# New Hampshire leverages cause of death app to improve disease surveillance

New Hampshire is the first state in the nation to rapidly report cause of death records to the Centers for Disease Control and Prevention through a mobile app, enabling physicians to upload vital statistics data twice daily, versus a month-long lag time for states in which data is sent in manually.

“There’s no value if the data is two weeks or a month old,” says Stephen Wurtz, New Hampshire’s state registrar and director of the Division of Vital Records Administration. “It takes less than two days from the time of death to the time the record is filed completely, and that includes notification to CDC.”

For surveillance of disease outbreaks, the CDC and state public health departments need to have instant access to this type of information, Wurtz contends. This kind of vital records data collection and analysis enables the CDC to track important disease trends in near real time and to make quicker public health decisions based on actionable information.

Funded by the CDC’s National Center for Health Statistics, the New Hampshire electronic Cause of Death (eCOD) mobile app was conceptually designed, architected and licensed by the NH-Department of State’s Division of Vital Records Administration, with technical collaboration and software development from IT service management vendor CNSI. The eCOD app can be downloaded to smartphones or tablets from the Apple iTunes and Google Play stores, provided users are registered New Hampshire-based physicians or medical examiners.

“We’ve had a very deep interest in getting vital statistics

information, meaning births and deaths in particular, in a very timely manner so we can use the information for surveillance purposes," says Charles Sirc, special assistant to the director of vital statistics at the CDC.

According to Sirc, the CDC has funded pilot sites to see how the timeliness, accuracy and completeness of vital statistics data can be improved, including New Hampshire's eCOD app. However, he notes that what makes eCOD's capabilities unique is the fact that it leverages CDC's Validation and Interactive Edit Web Service (VIEWS), which conducts an audit of death certificates to ensure that the information is complete and accurate.

"If a physician doesn't include sufficient detail in their cause of death (certification), then it becomes very important that we pinpoint additional questions to supplement or enhance that cause of death and come up with a more definitive cause of death," observes Wurtz.

Sirc says what distinguishes eCOD from other such apps is that it can be used on the fly to tap into vital statistics data for surveillance and health services research. For instance, he contends that cause of death such as influenza is an "immensely important" piece of information for public health officials letting them know how many people are dying from the flu.

"That's just the tip of the iceberg," adds Sirc, who believes such an app could be used for "acts of nature or terrorist efforts by putting the pieces of the puzzle together" for situational surveillance to "more clearly see the whole picture."

"Concerning Zika in Miami or the leptospirosis (rat urine disease) outbreak in New York City, if these jurisdictions had this mobile app with the situational surveillance feature, they would have been better equipped to identify and isolate

the origin of these public heath events," says Wurtz.

"We feel this technology will benefit the CDC and local state health departments with their need for disease surveillance," adds Wurtz.

According to Wurtz, New Hampshire will continue its partnership with the CDC and its push for its eCOD mobile app enhanced with situational surveillance technology to "become the national standard for mobile death certification and death registration." He boasts that no other state has this capability and that it is New Hampshire's "mission to give this technology to any state that wants it—at no charge."

"The idea is to be able to transfer the technology across state lines," concludes CDC's Sirc. However, he adds that so far the CDC has not identified another state—besides New Hampshire—to adopt the eCOD app. "One of the basic requirements we're looking for in these other states is that they have to have an automated (death) registration system that is operational."

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