’ Spurring Federal Lawmakers to Seek Permanent Ban on Chemicals in ‘Bath Salts’, CONTROLLED SUBSTANCES HANDBOOK NEWSL., July 2012, at 2 (reporting that bath salts were still being sold in some stores even after the DEA’s temporary ban).

72. Spielman, *supra* note 9 (quoting Cara Smith, Deputy Chief of Staff, Illinois Attorney General, who said in mid-February of 2012 that bath salts were being bought “over the counter”).

While awareness about bath salts has increased slightly, and the government has attempted to respond with new laws and bans, there still appears to be a market for the drugs. In January 2012, more than \$1 million worth of synthetic cannabis and bath salts were seized from a smoke shop in the Chicago suburbs.⁷³ The availability of these drugs over the counter and on the Internet eliminates the risk of having to make a purchase from a drug dealer, and many synthetic drugs contain substances that have not yet been banned.⁷⁴ According to an Internet survey, the perceived legal status of mephedrone accounted for its popularity.⁷⁵ In addition, synthetic drugs often do not show up on drug tests, another factor that can make them appealing to users.⁷⁶

Another attraction of bath salts, for some, is they “seem less dangerous than illegal drugs like marijuana, cocaine or hallucinogens,” because they often “are touted as legal” and are easy to acquire.⁷⁷ Many of the online retailers of bath salts market their products with the phrase “50 State Legal” or similar phrases.⁷⁸ The site *am-hi-co.com*, meanwhile, has a page, accessible from its main page, that boasts it will not supply to its customers any substance banned in America, and it invites “the DEA to test all our available USA blends.”⁷⁹ The page also includes links to pages for each of the fifty states, where visitors can find state statutory laws on synthetic drugs.⁸⁰

IV. EXTREME DANGER

The effects advertised⁸¹ and those experienced by bath salts users often are dramatically different, as the drugs have caused trips to the hospital and even

73. See *Two Charged with Manufacturing ‘Charley Sheene’ Bath Salts*, HERALD-NEWS (Jan. 13, 2012), <http://heraldnews.suntimes.com/news/9991108-418/two-charged-with-manufacturing-charley-sheene-bath-salts.html> (describing a large seizure of synthetic drugs).

74. Paul Walsh, *Second Death in Minnesota is Tied to Synthetic Drugs*, MINNEAPOLIS STAR TRIB., Sept. 9, 2011, at 1A. The article discusses the death of Alex Winterhalter, which has been attributed to synthetic drugs. *Id.* According to the article, Winterhalter began smoking synthetic pot after police caught him with more than four ounces of marijuana at his parents’ house. *Id.* He switched drugs, his friends said, because he “figured it was the best way to keep getting high—without getting in trouble again.” *Id.*

75. OFFICE OF DIVERSION CONTROL, *supra* note 60, at 10.

76. See Nancy Barnes, *The Perils of Drug Use in the Internet Age*, MINNEAPOLIS STAR TRIB. (July 24, 2011), <http://www.startribune.com/opinion/126040503.html>.

77. *Id.*; see also Louwagie, *supra* note 64 (quoting the twenty-four-year old male host of a party where bath salts were used as saying that the drug “was just legal and we wanted to try something along that line, and we wouldn’t get in trouble for it”).

78. See, e.g., LEGAL BATH SALTS, <http://spiritualherbsandplants.com/legal-bath-salts/> (last visited Apr. 14, 2013).

79. CHECK LAW, AM-HI-CO, <http://am-hi-co.com/acatalog/legal-regions.html> (last updated Apr. 8, 2013).

80. *Id.*

81. See *supra* Part III.B.1.

death.⁸² Doctors have reported increasing numbers of people suffering from reactions to bath salts in emergency rooms,⁸³ and more stories are emerging of experiments with the drugs gone horribly wrong.⁸⁴ In addition, labels, directions and ingredient listings that are misleading, absent, or just plain wrong can make the already dangerous substances even more deadly.⁸⁵

A. Severe Reactions Reported

The increases in calls to poison centers and visits to emergency rooms as a result of synthetic drug use have raised concern from physicians and drug experts.⁸⁶ Doctors have described visitors to emergency rooms as “combative and agitated” and experiencing hallucinations,⁸⁷ and some have been sent to psychiatric wards.⁸⁸ Law enforcement officers, meanwhile, have reported attempts to subdue people high on bath salts who appear to be fighting “imaginary people.”⁸⁹ Mark Ryan, a poison center director in Louisiana, said users of bath salts suffer severe effects far more often than users of other drugs.⁹⁰ Ryan also noted that bath salts hallucinations are more frightening than those experienced by people on LSD, and that users are infused with the incredible strength that PCP users display.⁹¹ According to Ryan, “[i]t’s not like it’s just a bad drug, it’s a superbad drug.”⁹² Dr. Richard Clark, an emergency-room physician at the University of California San Diego Medical Center claimed bath salts are “without a doubt the most dangerous drug we are dealing with now.”⁹³ The DEA noted synthetic cathinones produce effects similar to those produced by stimulants:

palpitation, seizure, vomiting, sweating, headache, discoloration of the skin, hypertension, and hyper-reflexia. Adverse effects associated with consumption of these drugs as reported by abusers include nose-bleeds, bruxism (teeth grinding), paranoia, hot flashes, dilated pupils, blurred vision, dry mouth/thirst, palpitations, muscular tension in the

82. *See infra* Part IV.A.

83. *Id.*

84. *See infra* Part IV.B.

85. *See infra* Part IV.C.

86. *See* Decker, *supra* note 7. Dr. Paul Gabriel, the director of emergency medicine at Grant Medical Center in Columbus, compared the “explosive reactions” of patients coming into the Grant emergency room high on bath salts to “those that doctors saw from angel dust 40 years ago. ‘These guys are just out of their minds,’ he said.” *Id.*

87. *Id.* In the article, an emergency physician at the Ohio State University Medical Center, Dr. Diane Gorgas, said side effects are “kind of like the worst parts of” LSD, PCP, and cocaine. *Id.*

88. *See, e.g.,* Louwagie, *supra* note 4.

