

Roadmap for Local Public Health Informatics Modernization (2025-2029)

Introduction

Almost every aspect of public health practice involves the use of data. Although informatics is not a commonly used term, much of the work done by Kansas public health workers is related to informatics. With the world changing rapidly when it comes to the creation and use of data; technology is expanding to make data use and management both easier and more complex at the same time. In order to serve the public's needs and in achieving optimal health and well-being for Kansans, local and state public health must forge a path to embrace the opportunities informatics provides.

The Public Health Informatics Institute defines public health informatics as the science of how to use data, information and knowledge to improve human health and the delivery of health care services.

The public health workforce is using informatics when they collect data and translate them into a language practitioners can understand so that they can make data-driven decisions to improve public health.

In 2024, Wichita State University's Center for Public Health Initiatives (WSU CPHI) partnered with the Kansas Association for Local Health Department (KALHD) Informatics Subcommittee to conduct the Kansas Local Public Health Informatics Survey, through funding from the Kansas Department of Health and Environment (KDHE). The survey provided a comprehensive assessment of the current state of informatics capabilities within Kansas local health departments. It aimed to evaluate and gain a stronger understanding of public health informatics system capabilities.

The results of that assessment and collaboration with local public health system stakeholders has culminated in the development of this roadmap for informatics improvements for the Kansas local public health system. The **roadmap** is a strategy-level document outlining target milestones for local health departments in Kansas based on a recognition that counties of different sizes have varying needs and resources. The roadmap below identifies a desired future state for Kansas public health informatics, communicates priority strategy areas, and outlines desired end goals. The roadmap provides recommendations for local health departments in three possible stages of development for each strategy: early phase, established phase and advanced phase. Health departments may be at different phases for each of the strategies, or may seek to focus on different strategies based on their strategic priorities. It is important to note that in order for the recommendations to be successfully implemented, health



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departments will need dedicated staff time to do so. While the roadmap offers some areas of focus for the local public health system, it does not discourage health departments who are working to improve other areas of informatics or data modernization improvements from doing so.

Creation of the Roadmap

In coordination with the KALHD Informatics Subcommittee, WSU CPHI compiled and analyzed the results of the 2024 Kansas Local Public Health Informatics Survey identified ten key priorities of potential focus for system improvement. Members of the team held a session at all six local public health regional quarterly meetings in July and August of 2024, with 71 local health departments in attendance throughout the state. At those meetings, the team conducted the following activities to develop this roadmap:

- Presented key findings of the survey results
- Reviewed a simplified vision statement and gathered feedback on how to expand and improve that vision for local public health informatics system improvement
- Reviewed ten potential areas of focus identified based on the informatics survey results and asked health departments to prioritize the most important of those to focus on in a roadmap spanning a three-to-five-year period
- Asked for feedback on what improvement would look like, divided into groups based on county population density (frontier, rural, densely-settled rural, semi-urban and urban)
 - Asked each group the question: If we were to reconvene in 3-5 years, what achievements would you like to be celebrating with your colleagues?

Results were then analyzed to identify the top priorities for the roadmap. Based on overlap of discussion between the top two topics, they were combined (standardize EHR usage and improve interoperability/ reduce dual data entry). Informatics survey results and several versions of this assessment were also shared with the KALHD Informatics Subcommittee for review and feedback.

Vision

Feedback from local public health department staff from across the state was gathered to create this vision statement for a desired future state of informatics in the local Kansas public health system:

“A Kansas Public Health system that efficiently acquires, manages, shares, and utilizes data to protect and promote public health and safety. This modernized infrastructure will prioritize accessibility, timeliness, and interoperability. This will include preparedness for emergencies and communication to decision-makers for data-driven decisions. With a commitment to data privacy and security, the public health informatics system will be supported by sustainable funding and continuous monitoring to enhance efficiency and community well-being.”

The Roadmap: Where to Go from Here

Aim #1: Increase the capacity of local health departments to utilize data to address community needs

Recommended Strategy 1: Improve data literacy among health departments (data analysis, reporting/storytelling, etc.)

