



NC DEPARTMENT OF  
**HEALTH AND  
HUMAN SERVICES**

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To: North Carolina Clinicians  
From: Zack Moore, MD, MPH, State Epidemiologist  
**Subject: Vitamin K-Dependent Coagulopathy Associated with Synthetic Cannabinoids Use**  
Date: August 30, 2018

There is currently a multistate outbreak of severe coagulopathy associated with synthetic cannabinoids use. As of July 13, 2018, 11 states had reported at least 250 cases, including 6 deaths, to the Centers for Disease Control and Prevention (CDC). Brodifacoum, a long-acting vitamin K-dependent antagonist that is used as rat poison, has been detected in case-patients' drugs and biological samples.

Five cases of vitamin K-dependent coagulopathy in patients who reported using synthetic cannabinoids have been reported to the North Carolina Division of Public Health (NC DPH) since June 2018.

Patients with vitamin K-dependent coagulopathy may first present to primary care providers, emergency departments, or urgent care clinics with any these symptoms: Hematuria, bleeding gums or mouth, bruising, nosebleeds, excessively heavy menstrual bleeding, hematemesis, hemoptysis, flank pain, and abdominal pain.

### Recommendations

North Carolina clinicians and emergency responders are urged to take the following steps to ensure appropriate identification and clinical management of cases:

1. If a patient presents with signs or symptoms consistent with vitamin-K dependent coagulopathy, contact the Carolinas Poison Center at 1-800-222-1222 immediately to report the case and discuss the treatment and management.
2. Ask all patients with signs or symptoms consistent with vitamin-K dependent coagulopathy if they have used synthetic cannabinoids within the last 3 months. Other names include K2, Spice, synthetic marijuana, and fake weed/legal weed.
3. Ask all patients about history of illicit drug use, even in the absence of signs or symptoms of coagulopathy. All patients reporting synthetic cannabinoids use within the last three months or those in whom use is suspected should be screened for vitamin K-dependent coagulopathy by checking their coagulation profile (e.g., INR).

Additional information about the ongoing outbreak and recommendations for clinicians are in the attached [CDC Health Advisory](#).

### Reporting

To report any similar cases, or if you have questions about treatment and management of these cases, please contact the Carolinas Poison Center at 1-800-222-1222.

If you have questions about the ongoing outbreak, please contact the NC DPH at 919-695-2662.

**NC DEPARTMENT OF HEALTH AND HUMAN SERVICES • DIVISION OF PUBLIC HEALTH**

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