89. *Id.*

90. *Id.*

91. *Id.*

92. *Id.*

93. Pauline Repard, *End to Sales of Synthetic Drugs Urged*, SAN DIEGO UNION-TRIB., Feb. 1, 2012, at B1.

jaw and limbs, headache, agitation, anxiety, tremor, and fever or sweating.⁹⁴

Cara Smith, the deputy chief of staff to Illinois Attorney General Lisa Madigan, brought samples of bath salts purchased on the Northwest Side of Chicago to a February 2012 City Council Finance Committee meeting.⁹⁵ She told the committee that in emergency rooms, where bath salts overdoses are becoming more common, “the most universal term that I hear is, ‘They’re out of their minds.’ We’ve had all sorts of horrible accounts of kids who ingest these and feel that the devil is chasing them, are compelled to kill themselves, have horrible car accidents.”⁹⁶

Dr. Frank LoVecchio, who works in the emergency room at Banner Good Samaritan Medical Center in Phoenix, said he dealt with bath salts users so unhinged that they did not respond to large doses of sedatives, and he had to give them general anesthesia.⁹⁷ In addition, Dr. Justin Strittmatter, an emergency room doctor at Gulf Coast Medical Center in Panama City, Florida, treated a man who had snorted bath salts and had a temperature of 107.5 degrees.⁹⁸ Other doctors have found patients with “dangerously elevated blood pressure and heart rates and people so agitated that their muscles started to break down, releasing chemicals that led to kidney failure.”⁹⁹ Even when users do not experience serious reactions that send them to hospitals, some have reported to have “crashed” or “come down” after highs from the substances wear off, as they would after using ecstasy or cocaine.¹⁰⁰

B. Tales of Terror

The most notorious story with a link to bath salts is that of Rudy Eugene, who stripped naked and began chewing on the flesh of a homeless man on the MacArthur Causeway in Miami on May 26, 2012.¹⁰¹ Many blamed bath salts, and the story went viral on the Internet, with Eugene being dubbed a “zombie.”¹⁰² Eugene’s toxicology report revealed only traces of marijuana—no synthetic cathinones—but many were skeptical, and some scientists claimed the only reason

94. Schedules of Controlled Substances: Temporary Placement of Three Synthetic Cathinones into Schedule I, 76 Fed. Reg. 174 (proposed Sept. 8, 2011) (to be codified at 21 CFR pt. 1308).

95. Spielman, *supra* note 9.

96. *Id.*

97. Abby Goodnough & Katie Zezima, *An Alarming New Stimulant, Sold Legally in Many States*, N.Y. TIMES, July 17, 2011, at A1.

98. *Id.*

99. *Id.*

100. *Dangers*, *supra* note 2, at 10.

101. See Rafael A. Olmeda and Ihosvani Rodriguez, *‘Drugs Took Over’ Miami Cannibal*, FORT LAUDERDALE SUN-SENTINEL, May 30, 2012, at 1A.

102. *Id.*

bath salts were not found in Eugene's system was because not all can be detected in tests.¹⁰³

The story of Eugene certainly resembles the worst and most frightening of the accounts involving reactions to bath salts—horror movie-style tales that conjure up the effects of PCP on people in the 1970s.¹⁰⁴ Those tales include an Indiana man who jumped into traffic from a flagpole, a man who stabbed a priest after breaking into a monastery in Pennsylvania, and a woman who violently scratched herself for several days because she believed something was under her skin.¹⁰⁵ Dr. Jeffrey J. Narmi, who works at Schuylkill Medical Center in Pottsville, Pennsylvania, described those arriving in the emergency room after taking bath salts as being agitated, violent, psychotic, and needing to be restrained by multiple medical workers.¹⁰⁶ Some were admitted overnight for treatment and then moved to the psych floor.¹⁰⁷ “These people were completely disconnected from reality and in a very bad place.”¹⁰⁸

In Louisiana in late 2010, twenty-one-year-old Dickie Sanders snorted Cloud 9 bath salts and was “[r]ocked by waves of paranoia and imagining that the police were closing in on him.”¹⁰⁹ Sanders used a butcher knife to cut his throat in front of his sister and father, Richard, a St. Tammany Parish family physician, but he missed major arteries and survived.¹¹⁰ Richard attempted to calm his son, who became “more despondent, more nervous, more erratic.”¹¹¹ At night, however, while his family slept, Dickie Sanders shot himself in the head with a .22-caliber youth rifle.¹¹²

In Konawa, Oklahoma, house party attendees took bath salts and wound up in different states of distress—some having hallucinations, another scratching his face bloody.¹¹³ Stacy Jewell, aged twenty-two, passed out and later died en route to the hospital.¹¹⁴ Andrew Akerman went into a coma; a week later, he was taken off life support.¹¹⁵ The party-goers allegedly ingested a liquid—water in which a powder had been dissolved—that was distributed via a medicine dropper.¹¹⁶ Within an

103. Susannah Bryan, *Experts Question Claim that ‘Cannibal’ Attacker was not on Bath Salts*, ORLANDO SENTINEL, July 9, 2012, at A3.

104. See Goodnough & Zezima, *supra* note 97.

105. *Id.*

106. *Id.*

107. *Id.*

108. *Id.*

109. Bob Warren, —*Snorting Bath Salts Pushed St. Tammany Man To Suicide* TIMES-PICAYUNE (Jan. 18, 2011), http://www.nola.com/crime/index.ssf/2011/01/snorting_bath_salts_pushed_st.html.

