Louisiana Health Information Technology Roadmap

2018 – 2021

FINAL

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1. Executive Summary

1.1 Introduction

To help achieve the triple aim of improved population health, better care delivery, and greater value for health care spending, the state of Louisiana is committed to making meaningful and sustainable changes to its statewide health information technology (health IT) infrastructure. In recent years, states have leveraged federal matching funds to develop robust health IT and health information exchange (HIE) networks. The Health Information Technology for Economic and Clinical Health (HITECH) Act of 2009 offered opportunities for states to promote adoption and use of health IT. As HITECH approaches sunset in 2021, states are actively developing and pursuing strategies to support progress and financial sustainability of health IT/HIE in order to continue innovations in data analytics and promote governance necessary to foster ongoing advancements.

1.2 Overview

Louisiana's approach to long-term sustainability of its current and future health IT and HIE statewide infrastructure begins with the creation of its 2018 – 2021 Louisiana Health Information Technology Roadmap (Roadmap). Commissioned by the Louisiana Department of Health (LDH or Department), the four-year Roadmap provides a foundational framework to achieve ubiquitous, interoperable health care data sharing among participants throughout the broader Louisiana health care community.

The Roadmap is presented as a resource for LDH and its stakeholders to utilize as they continue to make investments in core health IT and data exchange infrastructure throughout the state. It promotes a collaborative effort among federal, state, and private partners, and provides a plan for rapidly moving Louisiana toward an interoperable health IT ecosystem – an essential element to support Louisiana's vision of improving outcomes in health care delivery, quality, and costs. The Roadmap serves as a guide for LDH and its partners to successfully navigate through ever-changing policy and industry conditions. It is designed to function as a multi-year plan containing detailed initiatives and activities based upon stakeholder input, research and data analysis, and industry best practices.

1.3 Summary

The Roadmap document includes the following:

- Suggested areas to advance the state's health IT infrastructure and related timelines.

- Potential methods to employ a modular health IT infrastructure to liberate various data sources and promote information exchange for fundamental technology-based and process-oriented use cases.

- Possible approaches for enhanced stakeholder involvement to achieve and sustain the state's population health vision, support integrated service delivery, and address alternative payment models (APM) to yield measurable improvements in health and financial outcomes.

2. Louisiana Health IT Roadmap Development Approach

In 2017, LDH contracted with Myers and Stauffer to conduct activities and develop the Louisiana Health IT Roadmap. Specific project tasks involved stakeholder engagement, related research, and data analysis. The timeline below illustrates the activities performed over the six-month engagement.

April
- Louisiana Begins Roadmap Activities
- Louisiana Health IT Roadmap Presentation

March
- Stakeholder Engagement Phase I & II Closes

February
- Stakeholder Interview Process Closes

2018 January

December
- Stakeholder Engagement Process Phase II Begins
- State Infrastructure Research Begins
- Data Source Assessment Begins

November
- Stakeholder Interview Process Begins

October
- Stakeholder Engagement Process Phase I Begins

September
- Marketing Strategies Begins

2.1. Roadmap Development Principles

The guiding principles outlined below were applied to the Roadmap's development process.

- **Collaborative Principle:** Allow multiple opportunities for stakeholder participation to enable strong buy-in from a diverse set of individuals and organizations.

- **Key Asset Principle:** Address the state's health IT needs with the highest level of importance and ensure these needs are prioritized ahead of other Roadmap Initiatives.

- **Criticality Principle:** Address health IT issues deemed to be critical to delivery and ensure they are prioritized ahead of other Roadmap Initiatives.

- **Dependency Principle:** Prioritize Initiatives that are a prerequisite for other projects focused on the exchange and use of health data deemed to be critical.

- **Business Value Principle:** Consider and evaluate Initiatives that leverage existing infrastructure to maximize the potential of past and current investments.

- **Foundation Principle:** Support the state's health-related strategic plans, as well as fulfill business functionality requirements. Foundational Initiatives are also sequenced based upon industry best practices for building a robust and sustainable health IT infrastructure.

2.2. Stakeholder Engagement and Information Gathering

Louisiana health care stakeholders from across the state were engaged to provide information regarding their health data exchange technology and policy needs and wants. Representatives were asked to participate in data gathering activities intended to collect data necessary to assess the current state of health IT in Louisiana; confirm the existence and/or near-term deployment of key infrastructure assets; capture health IT-related needs and wants; and identify existing gaps.

