

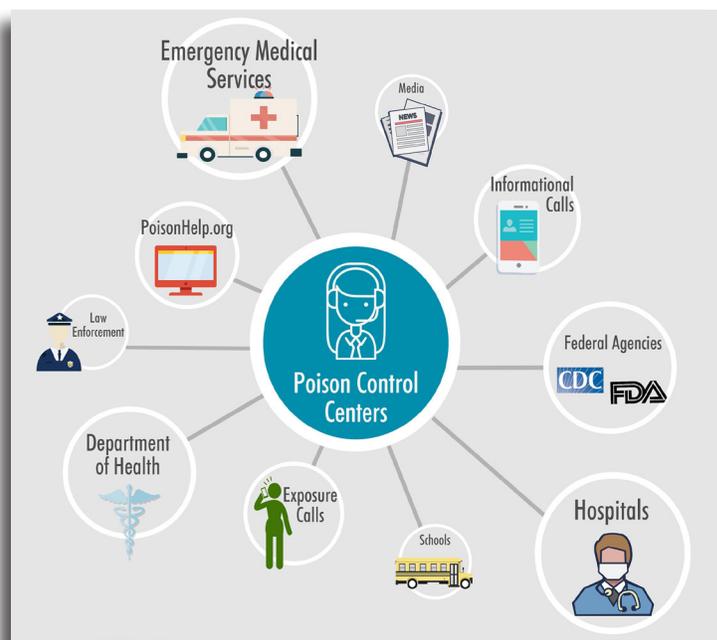


June 2017 Deadly Novel Synthetic Opioid Exposure Outbreak in Georgia – A Case Study in the Crucial Surveillance Role of Regional Poison Control Centers

In June 2017 the Georgia Poison Center was the first public health entity to detect and respond to a deadly novel opioid outbreak, an outbreak that could have remained undetected indefinitely and racked up untold fatalities were it not for the poison center.

While poison control centers (PCCs) have long been hailed for their ability to administer expert medical treatment advice during poisoning emergencies, PCCs are not broadly recognized for the crucial role they play in detecting and responding to major, time-sensitive public health crises. As the counterfeit Percocet case study described below demonstrates, PCCs are uniquely positioned to serve as the epicenters for the detection of regional clusters and outbreaks, ensuring a swift response that undoubtedly saves lives.

“Poison control” is made up of 55 accredited PCCs that serve the entire U.S. via the free, national Poison Help hotline, 1 (800) 222-1222. With oversight by Board Certified Medical and Clinical Toxicologists, specially-trained physicians, nurses, and pharmacists answer calls 24/7, year-round from the public, emergency departments, pharmacists, law enforcement officials, EMTs, health department officials, and many others. PCCs receive approximately 3 million calls annually, and consults are available in over 150 languages via a language line, making poison control truly accessible to all Americans within arm’s reach of a telephone.



Day 1, June 5, 2017

At approximately 10:20 p.m., an emergency department physician at Navicent Health in Macon, Georgia calls the Georgia Poison Center to report an unusual series of patients that have been admitted to the hospital within the past 24 hours. The physician, who has called the poison center several times before for both treatment advice and reporting purposes, is concerned that this random group of patients, all with similar alarming respiratory and central nervous system symptoms, might be part of a much larger scale outbreak in the middle Georgia region. Furthermore, the physician hopes that the poison center can help him alert key state partners and warn the public of this burgeoning public health crisis in the region.

The Georgia Poison Center learns that five individuals, ranging in age from 23yo-60yo, purchased what they had been lead to believe were Percocet tablets. Patients described the product as yellow pills with “Percocet” stamped on one side and 10/325 on the other. However, ingesting one or two Percocet pills would not cause the life-threatening effects being observed in these adults. Furthermore, all affected patients were requiring more the normal amount of pre-hospital naloxone from first responders, all five patients had to be intubated (with three of them requiring mechanical ventilation for further respiratory support), and all five individuals purchased the so-called Percocet pills at the same drug house earlier that same day.