110. *Id.*

111. *Id.*

112. *Id.*

113. Louwagie, *supra* note 64.

114. *Id.*

115. *Id.*

116. *Id.*

hour, most who had taken the drug were nauseated, dripping with sweat, and wondering what had gone wrong.¹¹⁷ Colton Green clawed at his own face.¹¹⁸ Green's mother, Kat, a police officer, responded to the scene and found her son.¹¹⁹ When he tried to sit up, he fell over and seized, with his muscles tightening so much that his mother "thought his body would somehow break."¹²⁰ Green's lips turned blue, and he later flat-lined in an ambulance before being transferred to a medical helicopter.¹²¹ Green was hospitalized for three days and survived, but his hands "still tingle with numbness," and "[d]octors are concerned about his heart."¹²²

In the spring of 2011, eleven teenagers and young adults were rushed to the hospital after snorting the synthetic drug 2C-E at a party in Blaine, Minnesota.¹²³ One of the males in the group, nineteen-year-old Trevor Robinson, yelled, broke items, and punched walls after ingesting the substance and later stopped breathing.¹²⁴ He "died of cardiac arrest attributed to toxicity associated with the presence of drugs and no natural disease explained the death," according to murder charges filed against Timothy Lamere, who is accused of supplying the drug.¹²⁵ When police arrived at the party, they observed violent behavior and reported that some of the partygoers under the influence of the drugs struggled with medical personnel and police.¹²⁶

Synthetic cannabinoids also have proven to lead to psychotic episodes and intense hallucinations. In September of 2010, a teenager drove his truck into the side of a house shortly after nearly hitting a child at a junior high school.¹²⁷ The driver admitted to smoking "Wicked X," a substance that had been marketed as "herbal incense."¹²⁸ In Iowa, police point to use of synthetic marijuana as a factor in David Rozga's June 2010 suicide.¹²⁹ After smoking synthetic marijuana, Rozga became agitated and told his friends he "felt like he was in hell," according to his

117. *Id.*

118. *Id.*

119. *Id.*

120. *Id.*

121. *Id.*

122. *Id.*

123. David Chanen, *Murder Charges in Drug Case*, MINNEAPOLIS STAR TRIB., Mar. 22, 2011, at 1B.

124. *Id.*

125. *Id.*

126. *Id.*

127. *Dangers*, *supra* note 2, at 6.

128. *Id.*

129. Justin Jouvenal, *Laws Fail to Keep Pace With Synthetic Marijuana*, WASH. POST, Dec. 29, 2011, at A14.

father.¹³⁰ Rozga, aged eighteen, had just graduated from high school with a 3.5 grade-point average and planned to go to college.¹³¹

C. Ingredients and Directions Harm More Than Help

The marketing of synthetic cathinones as bath salts, research chemicals, or plant food clearly is just a ruse.¹³² More troubling is that the packages of these substances often are mislabeled or have “deliberately misleading instructions on how they should be used.”¹³³

The manufacturers and retailers who make and sell these products do not fully disclose the product ingredients including the active ingredients or the health risks and potential hazards associated with these products. This poses significant risk to abusers who may not know what they are purchasing or the risk associated with the use of those products.¹³⁴

In addition, the concentration levels of the substances—even those that share the same name—vary so significantly that a dose of one can be “many times more potent” than a dose of another, making use of the drugs akin to Russian roulette.¹³⁵ “Such variations in content and purity make the drugs dangerously unpredictable and greatly increase the chance of dying from an accidental overdose.”¹³⁶ As part of its investigation into synthetic cathinones, the Minneapolis Star Tribune ordered various bath salts from on-line retailers, and only half of the products listed ingredients.¹³⁷ One package of Cloud 9 bath salts “described its contents as a ‘proprietary blend of concentrated water softening agents, Epsom salts, sodium chloride, amino acid blends, and naturally occurring trace elements and minerals.’”¹³⁸ However, the laboratory hired by the newspaper to test the substances reported that none of those substances were included in the package.¹³⁹ Instead, it was entirely 3,4 dimethylmethcathinone, “a psychostimulant that could quickly wreak havoc in a user’s brain at that concentration.”¹⁴⁰ The products

130. *Id.*

131. *Id.*

132. *Dangers*, *supra* note 2, at 12 (noting that price differences between legitimate plant food and packages containing bath salts show that retailers’ marketing products as “bath salts,” “incense,” or “plant food” is really a pretense for engaging in unlawful activities); *see also*, Dara Kam, *Drug Sold as Bath Salts is Ordered off Shelves by Attorney General*, PALM BEACH POST, Jan. 27, 2011, at 5A (quoting Florida Attorney General Pam Bondi, who said “[t]hese are not your typical bath salts”).

133. Oakes, *supra* note 19.

134. Schedules of Controlled Substances: Temporary Placement of Three Synthetic Cathinones into Schedule I, 76 Fed. Reg. 174 (proposed Sept. 8, 2011) (to be codified at 21 CFR pt. 1308).

135. Oakes, *supra* note 19.

136. *Id.*

137. *Id.*

138. *Id.*

139. *Id.*

140. *Id.*

bought by the newspaper gave little guidance about how they should be used.¹⁴¹ One package cautioned users to “use sparingly.”¹⁴² Another substance, marketed as a “plant food” told users to “Add 1 gram to your watering can. . . . One can will cover 2–6 adult plants.”¹⁴³

V. GOVERNMENT RESPONSE

With the rise in use of bath salts, the government has been scrambling to strike back.¹⁴⁴ The Drug Enforcement Administration sought and gathered information on synthetic cathinones, and used its emergency powers to schedule temporarily three substances commonly used in bath salts in November of 2011, and in July of 2012 President Barack Obama signed the Synthetic Drug Abuse Prevention Act of 2012 into law, permanently scheduling two of those substances and two dozen others.¹⁴⁵ Even declaring certain substances illegal has not been a cure-all, however, as drug manufacturers can alter slightly the structure of chemicals so they are not affected by the ban or use basic disclaimers to attempt to expose a loophole.¹⁴⁶ In addition, even if the drugs are kept out of stores, it is all but impossible for the DEA to monitor sales of synthetic cathinones on the Internet.¹⁴⁷

A. *The Federal Response*

In March of 2011, the Drug Enforcement Administration issued a “Request for Information,” in which it claimed that “[t]he sudden appearance of synthetic cathinones . . . on the designer drug market in the United States is of great concern.”¹⁴⁸ The DEA noted in its request that the substances, popular in Europe since 2007, were new to the American drug market, are marketed, falsely, as “research chemicals,” “plant food,” or “bath salts,” and are sold on the Internet and also at “smoke shops, head shops, convenience stores, adult book stores, and gas stations.”¹⁴⁹ The DEA claimed its Drug and Chemical Evaluation Section was gathering information about the substances to see if they could possibly be scheduled, but it asked for “any information related to law enforcement encounters, drug identification, toxicology reports, medical examiner reports, and abuse related to these synthetic cathinones.”¹⁵⁰

141. *Id.*

142. *Id.*

143. *Id.*

144. *See infra* Part V.A.

