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Biosurveillance Technology Used to Combat Drug Abuse

Quick Look

By Jenifer Goodwin

The Cambridge (Mass.) EMS system is putting biosurveillance technology to novel use: combating drug abuse. In Massachusetts, overdoses from heroin and prescription drugs such as oxycodone, codeine and methadone increased sixfold from 1990 to 2007, according to the Cambridge Prevention Coalition, a drug abuse prevention agency that's part of the Department of Human Service Programs. Cambridge was one of 15 cities to receive state funding to evaluate the issue and find ways to reduce the problem.

For help, the Coalition turned to Pro EMS, a private company that provides emergency response in the city in conjunction with the Cambridge Fire Department. About a year ago, Pro EMS began using biosurveillance technology provided by FirstWatch of Encinitas, Calif., to monitor real-time trends in H1N1 and other hazards, as well as to track the geographic distribution of 911 calls to help with deployment decisions. By integrating FirstWatch software with the electronic health record tablet already in use, Pro EMS could give the Coalition real-time alerts about drug overdose situations, as well as trends and patterns. Pro EMS is also helping the Coalition track underage drinking trends and incidents.

Early detection means early intervention and action, says Gisela Rots, director of the Cambridge Prevention Coalition. "Using the FirstWatch system allows us to complete the picture of our data analysis," she says. "Having real-time data

that let us track the number of overdoses, the geographic area, the kind of drug, and other important information helps in achieving our goals, which is to reduce the overdoses and provide help to those users and their families."

Privacy laws prohibit Pro EMS from sharing names or exact addresses with the Coalition, says Pro EMS CEO Bill Mergendahl, but the company can provide information on the streets in which overdoses occur, as well as the age, gender and other demographic information about addicts. Those data help the Coalition focus its interventions and initiatives where they're most needed and where they will have the most

impact. For example, if the data show a trend in people overdosing on some new combination of drugs, the Coalition can alert the community about the danger, as well as

“Early detection means early intervention and action.”

— Gisela Rots, Director of the Cambridge Prevention Coalition

the local shelters and hospitals, Rots says.

Ultimately, reducing drug overdoses could also benefit the EMS system by leading to decreased numbers of overdose-related 911 calls and transports, Mergendahl says. For example, in 2007, for every opioid-related death, there were 47 non-fatal incidents treated at Massachusetts acute care hospitals, according to the Coalition. "It's extremely important for EMS to be connected with public health issues in the community that we serve, and drug abuse has always been a big one in our area," he adds.

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