The following activities took place to promote the Roadmap project, collect data, and gather information from key stakeholders:

- The Roadmap project was promoted at high-profile industry events to gain community buy-in.

- Various data sources were analyzed to best target campaign efforts and generate a potential list of representative stakeholders.

- A wide range of stakeholders were engaged to elicit input using in-person and telephonic interviews, online quantitative and qualitative surveys, and an LDH Discovery Session with internal representatives from across the Medicaid enterprise.

- A comprehensive review of historical documentation was conducted including information provided by LDH to understand governance, history, policies, and relevant health IT and HIE activities. See *Appendix B* for a comprehensive list of materials reviewed to support Roadmap development.

Health IT Fact Gathering and Promoting Roadmap Awareness

Healthcare Information and Management Systems Society (HIMSS) Louisiana Chapter Lunch and Learn

Several Louisiana health care organizations met in September 2017 for a lunch and learn sponsored by the Louisiana Chapter of HIMSS. The meeting focused on how payers and providers use data to improve quality and value in the Louisiana health care ecosystem. During the event, LDH introduced the attendees to the Roadmap project, its purpose, and estimated timeline for completion.

Louisiana Connect Conference

LDH hosted the Connect Louisiana Symposium on October 3, 2017. Showcased during the event, Dr. Esteban Gershanik, Louisiana State Chief Information Officer (CIO) and Director of the Bureau of Health Informatics, introduced the Roadmap project, outlined the purpose, current vision of priorities, and potential health IT activity streams. The presentation focused on informing conference attendees about the project and seeking their participation in upcoming stakeholder engagement efforts necessary to develop and inform the Roadmap.

During the presentation, a three-question poll was administered to gain an initial understanding of community sentiment regarding the state's health IT progress to date. Key findings from the poll focused on the following:

- Reducing emergency department (ED) utilization and quality reporting for Meaningful Use (MU), Medicare Access and CHIP Reauthorization Act (MACRA) are top priorities among participants.

- Advancing data analytics and HIE are seen as important focus areas for LDH.

- MU and the Regional Extension Center (REC) have been useful to advance health IT.

Louisiana GC3 Conference

LDH presented an overview of the Roadmap project at the Gulf Coast Chapters' HIMSS conference in November, 2017. During the three-day event, several in-person stakeholder interviews were conducted. This event initiated the stakeholder data collection phase of the Roadmap project.

Roadmap Promotion at Health Information Technology Advisory Committee (HITAC) Meetings

The HITAC (or Committee) is a neutral body of volunteer stakeholders supported by the Louisiana Chapter of HIMSS. Though no formal agreement exists, the Committee is tasked with providing guidance to the state's strategic planning efforts related to the promotion of health IT and HIE. Information provided by HITAC members for the purpose of Roadmap development was collected during Committee meetings scheduled during the project period.

Stakeholder Selection Approach

The project team gathered and analyzed Louisiana Medicaid Management Information System (MMIS) data to determine the largest billers, by organization, in the state. Data from the Robert Wood Johnson Foundation program was matched by zip code to MMIS data to identify Medicaid provider organizations

and hospitals serving beneficiaries in counties with low health outcomes (defined as length and quality of life)[1].

External stakeholders included representatives from clinical and public health providers, Medicaid electronic health record (EHR) incentive program participants (clinicians and hospitals), and local health care organization members. The final set of stakeholders included over 100 provider organizations for potential participation.

External Stakeholder Engagement

In-person and Telephone Interviews
In collaboration with LDH, a final set of key stakeholders were selected for in-person and telephone interviews. Prior to each interview, stakeholders completed an online survey used to collect information to inform interview questions. In total, Myers and Stauffer conducted in-person and telephone interviews with 19 individuals representing 17 organizations.

Quantitative and Qualitative Surveys
To obtain additional information from the provider community throughout the state, online qualitative and quantitative surveys were distributed, in coordination with LDH, via email to a broader stakeholder population.

A qualitative survey was distributed to 86 provider organizations representing behavioral health, federally qualified health centers (FQHCs), rural health centers (RHCs), health insurance organizations, home health and hospice providers, hospital facilities, inpatient and outpatient physical rehabilitation, outpatient provider organizations, payers, public health organizations, skilled nursing, occupational health and physical therapy, state associations, state agencies, and academia. Twenty-four respondents participated in the qualitative survey.