145. *See infra* Part V.A.

146. *See infra* Part V.B.

147. *See infra* Part V.B.

148. DRUG ENFORCEMENT ADMINISTRATION, U.S. DEP’T OF JUSTICE, REQUEST FOR INFORMATION 1 (2011),

149. *Id.*

150. *Id.*

The National Drug Intelligence Center (NDIC) published a Situation Report on bath salts in July of 2011 and labeled them “an emerging domestic threat.”¹⁵¹ The NDIC claimed it had “high confidence that the distribution and abuse of synthetic cathinones” would increase in the near future, “posing yet another challenge to law enforcement officials.”¹⁵² Among the specific difficulties posed by bath salts are difficulties in tracking them.¹⁵³ While U.S. Customs and Border Protection keeps track of seizures of synthetic cathinones at ports of entry, “many synthetic cathinone products are disguised or mislabeled to impede detection.”¹⁵⁴ In addition, the drugs often are not detected by drug-sniffing dogs or field test kits.¹⁵⁵

In early September of 2011, Gil Kerlikowske, the White House “drug czar,” held a meeting with high-level representatives of ten federal agencies to “address what can be done to ‘disrupt the production, importation, sale, and use of synthetic drugs.’”¹⁵⁶ In October of 2011, the Drug Enforcement Administration used its emergency powers to ban temporarily mephedrone, methylenedioxypropylvalerone (MDPV), and methylone, three synthetic stimulants used in bath salts.¹⁵⁷ The move placed the substances in Schedule I, the DEA’s most restrictive category of banned substances, for at least a year.¹⁵⁸ According to the DEA, it based its decision to schedule the drugs temporarily on a finding “that the placement of these synthetic cathinones into Schedule I of the CSA is necessary to avoid an imminent hazard to the public safety.”¹⁵⁹

To reach that decision, the Administrator must weigh three of the eight factors set forth in section 201(c) of the CSA: “the substance’s history and current pattern of abuse; the scope, duration and significance of abuse; and what, if any, risk there is to the public health.”¹⁶⁰ The Administrator determined, based upon available information and statistics that mephedrone, MDPV, and methylone “have a high

151. NAT’L DRUG INTELLIGENCE CTR., *supra* note 14, at 1.

152. *Id.*

153. *Id.*

154. *Id.*

155. *Id.*

156. Larry Oakes, *DEA Clamps Down on Synthetic Drugs*, MINNEAPOLIS STAR TRIB., Sept. 8, 2011, at 1A.

157. Elizabeth A. Harris, *D.E.A. Bans Chemicals Used in ‘Bath Salts’*, N.Y. TIMES, Oct. 22, 2011, at A12; *see also* Controlled Substances Act, 21 U.S.C. § 811 (2011) (discussing the temporary scheduling of substances); 28 C.F.R. § 0.100 (2012) (establishing that the Attorney General’s duties under the Comprehensive Drug Abuse Prevention and Control Act of 1970 will be handled by the Administrator of the DEA).

158. *See* Harris, *supra* note 157; *see also* Controlled Substances Act, 21 U.S.C. § 812 (2011) (laying out the findings required in order for a substance to be classified as a Schedule I drug including “high potential for abuse,” “no currently accepted medical use in treatment in the United States,” and “a lack of accepted safety for use of the drug or other substance under medical supervision”). Heroin and marijuana are Schedule I drugs. *Id.*

159. Schedules of Controlled Substances: Temporary Placement of Three Synthetic Cathinones into Schedule I, 76 Fed. Reg. 174 (proposed Sept. 8, 2011) (to be codified at 21 CFR pt. 1308).

160. *Id.*

potential for abuse, no currently accepted medical use in treatment in the United States, and lack accepted safety for use under medical supervision.”¹⁶¹ The Administrator noted that synthetic cathinones’ pharmacological effects mirror those of methamphetamine, cathinone, methcathinone, and MDMA, and thus abuse of synthetic cathinones potentially could harm users seriously.¹⁶² DEA Administrator Michele M. Leonhart noted the chemicals placed under the temporary ban posed “a direct and significant threat, regardless of how they are marketed,” and he vowed to “aggressively pursue those who attempt their manufacture and sale.”¹⁶³ The DEA already had used its emergency powers to place five synthetic cannabinoids into the CSA, publishing the final order in the Federal Register on March 1, 2011.¹⁶⁴

Arguably the most significant federal action to date took place in July of 2012, when President Obama signed the Synthetic Drug Abuse Prevention Act as part of the Food and Drug Administration Safety and Innovation Act.¹⁶⁵ The Act added twenty-six substances used in “designer” drugs into Schedule I of the Controlled Substances Act, including mephedrone and MDPV, which commonly are used in bath salts.¹⁶⁶ It also lengthened the time substances can be banned temporarily—from one year to two years—and lengthened the time for which the temporary bans can be extended from six months to a year.¹⁶⁷ The law was praised by some,¹⁶⁸ but others questioned how large an impact it would have.¹⁶⁹ Karen Tannert, a chief pharmacist for the Texas Department of State Health Services, called synthetic drugs unique “chameleon chemicals” and added that it is “incredibly easy” for drug makers to create a new chemical entity that falls outside the law by tweaking chemical compounds.¹⁷⁰

161. *Id.*

162. *Id.*

163. Press Release, Drug Enforcement Admin., Chemicals Used in ‘Bath Salts’ Now Under Federal Control and Regulation (Oct. 21, 2011), *available at* <http://www.justice.gov/dea/pubs/pressrel/pr102111.html> (last visited Mar. 30, 2012).