Early Phase Health Department

- Seek training opportunities for one or more staff members interested in increasing data literacy
- Talk with peer LHDs how they use data to address community health needs

Established Phase Health Department

All of the above, plus the following:

- Inventory the data systems the health department uses
- Develop and maintain systems to improve data collection, data access and data analysis
- Explore external systems that help consolidate community health data and share them with the public to identify and support community data awareness and storytelling (e.g. MySidewalk)

Advanced Phase Health Department

All of the above, plus the following:

- Explore a [master patient index/ single patient interface](#) for the health department
- Leverage new data sources for community health, such as population-level HIN data

Resources

- Kansas TRAIN: <https://www.train.org/ks/welcome>
 - Public Health Informatics Institute's Public Health Informatics Profile Toolkit: [Full-PHI-Toolkit.pdf](#)
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Recommended Strategy 2: Increase skills and knowledge of LHD staff to access and utilize data that identifies community needs (primary and secondary data)

Early Phase Health Department

- Staff take online training on basic data-related programs (Excel, R, etc.)
- Staff take online training or review materials related to data visualization (e.g. Evergreen Data articles/blog posts)
- Schedule a regular review of County Health Rankings data (published annually in March) and Kansas Health Matters data for the health department team or and/or a community coalition

- Review the concept of local health departments as a Chief Health Strategist and assess how to incorporate those activities into the health department's work. The PHAB Standards provide concrete guidance for local health departments to serve as the Chief Health Strategist. The following Standards may be of special interest:

Standard 1.1	Participate in or lead a collaborative process resulting in a comprehensive community health assessment.
Standard 1.2	Collect and share data that provide information on conditions of public health importance and on the health status of the population.
Standard 1.3	Analyze public health data, share findings, and use results to improve population health.
Standard 2.1	Anticipate, prevent, and mitigate health threats through surveillance and investigation of health problems and environmental hazards.
Standard 3.1	Provide information on public health issues and public health functions through multiple methods to a variety of audiences.
Standard 3.2	Use health communication strategies to support prevention, health, and well being
Standard 4.1	Engage with the public health system and the community in promoting health through collaborative processes.
Standard 5.1	Serve as a primary and expert resource for establishing and maintaining health policies and laws.
Standard 5.2	Develop and implement community health improvement strategies collaboratively
Standard 7.1	Engage with partners in the health care system to assess and improve health service availability.
Standard 7.2	Connect the population to services that support the whole person.

Established Phase Health Department

All of the above, plus the following:

- Explore external systems that help consolidate community health data and share them with the public to identify and support community data awareness and storytelling (e.g. MySidewalk)
- Conduct an all-staff training or assign all staff to take a training regarding community health data

Advanced Phase Health Department

All of the above, plus the following:

- Explore ways to display public health data that is updated in real time and is accessible to the community members the health department serves
- Conduct training with stakeholders (community-based organizations and engaged neighborhood residents) on data literacy to increase community-driven decision-making with regards to needs assessment and health improvement measurement

Resources

- State of Kansas Library's Computer Skills Center, includes free classes on Microsoft programs including Excel and Access: [Computer Skills Center](#)
- Public Health Foundation's Data Science and Informatics Training Plans: [Comprehensive Data Science Training Plans for Public Health | PHF](#)

- Evergreen Data Academy and blog (data visualization): [Evergreen Data](#)
 - Resources to understand the concept of local public health as the Chief Health Strategist:
 - [Public Health 3.0: A Call to Action for Public Health to Meet the Challenges of the 21st Century](#)
 - [Chief Health Strategists: How Public Health Leaders Can Be Successful Working Across the Health Landscape, Part I | ASTHO](#)
 - [The High Achieving Governmental Health Department in 2020 as the Community Chief Health Strategist](#)
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Recommended Strategy 3: Increase LHD collaboration with community partners in sharing data related to community needs

Early Phase Health Department

- Share resources with community partners on community health data (e.g. share County Health Rankings with community partners when they are published)
- Convene community partners to review and discuss community health data
- Expand the typical partnerships the LHD engages during the CHA/CHIP cycle (MAPP 2.0 resources), and initiate those relationships prior to the start of a CHA or CHIP

Established Phase Health Department

All of the above, plus the following:

- Hold a community listening session to review community needs data and gather qualitative data on their lived experience related to those needs
- Convene a community advisory committee of community members with lived experience of health disparities or health inequities to guide discussions on community health needs data, and follow best practices to demonstrate their time is valued
- Expand data sharing with community partners through data sharing agreements

