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From: Ron Kirschner, MD, Medical Director  
To: ALL HEALTH CARE PROFESSIONALS  
Subject: Coagulopathy associated with synthetic cannabinoid abuse  
Date: 4/4/18

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- Last week, the Illinois Poison Center began receiving reports of multiple patients who presented to Illinois health care facilities with severe coagulopathy and significant bleeding. Most of the presenting patients' INRs were so high that they were unmeasurable. The coagulopathies have been responsive to fresh frozen plasma and Vitamin K.
- It appears that all of the presenting patients used synthetic cannabinoids that were tainted with brodifacoum, a long-acting anticoagulant rodenticide. The drugs were apparently purchased at various locations in different states under a variety of brand names.
- This week, additional cases were reported by the Indiana and Maryland Poison Centers. The extent of the tainted drugs' geographical distribution is unknown.
- If you see patients who present with these symptoms, please notify our center and/or your department of health.
- Because the half-life of brodifacoum in humans has been documented to be weeks after oral ingestion (Gunja) prolonged treatment with vitamin K is likely to be necessary.
- Brodifacoum and other anticoagulant rodenticides may be detectable in biological samples by specialized reference labs such as NMS ([www.nmslabs.com](http://www.nmslabs.com)).
- Patients with active bleeding may need clotting factor replacement with fresh frozen plasma in addition to vitamin K.
- The unique challenges of antidote pricing in the 21<sup>st</sup> century may mean that IV vitamin K is actually more affordable than the oral drug, or that in some cases providers may even wish to consider using a veterinary oral vitamin K formulation.

#### Reference

Gunja N. Management of intentional superwarfarin poisoning with long-term vitamin K and brodifacoum levels. *Clin Toxicol* 2011; 49: 385-90.

**Our certified nurse specialists in poison information and physician toxicologists  
are available 24 hours a day to answer your questions.**