A quantitative survey was employed to gather supplemental data. Quantitative surveys were distributed by LDH to more than 500 stakeholders, including state health care provider associations and providers participating in the Medicaid EHR Incentive Program. Seventy-eight responses were received, representing all nine LDH regions.

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[1] http://www.countyhealthrankings.org/sites/default/files/state/downloads/CHR2017_LA.pdf

Participating Organizations in Development of Louisiana's Health IT Roadmap

Overall, a total of 98 organizations (listed below) contributed to the development of the Roadmap by providing input during in-person or telephonic interviews, or through participating in qualitative and quantitative surveys.

Table 1: Roadmap Participating Organizations

Louisiana Health IT Roadmap Participating Organizations	
Acadian Care	Louisiana State University Health Sciences Center
Acadiana Area Human Services District	McMains Developmental Center
Access Health Louisiana	Metropolitan Human Services District
Aledade	Mitchells Pediatrics
AmeriHealth Caritas Louisiana	New Orleans Health Department
Assisi Bridge House	North Oaks Health System
Blue Cross Blue Shield Louisiana	Northwest Louisiana Human Services District
Bureau of Family Health	O'Brien House
Calais Dermatology Associates	Ochsner Health System
Capital Area Human Services District	Office of Aging and Adult Services
Central Louisiana State Hospital	Office of Public Health
Chitimacha Health Clinic	Office of Technology Services
Christus Louisiana	Office of the National Coordinator
CrescentCare	OMC Natch School Base Health Clinic
Crowley Office of Behavioral Health	Opelousas General Health System
Deanz Healthcare for Women	Open Health Care Clinic
East Baton Rouge Coroner's Office	Our Lady of the Lake Physician Group
Eastern Louisiana Mental Health System	Outpatient Medical Center
Florida Parishes Human Services Authority	Pelican Pediatrics
Franciscan Missionaries of Our Lady Health System	Primary Care Providers For A Healthy Feliciana
Gastroenterology Associates	Priority Health Care
Greater New Orleans Health Information Exchange	Reeves Memorial Medical Center
Greenpath International, Inc.	Riverland Medical Center
Hardtner Medical Center	Rkm Dental Clinic
Health Express Inc.	Rkm Primary Care
Healthcare Informatics Resource Exchange	Shalom Clinic for Children
Hebert Medical Group	SouthCare Medical

Louisiana Health IT Roadmap Participating Organizations	
Iberia Comprehensive Community Health Clinic	Southeast Community Health Systems
Imperial Calcasieu Human Services Authority	St. James Parish Hospital
Infamedics	St. Francis Medical Center
J A Badeaux, III, M.D.	Teche Action Clinic
Jefferson Parish Human Services Authority	The Pediatric Center of Southwest Louisiana
Association of Substance Abuse Counselors and Trainers	Thibodaux Regional Medical Center
Louisiana Board of Pharmacy	Total Family Medical
Louisiana Children's Medical Cooperation	Trinity Community Health Centers/Winn Community Health Center
Louisiana Department of Health	Tulane University
Louisiana Health Care Quality Forum	University Hospital and Clinics
Louisiana Hospital Association	University Medical Center
Louisiana Mississippi Hospice and Palliative Care	Vanguard Behavioral Health Consultants, LLC
Louisiana Primary Care Association	Willis-Knighton Pierremont Health Center
Louisiana State Medical Society	Women's Hospital Beta Interview
Louisiana State University Health Care Services Division	

The figures below illustrate Louisiana regions and the associated number of responses received by region among all participating organizations through interviews, qualitative, and quantitative surveys.

