



## HEALTH ADVISORY: Coagulopathies Associated with Contaminated Synthetic Cannabinoids

Issued: 04/05/2018

### REQUESTED ACTIONS:

**Local health departments:** Please share with healthcare providers in your jurisdiction.

**Hospitals and clinics:** Please distribute to healthcare providers in your facilities.

### Healthcare providers:

- If a patient presents with significant bleeding and/or an elevated INR without a definitive cause, ask if synthetic cannabinoids were used in the last three months.
- If a patient reports synthetic cannabinoid exposure or has evidence of bleeding, check the patient's International Normalizing Ratio (INR) prior to release. The INR has been elevated in some patients prior to clinical signs.
- Advise patients that if they (and/or others they know) use synthetic cannabinoids and start experiencing severe bleeding or bruising, have someone take them to the hospital immediately or call 911. Advise patients to tell their healthcare providers about the possible link between symptoms and synthetic cannabinoid use.
- To discuss treatment and management guidance for potential patients, please call the **Iowa Poison Control Center at 800-222-1222**.
- For surveillance purposes, please report suspected cases to the **Iowa Department of Public Health at 866-834-9671**.

### ADDITIONAL INFORMATION:

As of Thursday, April 5, 2018, a total of 94 cases of severe coagulopathy and bleeding associated with synthetic cannabinoid use have been reported in five states (89 cases in Illinois, two cases in Indiana, one case in Missouri, one case in Wisconsin, and one case in Maryland). Two deaths have been reported in Illinois. The first case occurred in Illinois on March 7, 2018.

These cases have used products containing synthetic cannabinoids (a.k.a. Spice, K2, legal weed, fake marijuana, synthetic marijuana, and synthetic THC) which were obtained from convenience stores, dealers and friends. Synthetic cannabinoids can be smoked or sold as liquids to be vaporized and inhaled in e-cigarettes and other devices. The chemical *brodifacoum*, identified in biological samples from some patients, is widely used in pesticides (typically in rodent control) as a vitamin K antagonist anticoagulant poison. It is suspected that the *brodifacoum* was added to synthetic cannabinoid mixtures.

Symptoms of severe coagulopathy include: easy bruising, bleeding from the nose or gums, coughing up blood, vomiting blood, blood in the urine or stool, severe menstrual bleeding and bleeding out of proportion to an injury. Laboratory tests have found the patients' INRs to range from 6 to >20. A normal INR for a person not taking warfarin is around 1.

*Brodifacoum* is a long-acting anticoagulant that works by blocking the action of vitamin K. The cases have responded to the treatment for vitamin K antagonists, including multiple units of fresh frozen plasma, activated prothrombin complex concentrate, and large doses of vitamin K. Patients often require prolonged treatment with high dose oral vitamin K even after the initial bleeding has been controlled.

No cases have been reported in Iowa.