Within minutes of receiving this call, the senior poison center specialist on staff notifies the poison center’s Director of the cluster of patients. The Director and the poison center specialists then devise a plan to determine if the suspicious cases may be more widespread than has been observed thus far. The four-pronged plan includes:

1. A review of all poison center cases taken in the past 48hrs that meet a broad case definition, including ingestion of an unknown street drug.
2. Calling the emergency departments of the other five hospitals in the region to see if other cases fitting the profile were admitted to their facility recently.
3. Immediate notification of an on-call state public health official.
4. Notification of on-call back-up toxicologists.

After reviewing the poison center cases, calling the hospitals, and speaking to a state epidemiologist, the poison center staff suspects the outbreak is not limited to the cases at Navicent Health in Macon. Poison center staff call several hospitals in the region to ask hospital staff to review their patient records over the past 36 hours to see if anyone else meets the initial case definition. Two additional hospitals report cases meeting the case definition, and within 2.5 hours, known cases triple to 15.

Day 2, June 6, 2017

Overnight, poison center staff notify the Georgia Department of Public Health (GDPH), Georgia Bureau of Investigations (GBI) crime laboratory, Department of Justice, Attorney General's office, Drug Enforcement Agency, and other state and local officials. In the morning, the GDPH and Georgia Poison Center begin drafting media messaging together to make the public and other stakeholders aware of the situation. The Georgia Poison Center Director provides an update to his points of contact at the three hospitals managing cases, and seeks their input as to media messaging. A unified message is crafted with input from the lead agencies and hospitals with cases. At approximately 12:00 p.m., the unified media message is disseminated via the GDPH.

Day 3, June 7, 2017

The Georgia Poison Center, the GBI, and the GDPH begin to be bombarded by media for updates as criminal investigations and laboratory testing are underway. The poison center is tasked with providing clinical updates to media, while GBI is tasked with fielding all criminal and laboratory-related questions, and GDPH is to manage other media inquiries. Daily media briefs begin.

Days 4 & 5, June 8 & 9, 2017

The GBI crime laboratory begins the process of identifying the components of the confiscated pills. The poison center continues to receive telephone calls about new cases and assists with the medical management of these cases. The poison center and GDPH refine the case definition to help identify new cases. Guidelines and procedures for specimen collection, transport, and testing of samples are jointly developed by the poison center and GDPH for the State Health Commissioner to review and approve. A conference call is arranged by the GBI to share with the poison center the non-validated findings of the confiscated pills' components. With input from GDPH and the poison center, a special alert message from the State Health Commissioner's office is disseminated to every hospital in Georgia via the Georgia Hospital Association, stating the case definition, specimen collection and transport protocol, and positioning the Georgia Poison Center as the call center to which health care practitioners should report cases, codifying the poison center's role as the coordinating center of outbreak management.

June 13, 2017

GBI laboratory analysis reveals that the pills implicated in the outbreak contain a mixture of two synthetic fentanyl analogues: "U-47700," an analogue previously identified and known to the clinical toxicologic community, and cyclopropyl fentanyl, a compound not previously identified.

As of June 13, the number of cases associated with this outbreak has climbed to just over 40. The Georgia Poison Center continues to follow and advise on the treatment of three patients, and the number of suspicious deaths is five.

Media coverage of this event has been vast, including major outlets such as CNN, CBS, the Washington Post, and Fortune, with a total estimated reach of 35 million within the first week alone.

Take-Aways:

As opposed to automated surveillance systems, poison control centers like the Georgia Poison Center provide a crucial human element to outbreak detection. In addition to taking calls from the public 24/7, life-saving information flows to and from a regional poison control center and its region's hospitals, emergency responders, and law enforcement. By proactively identifying cases of people ingesting counterfeit Percocet and connecting the dots from all of these information sources in real-time, the Georgia Poison Center mobilized key partners like the GDPH and GBI and their resources, and notified the public via the media to halt the outbreak and save lives.