164. Schedules of Controlled Substances: Temporary Placement of Five Synthetic Cannabinoids Into Schedule I, 76 Fed. Reg. 11075 (Mar. 1, 2011).

165. Synthetic Drug Abuse Prevention Act of 2012, Pub. L. No. 112-144, § 1152, 126 Stat. 1130, 1130–32 (2012) (to be codified at 21 U.S.C. § 812).

166. *Id.*

167. *See* Synthetic Drug Abuse Prevention Act § 1153 (to be codified at 21 U.S.C. § 811(h)(2)).

168. *See* Rachel Dove-Baldwin, *New Law Passed Regarding Synthetic Drugs*, WILLIAMSON DAILY NEWS (July 21, 2012), http://www.williamsondailynews.com/view/full_story/19493716/article-New-law-passed-regarding-synthetic-drugs (“This law will provide a critical boost to the nation’s efforts to address and curtail the threat of synthetic drugs.”).

169. *See, e.g.*, Editorial, *An Herbal Scourge*, THE TAMPA TRIB., July 27, 2012, at 16 (commenting that the law’s impact “is expected to be modest” because of the many varieties of the drugs).

170. Anita Hassan, *Lethal Designer Drug Taking Lives in Streets of Houston*, THE HOUSTON CHRON., Sept. 23, 2012, at B1.

B. Exposing Loopholes, Circumventing the Law

The DEA's scheduling of substances common in bath salts and synthetic marijuana does not mark the end of the problem with the substances. Government chemists—and thus the DEA and law enforcement—consistently are playing “catch-up,” because when they identify “chemical compounds turning up” in synthetic drugs and alert law enforcement, “another form of them emerges.”¹⁷¹ Drug manufacturers “can choose from an almost endless menu of chemicals that they can concoct.”¹⁷² The DEA estimates that there could be more than 100 chemicals that are suspected synthetic cannabinoids or synthetic stimulants.¹⁷³

Ostensibly, this problem should be remedied by the Federal Analogue Act.¹⁷⁴ The Act, originally called the “Designer Drug Enforcement Act,” was passed in an attempt to close loopholes that were being exploited in the Controlled Substances Act, specifically that drug manufacturers could make slight structural changes to Schedule I drugs to avoid penalty.¹⁷⁵ With the passage of the Act, the DEA did not have to “promulgate a rule banning each chemical as it emerges on the black market.”¹⁷⁶ Instead, the Act prohibited automatically a chemical that was “‘substantially similar in structure’ to an already-prohibited drug, and has a ‘substantially similar chemical effect’ or is ‘represented to have such an effect.’”¹⁷⁷

However, packages of synthetic cathinones, like packages of synthetic cannabinoids, typically bear a statement that the contents are “not for human consumption” or “for novelty use only.”¹⁷⁸ These disclaimers are meant to exploit a loophole in the Federal Analogue Act, which states that controlled substance analogues shall, “to the extent intended for human consumption,” be treated as a Schedule I controlled substance.¹⁷⁹ Investigation is needed on every potential analogue case to decide if the substance was “intended for human consumption,” and in criminal prosecutions involving analogue substances, the government has additional burdens.¹⁸⁰ It must establish “through experts in the field of chemistry, that the substance is substantially similar in chemical structure to a schedule I controlled substance;” and “through experts in the field of pharmacology, that the

171. See Walsh, *supra* note 8.

172. *Id.*

173. *Dangers, supra* note 2, at 10.

174. 21 U.S.C. § 813 (2011) (“A controlled substance analogue shall, to the extent intended for human consumption, be treated, for the purposes of any Federal law as a controlled substance in schedule I.”).

175. See Gregory Kau, *Flashback to the Federal Analog Act of 1986: Mixing Rules and Standards in the Cauldron*, 156 U. PA. L. REV. 1077, 1078–79 (2008) (giving context and history surrounding the atmosphere that led Congress to enact the Federal Analog Act).

176. *Id.* at 1081.

177. *Id.* (citing 21 U.S.C. § 802(32)(A) (2011)).

178. *Dangers, supra* note 2, at 1.

179. 21 U.S.C. § 813 (2011).

180. *Dangers, supra* note 2, at 10.

substance is substantially similar in pharmacological activity to a schedule I controlled substance.”¹⁸¹ Another problem is the potential defense that the accused did not realize the drug was “substantially similar” to an outlawed substance.¹⁸² Some might argue that the chemistry is so complicated that “if expert witnesses cannot agree [on the nature of the substance], how was the defendant to know?”¹⁸³ In addition, a successful prosecution under the CSA’s analogue provision does not make the substance an analogue in subsequent prosecutions.¹⁸⁴

Because the statute requires that a substance be both structurally and pharmacologically similar to be an analogue, drug manufacturers can make substances that are pharmacologically similar and yet different structurally—and there appear to be “*endless variations*” on chemical substances.¹⁸⁵ Due to these concerns, use of “the ‘analogue’ process to prevent diversion and abuse of synthetic cannabinoids and stimulants is not adequate to address the problem” and a more active solution, direct scheduling, is necessary to solve the problems caused by such substances.¹⁸⁶ However, that seems to lead directly back to the problem that made the analogue provision attractive in the first place: that because of how many elements can be used to mimic the substances already used in bath salts, rogue chemists can continue to concoct new substances that are not banned.¹⁸⁷