Advanced Phase Health Department

All of the above, plus the following:

- Utilize MAPP 2.0 tools, including the Power Primer, to incorporate equity into the CHA/CHIP process
- Take concrete steps to integrate equity into qualitative and quantitative data collection
- Conduct a [data walk](#) in the community
- Transition to a community ownership model where community partners lead planning and governance in identifying and addressing community needs
- Adopt automated messaging like HL7 or FHIR with security processes and controls including data sharing agreements, and connect to statistical analysis software/dashboarding tools to provide timely data presented in a way that is valuable to those who need to take action to improve the situations of the populations affected by the data.

Resources

- [Integrating Equity in Research: Practical Guides - Kansas Health Institute \(khi.org\)](#)
 - [The Spectrum of Community Engagement to Ownership - Movement Strategy Center](#)
 - MAPP 2.0: [Mobilizing for Action through Planning and Partnerships \(MAPP\) - NACCHO](#)
 - Kansas Data Walk Example: [Cowley County Data Walk - RISE Cowley County](#)
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Aim #2: Increase the efficiency of local health departments in tracking, reporting, and utilizing public health data.

Recommended Strategy 1: Increase the number of LHDs using an EHR

The world is rapidly evolving when it comes to technological improvements, including those that support how we do our work. Future opportunities that will develop in the next 3-5 years cannot be leveraged without having a modern, cloud-based EHR set up.

Early Phase Health Department

- Make plans to implement a modern, cloud-based EHR
- Participate in systems approaches to address funding barriers (e.g. exploring group EHR purchasing options or multi-health department funding applications)

If the health department is not using an EHR and currently has no plans to implement one, the team can still:

- Identify barriers to doing so, which typically go beyond just funding
- Use the EHR implementation toolkit to identify steps to prepare for EHR implementation, such as identifying pain points and mapping out workflows

Resources

- EHR Implementation Toolkit: <https://www.kdhe.ks.gov/314/Electronic-Health-Record-Implementation->
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Recommended Strategy 2: Optimize the way LHDs use their EHRs to increase the efficiency within their systems

Early Phase Health Department

- Join a user group or list-serve to enhance peer learning. Coordinate with peers using the same EHR to identify more efficient ways to use the system.

Established Phase Health Department

All of the above, plus the following:

- Create and implement a plan to push out updates and train staff.
- Identify pain points within the EHR system the health department uses and identify opportunities to improve the set-up or ways the team uses the EHR.
- Create and implement a training plan for staff to take online training through the EHR vendor.
- Ensure the health department is effectively using report options in their EHR so they are not unnecessarily maintaining spreadsheets that are duplicative.

Advanced Phase Health Department

All of the above, plus the following:

- Attend the national user conference the EHR vendor hosts to bring back/apply lessons learned.
- Send a staff member through a more intensive training program through the EHR vendor so they gain expertise in several areas of the system and can train other staff in the organization.
- Leverage user groups to explore innovative data exchange opportunities in collaboration with other health departments.

Resources

- EHR Implementation Toolkit: <https://www.kdhe.ks.gov/314/Electronic-Health-Record-Implementation->
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Recommended Strategy 3: Identify potential technology solutions to enhance the way health departments enter data into systems

Early Phase Health Department

- Inquire with the EHR vendor what solutions they provide to streamline data entry
- Consider implementing automated patient data entry options for self-service
- Consider implementing mobile data entry solutions for LHD staff (use of tablets)

Established Phase Health Department

All of the above, plus the following:

- Consider virtual scribe tools
- Assess opportunities to use Optical Character Recognition (OCR) technology, such as card readers for insurance card entry into the EHR or digitalization of PDFs for integration into the EHR

Advanced Phase Health Department

All of the above, plus the following:

- Consider opportunities to use remote patient monitoring and data integration
- Utilize a digital inventory management system
- Explore more advanced, “trainable” OCR technology

Resources

- [Introduction to telehealth and remote patient monitoring | Telehealth.HHS.gov](#)
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Recommended Strategy 4: Increase the number of LHDs connected with state systems through bidirectional interoperability

