

Modernizing data systems in Missouri

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

CATEGORY: **Enterprise Approach to Data Systems Modernization**

The Missouri Department of Health and Senior Services (DHSS) took steps to evaluate and improve the state's surveillance systems and information-sharing platforms. This effort has resulted in more efficient systems and information being available to drive public health actions and identify specific populations impacted by various public health issues.

The "What"

DHSS recognized a need to modernize outdated, inefficient data systems to ensure interoperability with other systems, data exchange with local, state, and federal partners, data security, and current technical requirements.



DHSS utilized a template provided by the Centers for Disease Control and Prevention (CDC) to assess the current environment and used that information to develop a strategic plan to move modernization forward. In addition, the onset of the COVID-19 pandemic made it clear DHSS did not have a reportable disease surveillance system capable of handling the electronic ingestion of laboratory results. DHSS quickly recognized the need to upgrade and modernize its public health data infrastructure to receive and report COVID-19 data in a more timely and efficient manner.

DHSS has used Epidemiology and Laboratory Capacity for the Prevention and Control of Emerging Infectious Diseases (ELC) cooperative agreement funding in an efficient manner to replace and improve Missouri's outdated surveillance systems and create new data-sharing mechanisms, creating higher value-added activities as the number of manual processes is reduced and more information is available to partners. This includes:

- A new reportable disease surveillance system that can receive electronic data from labs;
- The re-design and consolidation of a myriad of current vital records systems created over the last 112 years into one comprehensive and fully electronic vital records (MoEVR) system;
- Utilization of dashboards to showcase public health data; and
- Maintaining a variety of Missouri's health information systems, including communicable disease registries, syndromic surveillance, and state laboratory information management systems.



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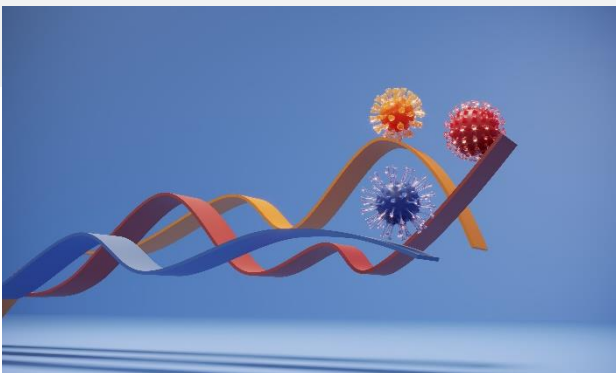
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The “So What”

This effort has established a current state of system functionality to prioritize efforts with current funding. State and local public health employees can focus on serving citizens rather than manual processes, leading to improved morale, reduced turnover, and better customer service.

Direct results of improved data systems have included:

- COVID-19 information being received and reported in less than 24 hours for any lab that was connected electronically to DHSS;
- Saving an average of three minutes per vital record for a standard request and 46 minutes for records that require additional research;
- Faster registration and issuance of vital records, which ensures requests from providers and citizens are completed with minimal delay. On average, electronic submissions are completed 8 days faster than paper submissions; and
- Seamless communication with local, state, and federal agencies to maximize program efficiencies and adhere to National Center for Health Statistics and Centers for Disease Control and Prevention standards for electronic data transmission and reporting.



With enhanced data dashboards, more data and information are now available to drive public health actions and identify specific populations impacted by various public health issues. They serve as a way to educate citizens, stakeholders, policymakers, and public health officials on public health data that may be hard to understand without visualizations. This promotes evidence-based decision-making.

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The “Now What”

DHSS will continue to support various data systems by providing personnel and training and maintaining technical resources such as network expenses and subscriptions for various electronic tools.

Receiving and processing data electronically allows for faster, more accurate public health action, as well as making more precise and timely data available to citizens and decision-makers at the state and federal levels. Ultimately, these actions should result in decreased morbidity and mortality from reportable conditions and improved health.