The majority of states, and many local communities, have passed measures targeting synthetic marijuana, and many states and local communities are following suit with laws banning synthetic cathinones.¹⁸⁸ But those regulations are not a final solution either. When Ohio’s state ban on bath salts and synthetic marijuana went into effect shortly before the federal ban, Nicole Dehner, chief policy adviser for the state’s Office of Criminal Justice Services, said that while some stores took products with illegal substances off their shelves, others put stickers on the products indicating illicit substances weren’t among the ingredients, even though they sometimes were.¹⁸⁹ Dehner said other stores have given regular buyers another

181. *Id.* at 11. These expert opinions are not always in accordance, however, and there may be opposing opinions regarding the nature of substances at issue. See Kau, *supra* note 175 at 1100–01 (noting that because “many chemistry experts disagree on whether a chemical is ‘substantially similar’ in structure to another chemical,” that litigation involving the Federal Analog Act often becomes a battle of experts relying upon opinions rather than evidence); Jessica Vander Velde, *Ever-Changing Designer Drugs Stymie Prosecutors*, TAMPA BAY TIMES, Oct. 14, 2012 at 12A (calling the Act “largely ineffective,” because cases involving the Act “often turn into battles of experts—expensive cases to mount”).

182. Vander Velde, *supra* note 181.

183. *Id.*

184. *Dangers*, *supra* note 2, at 11.

185. *Id.* at 12 (emphasis in original).

186. *Id.* at 11.

187. See Walsh, *supra* note 8. Government chemist Arthur Berrier says drug manufacturers are “keeping ahead of us” by coming up with new chemical compounds. *Id.*

188. Schedules of Controlled Substances: Temporary Placement of Three Synthetic Cathinones into Schedule I, 76 Fed. Reg. 174 (Sept. 8, 2011) (to be codified at 21 CFR pt. 1308).

189. Decker, *supra* note 7.

address—like the home of an employee—where they can buy the substances.¹⁹⁰ In Duluth, Minnesota, Jim Carlson continued to sell bath salts despite a pair of raids on his store, claiming to have switched to “products with different formulas that aren’t specifically outlawed.”¹⁹¹ Carlson, who said in 2011 that he sells \$6 million in synthetic marijuana and stimulants each year, went one step further in October; he filed suit in federal court against the federal government.¹⁹² Carlson’s suit claims the DEA “and other authorities violated his constitutional rights by seizing his property without stating the legal reason, depriving him of the ability to effectively fight the seizures in court.”¹⁹³

In March of 2011, Virginia made it a crime to possess or sell “spice,” synthetic marijuana that contains any of ten chemicals typically used in the substance.¹⁹⁴ However, three of the biggest busts for spice were derailed because the substances seized did not contain any of the chemicals banned by state law.¹⁹⁵ One of the busts—a raid of a tobacco shop—resulted in seizure of 1,700 packets of synthetic marijuana, but samples tested did not contain restricted active ingredients.¹⁹⁶ Another bust, two weeks after the ban, resulted in the seizure of 842 packets of synthetic marijuana worth more than \$8,000 from a head shop.¹⁹⁷ That case fell apart as well, as tests showed the synthetic marijuana did not contain banned compounds.¹⁹⁸ Other states—including Florida, Indiana, Illinois, and Alaska—have had similar problems.¹⁹⁹

Even if users are unable to find a brick-and-mortar store that sells the drugs, they are “widely available on the Internet.”²⁰⁰ As part of its investigation into synthetic drugs, *The Minneapolis Star Tribune* purchased synthetic drugs from several web sites, including Amazon.com (where it purchased a synthetic marijuana described as an “exotic potpourri blend”), Legalsalts.com (where it purchased “an invigorating bath salt” that tests revealed was thirty-six percent MDPV), and Naughtyplantfood.com (where it purchased a “research chemical powder” called “Charly Sheen” that mimicked Ecstasy).²⁰¹

190. *Id.* Gorgas told the paper that while she was “hopeful” the new legislation would lead to a decrease in the number of cases she saw, “[r]ealistically, I don’t know that it will make a huge difference. It’s not like meth went away or anything.” *Id.*

191. Larry Oakes, *Duluth Synthetic Drug Dealer Goes on Offensive*, THE MINNEAPOLIS STAR TRIB., Oct. 11, 2012 at 4B.

192. *Id.*

193. *Id.* Carlson’s attorney, Randall Tigee, commented that he and his client could not “even tell what they’re claiming violates the law.” *Id.*

194. VA. CODE ANN. § 18.2-248.1:1 (West 2012).

195. See Jouvenal, *supra* note 129.

196. *Id.*

197. *Id.*

198. *Id.*

199. *Id.*

200. Oakes, *supra* note 19.

201. *Id.*

Sites that sell bath salts—like bath-salts-direct.com—play upon the “legal” angle, and promote the fact that their substances have yet to be banned.²⁰² The site has a link on its main page which reads: “USA customers click here to find out which products are legal in your state.”²⁰³ From there, the site has links to information about the laws in all fifty states and the District of Columbia.²⁰⁴ Rusty Payne, a DEA spokesman, said that while it is a felony to buy some of the substances, it is “ridiculous” to think the federal government can completely halt the trafficking of synthetic drugs on the Internet because “thousands and thousands of websites” market the products.²⁰⁵

VI. WHAT TO DO

The biggest challenges facing law makers and law enforcement are the variations of chemicals which can be used by drug manufacturers to make synthetic drugs “technically” legal,²⁰⁶ and the difficulties of prosecuting drug crimes based upon the Federal Analogue Act—specifically that the law’s “statutory criteria require extensive investigation and analyses, as well as a qualified expert’s opinion regarding the chemical and pharmacological characteristics of the substance.”²⁰⁷ Because the definition of a controlled substance analogue is vague, prosecutors seem to be reluctant to bring cases.²⁰⁸ This has resulted in “fewer data points giving clues as to the courts’ definition of a ‘substantially similar’ structure.”²⁰⁹ While there appears to be no easy answer to the problem facing the United States, this article provides recommendations for fighting synthetic drugs at the federal²¹⁰ and state²¹¹ levels as well as a grass-roots campaign.²¹²

A. Streamlining Federal Efforts

At the federal level, the government should amend the Federal Analogue Act to more clearly define an analogue substance and provide for proactive listing of analogue substances. Currently, the Federal Analogue Act is a standards-based

202. See BATH SALTS DIRECT, <http://bath-salts-direct.com/> (last visited Apr. 14, 2013).

203. *Id.*

204. *Id.*

205. Oakes, *supra* note 19.

206. See *infra* Part III.C.

207. *Dangers*, *supra* note 2, at 10.

