# In Cary, N.C., Reducing Overdoses by 40 Percent

**Wastewater testing provides real-time data on emerging drug trends**



**Challenge:**
Provide a current picture of drug use in Cary, North Carolina

**Outcome:**
Officials were able to optimize their resources, prepare EMS teams, and understand which drugs are affecting their community, helping the town reduce overdoses by 40 percent.

When Cary, a 170,000-person town tucked away in North Carolina's Research Triangle, saw fatal and nonfatal opioid overdoses increase 70 percent over the previous year, officials knew they needed to act—and fast.

Cary partnered with Biobot on a wastewater testing program designed to yield insights on neighborhood-level opioid use. With this data, officials are able to evaluate the effectiveness of their drug prevention and treatment programs, optimize narcan distribution, equip EMS with real-time knowledge on emerging drugs, and more. Without it, community leaders like Deputy Town Manager Mike Bajorek often have to rely on a mixed bag of delayed data sources. It can take a year for city officials to get hospital records, and six months or more to confirm cause of death via autopsy reports. Biobot provides actionable data on substance use trends each month.

Together, Cary and Biobot identified 10 different sampling locations—also known as manholes—that would provide data representative of the town's population. For six months, Biobot analyzed wastewater samples from these sites and provided monthly reports to Cary officials, detailing community trends on a number of high-risk substances, including opioids like fentanyl.

Soon, Cary found that Narcan consumption exceeded overdoses 25-to-1, suggesting that 25 times more people were overdosing than what was reported through emergency services.



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**MIKE BAJOREK, DEPUTY TOWN MANAGER, CARY, N.C.**

"This is a proactive program," Bajorek says. "What we're trying to do is not catch people once they're addicted, but rather cut that addiction cycle before people are addicted."

Biobot's reports gave Cary officials timely and comprehensive information to guide community outreach. The data could distinguish between parent drugs and their metabolites; meaning it "can tell the difference between pills that were just dumped down the toilet versus pills that were taken and metabolized. That's really a key factor," Bajorak says.

In anticipation of privacy concerns around wastewater monitoring for opioids, Cary's Mayor and Town Manager engaged a diverse array of local stakeholders, and started a multi-platform engagement campaign featuring social media posts, Facebook Live and Youtube segments, community events, and presentations to neighborhood and civic groups, churches, and the Chamber of Commerce. For Cary, it was imperative to start a conversation, and reduce the stigma to help community members seek support.

The response was encouraging. Not only did the community have a better picture of local opioid use, the town was also able to increase knowledge about proper medication disposal. As a result, a year into the program, Cary disposed of 2,511 pounds of medication—2.5 times more than the previous year.

**Have questions about testing wastewater for high risk substances?**
Reach out to our team at hello@biobot.io.