Early Phase Health Department

- Implement an EHR, if the health department has not already
- Seek funding for interface set-up and maintenance costs

Established Phase Health Department

All of the above, plus the following:

- Initiate bi-directional interface connections with KDHE
 - KHEL
 - KsWebIZ
 - EpiTrax
- Collaborate with peer LHDs to identify best practices in interface implementation
- Conduct an assessment to document all of the systems the health department uses for data

Advanced Phase Health Department

All of the above, plus the following:

- Collaborate with other LHDs to assess and enhance interoperability of current interface connections
- Collaborate with KDHE and other stakeholders to explore further interfacing that has not yet been attempted (e.g. DAISEY)
- Partner with KDHE data modernization stakeholders to identify and address data access issues related to county-level data in state systems (e.g. WebIZ, KWIC)

Resources

- EHR Implementation Toolkit: <https://www.kdhe.ks.gov/314/Electronic-Health-Record-Implementation->
- KDHE’s Data Modernization Initiative: [Data Modernization Initiative | KDHE, KS](#)

Recommended Strategy 5: Increase and enhance LHD connections with health information networks, which connect them to opportunities for innovation in health technology

Early Phase Health Department

- Connect with a Health Information Exchange (HIE) network (e.g. KHIN, LACIE) to access or exchange data
- Learn about TEFCA, QHIN, USCDI/USCDI+

Established Phase Health Department

All of the above, plus the following:

- Assess and optimize HIE connections

Advanced Phase Health Department

All of the above, plus the following:

- Connect to innovative opportunities associated with HINs, such as HQ Intellect and HQ insight
- Prepare for and connect to Trusted Exchange Framework and Common Agreement ([TEFCA](#)), when available
- Explore the creation of data visualization resources build into an HIE that could be used for several local health departments

Resources

- KHIN: [Kansas Health Information Network \(khinonline.org\)](http://khinonline.org)
- LACIE: [lewisandclark – LACIE HIE \(lacie-hie.com\)](http://lacie-hie.com)
- TEFCA: [TEFCA | HealthIT.gov](http://HealthIT.gov)
- USCDI/USCDI+: [United States Core Data for Interoperability \(USCDI\) | Interoperability Standards Platform \(ISP\)](#)

Recommended Strategy 6: Explore longer-term opportunities to increase interoperability between LHDs and KDHE, such as a state [health data utility](#) or the utilization of TEFCA.

All Health Departments and KDHE

- Create and actively participate in a team to review how KDHE collects data from LHDs and seek to identify ways to streamline these processes
- Create and actively participate in a team to identify opportunities for data to be gathered and distributed to needed KDHE systems in a more streamlined way, such as a health data utility, data lake or through a QHIN/TEFCA
- Participate in a pilot program to explore these concepts

Advanced Phase Health Department

- Increase readiness for data sharing by adopting the latest health IT standards

Resources

- [What Is a Health Data Utility? | CSRI](#)
 - [HDU Framework - Civitas Networks for Health](#)
 - [HHS Finalizes Federal Health IT Strategy to Drive Systemic Improvements in Health and Care | HHS.gov](#)
 - [New Federal Health IT Strategy Sets Sights on a Healthier, More Innovative, and More Equitable Health Care Experience | HHS.gov](#)
 - [Interoperability Standards Platform](#)
 - [Standards and Technology | HealthIT.gov](#)
 - [Health Level Seven International - Homepage | HL7 International](#)
 - [Information Technology | NIST](#)
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Recommended Strategy 7: Explore policy, systems and environmental change to move data modernization efforts forward in Kansas

All Health Departments and KDHE

- Learn about and stay up to date on data modernization efforts nationally and at the state level, including maintaining an understanding of current terminology
- Identify statutes, policies and regulations that prevent or restrict public health data sharing and advocate for changes
- Develop a framework for data sharing agreements between local and state health departments
- Establish a shared framework for public health data governance in the state

Resources

- [Data Modernization Initiative \(DMI\) | Data Modernization | CDC](#)
- [Policy Options to Improve Data Sharing Between State and Local Health Departments](#)
- KDHE's Data Modernization Initiative: [Data Modernization Initiative | KDHE, KS](#)
- KDHE's Health Information Technology Advisory Council: [Kansas Health Information Technology - Opt Out](#)

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