208. Kau, *supra* note 175, at 1101–02 (noting that in the first two-plus decades since the passing of the Act, only about seventy cases were brought under it); see also Vander Velde, *supra* note 9 (pointing out that lawyers in the Middle District of Florida have never brought actions under the Act because it is “too weak”).

209. Kau, *supra* note 175, at 1102.

210. See *supra* Part V.A.

211. See *supra* Part V.B.

212. See *supra* Part V.C.

regulation, while the Controlled Substances Act is a rules-based regulation.²¹³ So while the CSA specifically defines chemicals that are prohibited *ex ante*, the Federal Analogue Act uses an *ex post* approach which prohibits chemicals “substantially similar” to already prohibited chemicals.²¹⁴ This makes the Federal Analogue Act vulnerable to due process concerns, specifically with fair notice to individuals.²¹⁵ How is a lay person to know if a chemical is “substantially similar” to one banned if chemistry experts disagree?²¹⁶ The answer might be in a hybrid rules-standard regulation that provides more guidance about what exactly it means for a substance to be an “analogue.”²¹⁷ Kau suggests that “Congress could statutorily define a ‘controlled substance analog’ as a chemical that is ‘substantially similar’ to (1) a currently scheduled chemical, or (2) a chemical that has previously been considered a controlled substance analog, with the stipulation that a chemical is ‘substantially similar’ to another chemical” if the lone difference is a minor molecular tweak.²¹⁸ This could make a criminal prosecution less about “opinion,” as has been a problem.²¹⁹ By giving courts more guidelines, prosecutors might be more willing to push these prosecutions.²²⁰

The DEA also could become more proactive. In addition to testing the drugs that already have been created and are being used, the DEA’s chemists could attempt to identify potential variations on already-prohibited drugs—variations that would fit within the improved and streamlined definition of a controlled substance analog. “[C]onstructing a database of potential analogs should be as simple as searching the scientific literature for the appropriate structural backbone, along with pharmacological search terms such as ‘hallucinogen,’ ‘stimulant,’ or ‘depressant.’”²²¹ By publishing a list of chemicals, the DEA would help allay due process concerns about notice.²²²

B. State Aggression

State and local governments also need to become more aggressive to stem the tide of synthetic drugs, especially considering the drugs seem to have infiltrated

213. See generally Kau, *supra* note 175 (explaining that the Federal Analog Act banned chemicals based on their relation to other banned, “substantially similar” chemicals—while the CSA simply lists the specific banned chemicals).

214. *Id.* at 1089–90.

215. *Id.* at 1099–1100.

216. *Id.* at 1100–01.

217. *Id.* at 1109.

218. *Id.*

219. See *Dangers*, *supra* note 2, at 11.

220. Kau, *supra* note 175, at 1107–08 (“[I]f the Federal Analog Act prohibited chemicals that differed from scheduled drugs only by ‘functional groups,’ this standard would reduce the cost of promulgating many heterogeneous rules, selectively deter criminals, and satisfy due process concerns.”).

221. *Id.* at 1112.

222. *Id.* at 1113.

pockets of the country in varying intensity.²²³ One option is modeling statutes after California's Controlled Substance Analog law.²²⁴ The law is much broader than its federal counterpart and its definition of "controlled substance analogue" is subject to a "disjunctive" reading.²²⁵ In the statute, a controlled substance analog is defined as a substance that *either* has a chemical structure "substantially similar to the chemical structure of a controlled substance," *or* "has, or is represented as having, or is intended to have a stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to, or greater than, the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance."²²⁶ The federal statute's version of the definition of "controlled substance analogue," on the other hand, requires a "conjunctive" reading—"requiring a substantially similar chemical structure to a controlled substance (i), *and then* either an effect similar to a controlled substance (ii) or the intent to have such an effect (iii)."²²⁷ In a jurisdiction with a disjunctive reading, a substance with a unique chemical structure could still be considered illegal if its effect was "substantially similar" to a controlled substance.²²⁸

In addition, state lawmakers can attempt to cut through red tape with legislation like House Bill 2388, proposed in Arizona.²²⁹ Because a state law banning certain substances in synthetic drugs has been circumvented by manufacturers tweaking their formulas, the latest bill would give the Arizona State Board of Pharmacy the power to ban the chemicals used in the drugs.²³⁰ Considering that the legislature is unable to keep up with all the new substances created by drug manufacturers—and the legislative process can move slowly—the Board of Pharmacy would be allowed "to ban the sale of the modified chemicals while the Legislature isn't in session and allow lawmakers to pass bills that would make those chemicals illegal at a later date."²³¹ This "rapid-response system" mirrors systems already in effect in several states like Oregon and Alabama and could significantly help states limit the spread of these substances.²³² Local municipalities also can copy the efforts of some towns in Tennessee that have "used noncriminal bans that address 'any substance that mimics the effects of any

223. See, e.g., Elisha Anderson, *State Bans K2 and Other Drugs*, DETROIT FREE PRESS, June 20, 2012, at A4 (reporting that Michigan lawmakers passed a bill banning certain synthetic drugs including bath salts as a way to crack down on use of such chemicals in products).

224. CAL. HEALTH & SAFETY CODE §§ 11400–11401 (West 2007 & Supp. 2013).

225. Kau, *supra* note 175, at 1087–88.

226. § 11401(b).