Figure 1: Louisiana Department of Health Regions
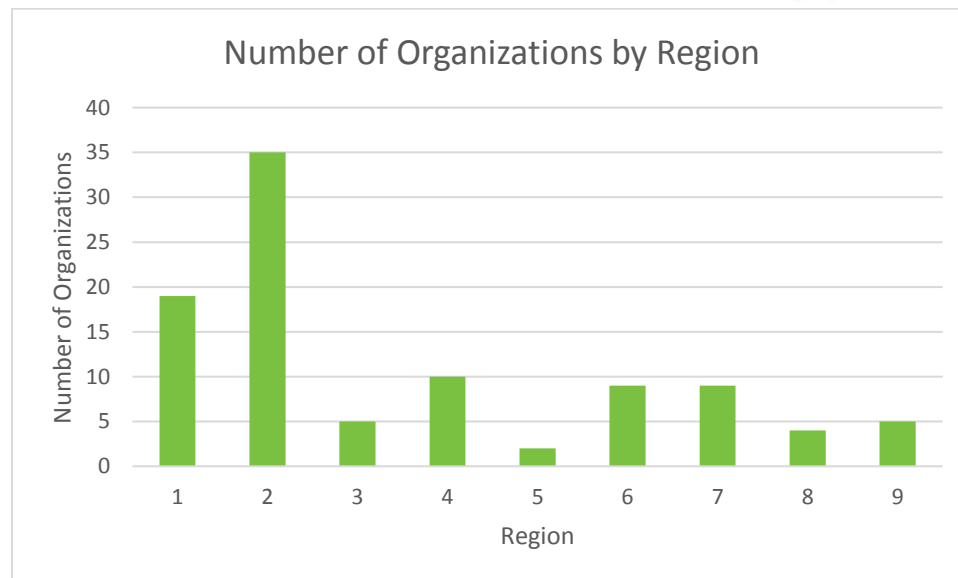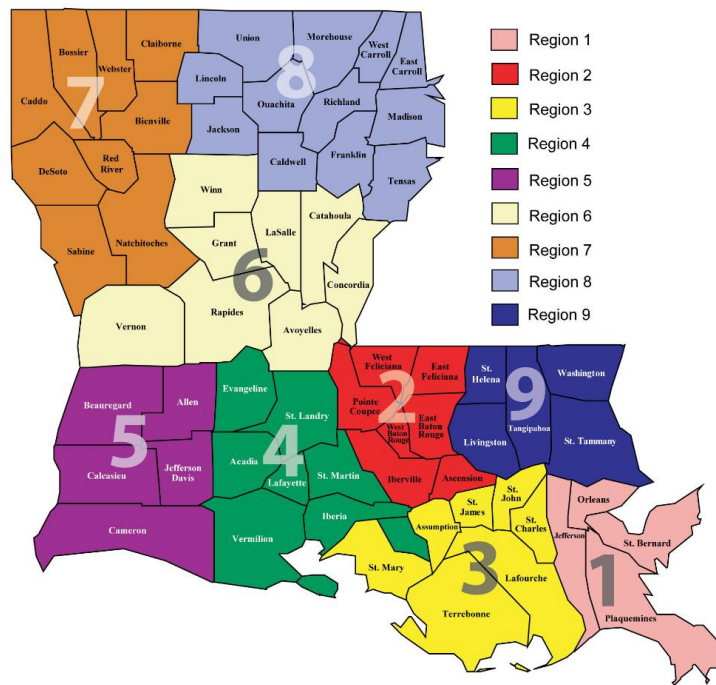
Note: Figure 1 does not account for surveys that did not include a zip code in a response.

Analysis of Qualitative and Quantitative Data

The qualitative data review process continued throughout the data collection phase of the project. The following outlines the National Science Foundation's recommendations for mixed methods data analysis.[2]

The following are key questions presented throughout the data analysis process:

- What are the common themes that are emerging in the responses?

- Are there any deviations from these common themes?

- What anecdotal findings are relevant to the broader goals identified during the process?

- Do any of the themes call for additional research?

Data collected through interviews and surveys were analyzed through a careful and comprehensive review to identify specific themes in the responses. The quantitative data was reviewed for relevant findings and trends that supported the themes and patterns discovered through the qualitative data gathering process.

Data Limitations

The qualitative surveys contain self-reported information collected through an online platform and were not audited for accuracy. The stakeholders' interpretation of the survey questions may vary, which may influence assessment results.

National benchmark data is not census-level data and uses different survey methodologies. National comparisons are not available for some components included in this assessment section of the Roadmap document.

The results of data collection methods may not be comparable across all locations or situations. Across larger organizations, levels of health IT/HIE challenges or limitations may differ from the level of limitation or challenge experienced by smaller organizations. Similarly, organizations in rural areas may experience a more unique set of limitations and challenges than those in urban settings.

Internal Data Collection – Discovery Session with LDH

Myers and Stauffer held an internal Discovery Session at LDH offices. The Discovery Session provided the chance to gain a foundational understanding of the current health IT environment and data exchange capabilities between and within state agencies serving Medicaid beneficiaries. The session was attended by state representatives including the Medicaid Director and Deputy Director, as well as members from LDH, the Bureau of Health Informatics within the Office of Public Health (OPH), Office of Adult and Aging Services, Office of Technology Services (OTS), Office of Behavioral Health, and the Office for Citizens with Developmental Disabilities.

