



NC DEPARTMENT OF  
**HEALTH AND  
HUMAN SERVICES**

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**MANDY COHEN, MD, MPH** • Secretary

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To: North Carolina Clinicians  
From: Zack Moore, MD, MPH, State Epidemiologist  
Subject: Vitamin K-Dependent Coagulopathy Associated with Synthetic Cannabinoid Use  
Date: June 11, 2018

The North Carolina Division of Public Health (NC DPH) recently received a report of a case of vitamin K-dependent coagulopathy in a patient who reported using synthetic cannabinoids. The source of the exposure has not yet been determined. There is currently a multistate outbreak of severe coagulopathy associated with synthetic cannabinoids use. As of May 25, 2018, nine states had reported 202 cases, including 5 deaths, to the Centers for Disease Control and Prevention (CDC). Most cases (164) have occurred in Illinois. Brodifacoum, a long-acting vitamin K-dependent antagonist that is used as rat poison, has been detected in case-patients' drugs and biological samples. Please see the attached CDC Health Advisory for more information.

Patients with Vitamin K-dependent coagulopathy may first present to emergency departments or urgent care clinics with any of the following symptoms: bruising, nosebleeds, excessively heavy menstrual bleeding, hematemesis, hemoptysis, hematuria, flank pain, abdominal pain, and bleeding gums or mouth. If a patient presents with signs or symptoms consistent with Vitamin-K dependent coagulopathy, NC DPH recommends taking the following steps.

1. Contact the Carolinas Poison Center at 1-800-222-1222 to report the case and discuss the treatment and management of the patient.
2. Ask the patient if they have used synthetic cannabinoids within the last 3 months. Other names for these products include K2, Spice, synthetic marijuana, and fake weed/legal weed.
3. If the patient reports synthetic cannabinoids use or you suspect use, check the patient's INR before releasing them.

In addition to these recommendations, additional information about the ongoing outbreak and recommendations for clinicians are outlined in the attached CDC Health Advisory.

If you have previously encountered any similar cases since February 1, 2018, or have general questions about treatment and management of these cases, please contact the Carolinas Poison Center at 1-800-222-1222.

Questions about the ongoing outbreak can be directed to the North Carolina Division of Public Health at 919-695-2662.

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

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