227. See Tracy Bateman Farrell, *Validity, Construction, and Operation of Controlled Substance Analogue Enforcement Act of 1986*, 188 A.L.R. FED. 325, 334–35 (2003) (emphasis added).

228. Kau, *supra* note 175, at 1088.

229. H.B. 2388, 50th Leg., 2d Reg. Sess. (Ariz. 2012); see also Alex Ferri, *As Formulas Change, Legislature Targets Drugs in 'Bath Salts'*, ARIZ. REPUBLIC, Mar. 28, 2012, at B3.

230. See Ferri, *supra* note 229.

231. *Id.*

232. Editorial, *Ariz. Can Curb New Variants*, ARIZ. REPUBLIC, Mar. 27, 2012, at B8.

controlled substances' to define broadly the substances used to make synthetic drugs."²³³

C. Grass-Roots Educational Efforts

While states and the federal government must continue to scramble to keep up with drug manufacturers, they necessarily are playing “catch-up.”²³⁴ However, given the difficulties the government faces in making substances illegal, and with the proliferation of synthetic drugs on the Internet, it seems clear that synthetic drugs cannot simply be handled through government regulation or the criminal justice system—even White House Drug Czar Gil Kerlikowske has admitted as much.²³⁵ Therefore, a push for increased education and awareness appears to be a better way of tackling the problem than expanding the “War on Drugs,” which some feel is a losing battle.²³⁶ Indeed, it might be the only way to tackle the problem.²³⁷ Advertising and educational videos like those that were made to combat the methamphetamine epidemic—the harsher the better—must be made to scare straight the youth of America.²³⁸ There is evidence that meth campaigns have helped, for instance in Georgia, after a \$4 million advertising campaign the percentage of teenagers who believed there is “great risk” in taking meth just once or twice jumped eleven percent.²³⁹ In addition, Congressman André Carson, a Democrat from Indiana, introduced a bill (H.R. 4205) that called upon the Office of National Drug Control Policy to add a public service announcement on the dangers of synthetic drugs to its national youth anti-drug media campaign.²⁴⁰

Paul Fuchcar, the executive director of Chattanooga’s Council for Alcohol and Drug Abuse also pushed for more education and for interventions by parents

233. Ben Benton, *Bills Aimed at Synthetic Drugs on the Move*, CHATTANOOGA TIMES FREE PRESS, Mar. 28, 2012, at B4.

234. See *infra* Part V.

235. Oakes, *supra* note 156. In an interview, Kerlikowske explained there are ways other than the criminal justice system—including education and prevention—to deal with synthetic drugs. *Id.*

236. See Juan R. Torruella, *Déjà vu: A Federal Judge Revisits the War on Drugs, or Life in a Balloon*, 20 B.U. PUB. INT. L.J. 167, 175 (2011) (stating that the “War on Drugs” “has failed in accomplishing or even coming close to its goal” if its purpose was to effect a large reduction or eliminate entirely the making and using of drugs, and that drug use has not been lessened by “massive incarceration of our population for drug law violations”).

237. See Barnes, *supra* note 44 (“[W]e’ve come to the sobering realization that neither local nor national law enforcement officials will be able to keep this problem in check without broad and sustained educational efforts.”).

238. See METH PROJECT FOUNDATION, www.methproject.org (last visited Apr. 14, 2013) (featuring shocking and disturbing videos of one ad campaign that grimly revealed the effects of meth use).

239. Andria Simmons, *Survey Suggests Meth Ads Effective*, ATLANTA J.-CONST., June 13, 2011, at 1B.

240. Press Release, Congressman André Carson, Rep. André Carson Introduces Bill to Raise Awareness About the Dangers of Synthetic Drugs (Mar. 20, 2012), *available at* http://www.carson.house.gov/index.php?option=com_content&task=view&id=874&Itemid=92.

before adolescents try synthetic drugs.²⁴¹ Fuchcar, who also is the chairman of the policy and planning committee for Tennessee's Department of Mental Health, has seen "a lot of experimentation" by adolescents who are unaware of the dangers the drugs present.²⁴² Educational efforts also seem to be the right answer when comparing synthetic cathinones not to cocaine or ecstasy but to readily available products, like glue or aerosol products, that are misused to garner a cheap high.²⁴³

Focusing on education is especially important considering that even if government were able to get a handle on synthetic drugs, the market for them likely would just go underground.²⁴⁴ It is our thinking, therefore, that must change, and that includes how and what we tell the young people of the country about the dangers presented by these drugs.²⁴⁵

We have to stop just saying no to our children and start explaining why. We have to be realistic about the allure of drugs before we can educate about the dangers. We have to stop obsessing about the supply and better address the demand. And we have to recognize it is not someone else's children at stake, but our own.²⁴⁶

Laws banning the substances in bath salts are a good and necessary first step. However, drug manufacturers' ability to create and use new chemicals, the difficulty of prosecuting offenders with the Controlled Substances Analog Act, and the brazen attitudes of some store owners who sell bath salts mean legislation and legal action can be only part of the situation.

VII. CONCLUSION

Synthetic cathinones, or "bath salts," as they are more commonly known, have spread quickly through the United States in the past few years—and the results have at times been frightening. Stories of violent—and sometimes deadly—reactions and deadly reactions have popped up across the country. The federal government, along with state and local governments, have taken steps to stem the tide of bath salts and other synthetic drugs like synthetic marijuana. Drug manufacturers, however, are attempting to stay a step ahead of the regulations. In addition, the drugs remain available on line and even in stores run by defiant owners. No matter how stringent the regulation or punitive the laws, it seems there still will be those willing to make and sell these drug. Therefore, increased efforts have to be made to limit those who take them.

241. Benton, *supra* note 233.

242. *Id.*

243. See Opinion, Outsmart the Criminal Minds, DAILY NEWS LEADER, Mar. 24, 2012 (advocating a new approach to educating children about the dangers of using synthetic drugs).

244. See Ramano, *supra* note 10.

245. *Id.*

246. *Id.*