The session was led by Myers and Stauffer's professional facilitator from the Georgia Institute of Technology. During the two-hour meeting, the group discussed and documented current opportunities and apparent gaps related to existing technology architecture, data quality, and data

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[2] https://www.nsf.gov/pubs/1997/nsf97153/start.htm

exchange. The Discovery Session activities identified health IT and data-related priorities over the next 10 years to establish data standardization, information governance, and long-term sustainability of the State's health IT infrastructure.

3. Overview: Current State of Health In Louisiana

3.1. Louisiana Health Status Background

Louisiana is the 25th most populous state in the United States and the 10th most populous in the South with a population of over 4.5 million people.[3] Nearly 17 percent of the state's population is living in rural Louisiana,[4] and over one-quarter of the state's population resides in three of the 64 parishes, including East Baton Rouge, Jefferson, and Orleans. Compared to the United States overall, a much larger share of residents identify as Black (31 percent versus 12 percent nationally). A higher share of residents live in poverty in Louisiana than in the United States as a whole (23 percent versus 15 percent nationally), and there are wide disparities in poverty by race and age. [5]

Louisiana falls below national average in terms of state population health. Louisiana ranks 49th overall according to the United Health Care Foundation's report, *America's Health Rankings Annual Report, 2017*.[6] Drug-related deaths increased from 13.7 to 17.7 deaths per 100,000 over the last five years, and increased 37 percent just over the last three years. In the last four years, premature death increased by two percent. Louisiana experiences the second highest rates of low birthweight and preterm births in the United States, and is among the top five in deaths caused by heart disease and stroke.[7]

However, in the past five years, Louisiana experienced one of the largest declines in the amount of uninsured statewide through Medicaid expansion launched in January 2016. The percentage of uninsured decreased 45 percent to a current rate of 11.1 percent of the population. Through Medicaid expansion, more than 100,000 patients have received preventative care, more than 15,000 have received breast cancers screenings, and 154 have been diagnosed with breast cancer. More than 2,600 people have been diagnosed with diabetes, 6,800 people have been diagnosed with hypertension, and 10,500 have been screened for colon cancer.[8]

Louisiana also experienced one of the largest decreases in preventable hospitalizations over the same period, dropping by 29 percent to a current rate of 65.8 percent of discharges per 1,000

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[3] Louisiana State Census Data Center. http://louisiana.gov/Explore/Demographics_and_Geography/
[4] https://www.ruralhealthinfo.org/states/louisiana
[5] Kaiser Family Foundation. The Louisiana Healthcare Landscape. https://www.kff.org/health-reform/fact-sheet/the-louisiana-health-care-landscape/ https://www.kff.org/health-reform/fact-sheet/the-louisiana-health-care-landscape/#footnote-189693-1
[6] United Health Care Foundation. America's Health Rankings, 2017. http://www.americashealthrankings.org/.
[7] Centers for Disease Control and Prevention. States of the State of Louisiana, 2015. https://www.cdc.gov/nchs/pressroom/states/louisiana/louisiana.htm
[8] Louisiana Medicaid Expansion Report, 2016 – 2017. http://dhh.louisiana.gov/assets/HealthyLa/Resources/MdcdExpnAnnlRprt_2017_WEB.pdf

Medicare enrollees. Deaths related to cancer and cardiovascular diseases also decreased by 1.0 death per 100,000 and 2.3 deaths per 100,000, respectively.[9]

Ensuring continued improvements in population health cannot be achieved by a single division, department, or agency. Instead, they must be addressed through internal/external (i.e., public/private partnerships) and guided by transparent, collaborative governance structures to ensure all stakeholders are moving forward in unison.

