

Vermont develops outbreak management tool



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CATEGORY: **Epidemiology and Laboratory Capacity (ELC)**

CATEGORY: **Nationally Notifiable Diseases Surveillance System**

To manage the influx of COVID-19 data, Vermont Department of Health developed the System Management and Response Tool (SMART). SMART improved Vermont's ability to collaborate in outbreak responses, document response actions and data for collaboration and epidemiological information, and improve outbreak and related surveillance.

The "What"

The Vermont Department of Health is a centralized health department that operates throughout the entire state, with a central office located in the state's largest city, Burlington, and 12 district offices that provide health services and other related support to communities in their regions. During the COVID-19 emergency, outbreak response was led by Department staff working (often remotely) via the central and district offices, usually in coordination with other state departments and agencies, with contract organizations providing logistical and medical support, and with community partners such as facility staff.



Due to the organization of the Department and the multi-team nature of response work, COVID-19 outbreak responses presented an information-sharing challenge. There was no previously available system to manage the various streams of data in association with the situation at hand. Information about outbreaks was therefore communicated and documented in an ad hoc fashion that included emails, spreadsheets, and related documents retained in various directories and inboxes. This slowed down response work and made surveillance and evaluation of outbreak and outbreak responses excessively time-consuming.

The volume of COVID-19 situations was rapidly became too large for these informal, ad hoc systems, so the Department worked with the Agency of Digital Services who developed an outbreak-centered data system, where data collected about the situation could be retained in a central system. This system is known as the System Management and Response Tool (SMART). Applied through SMART, Epidemiology and Laboratory for the Prevention and Control of Emerging Infectious Diseases (ELC) funding improved Vermont's ability to collaborate in outbreak responses, document response actions and data for collaboration and epidemiological information, and improve outbreak and related surveillance.



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SUBMITTED JUNE 2023



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office epidemiologists were better able to review notes on each situation, as needed, and access surveillance data at the response level to identify patterns. SMART is used daily by Department staff across districts and in the central office to provide each other with information.

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The “So What”

SMART enabled the multiple teams involved to manage and communicate COVID-19 surveillance data and response-related information in a situation-centered manner. This included data about the facilities, line lists of cases and contacts, and records of communication between Vermont Department of Health staff and facilities. Surveillance and response data became more consistent and timelier. Health Department central

The “Now What”

Vermont’s SMART will be expanded to other conditions, beginning with influenza outbreaks. Vermont has two other tiers of conditions that will be gradually entered into SMART.

Vermont also recently met with the CDC NEDSS

Base System (NBS) modernization team to provide an overview of the use and structure of SMART by a front-end superuser (a central office COVID-19 epidemiologist) and SMART’s lead developer. Vermont and the NBS team expect to meet in the future in continued collaboration.

Key contributors to this project include Vermont Department of Health – Infectious Disease Epidemiology; Vermont Agency of Digital Services; Vermont Department of Health – Infectious Disease Data Systems