3.2. Louisiana's Strategic Plans

The LDH OPH Strategic Plan (2014 – 2019)[10] identified that a state health assessment and improvement plan were needed to begin to address the state's population health needs. The OPH "Creating a Blueprint for Our Future" (Blueprint), outlines the 2016 – 2020 State Health Improvement Plan (LaSHIP) which included a state health assessment (SHA), as well as priorities and strategies for health status and public health system improvement.[11] Both the Blueprint and the OPH strategic plan include five priorities: 1) support behavioral health; 2) promote healthy lifestyles; 3) assure access to health care; 4) promote economic development; and 5) build public health system infrastructure. Each plan also underscores that the state has more work to do in terms of health IT and stakeholder collaboration. LDH's revised strategic plan for 2017 – 2022 also aligns with these five internal strategic priorities.[12]

The strategic plan seeks to improve statewide infrastructure through health IT. The goal stated in the plan is to "leverage health IT to maximize use and integration of data to drive decision making." The LDH OPH infrastructure may serve as the foundation of a *learning health system* in Louisiana, defined as one that "brings real value to electronic health information as a means to better care, wiser spending, and healthier people."[13] The LaSHIP and LDH strategic plan take this further and seek to enhance data and health IT to build systems to analyze data and measure impact system-wide.

Private/public partnerships and systems integration is the foundation of the LaSHIP Framework (Framework). A key takeaway from the Framework is that it is "intended to encourage cross-sector discussions and collaboration and systems integration." Internal/external partnerships and collaboration is critical, as illustrated in the strategic plan. By aligning development efforts of the public health system with community and stakeholder initiatives and needs, LDH OPH seeks to make the greatest impact on the health of its residents through sustainable, supported solutions.

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[9] United Health Care Foundation. America's Health Rankings, 2017. http://www.americashealthrankings.org/.
[10] http://new.dhh.louisiana.gov/assets/oph/SHA_SHIP/STRATEGICPLAN.pdf
[11] Louisiana SHA and SHIP. http://www.dhh.louisiana.gov/index.cfm/page/2180
[12] LDH Strategic Plan FY2017 – 2022. http://www.dhh.la.gov/assets/docs/budget/FY2017-2022LDHStrategicPlan.pdf
[13] Connecting Health and Care for the Nation. A Shared Interoperability Roadmap. V 1.0. https://www.healtHealth IT.gov/sites/default/files/nationwide-interoperability-roadmap-draft-version-1.0.pdf

Figure 2: LaSHIP Framework

Health IT, including HIE, is a valuable tool that can be used to address other key priorities outlined in the LaSHIP and OPH strategic plan. Health IT allows for secure, reliable access and sharing of valuable health data across the care continuum. It is critical to advance efforts to "promote integration of behavioral health and primary care services" (Objective 1) and "support a coordinated continuum of behavioral health care and prevention services" (Objective 2), Objectives 1 and 2 under the LaSHIP goal support behavioral health.

Another goal of the LaSHIP is to ensure access to health care, which not only means access to health insurance, but also seeks to 1) "improve access to health care providers among those living in rural communities or populations that are underserved"; and 2) "improve appropriate use of health facilities" (Objectives 3 and 4). Health IT offers opportunities to increase access to quality health care services through the use of secure telemedicine technologies. Health IT also allows for robust data gathering and encounter alerting in order to better understand patterns in consumer use of health care systems. For example, providers can be notified when their patients receive treatment in an ED to potentially reduce unnecessary hospital admissions or readmissions.

Finally, the LaSHIP seeks to promote healthy lifestyles under which two objectives are to "build community capacity for chronic disease prevention and management program" and to "increase early screening and prevention efforts for chronic diseases". Actionable data at the point of care is paramount to prevention and screening. Aggregate data is crucial to the development and monitoring of management programs, both of which can be addressed through effective health IT.

4. Current State: Louisiana Health IT Infrastructure and Assets

By having a competitive health care ecosystem with many active supporters of HIE, Louisiana has made forward progress in an evolving and challenging technology space. Louisiana has a valuable resource in local health care organizations and stakeholders. These entities bring unique and important input and experience as it relates to the development of health IT and exchange. A statewide infrastructure to support electronic HIE can aid the LDH in paving the way for long-term sustainability by aligning health IT initiatives with the goals and needs of the provider community. Gathered from stakeholder input, the top priorities for Louisiana health care stakeholders are: improvements to interoperability and data exchange; stakeholder collaboration and governance; health IT facilitation to support physician services; incentives; quality care, and the advancement of the health IT workforce to support innovation. The following sections showcase both state and federal health IT-related investments and achievements made in Louisiana over the past decade, including an overview of the State's current health IT infrastructure.

4.1. Louisiana's Health IT Achievements

Figure 3: Timeline of Louisiana's Health IT Progress and Related Events
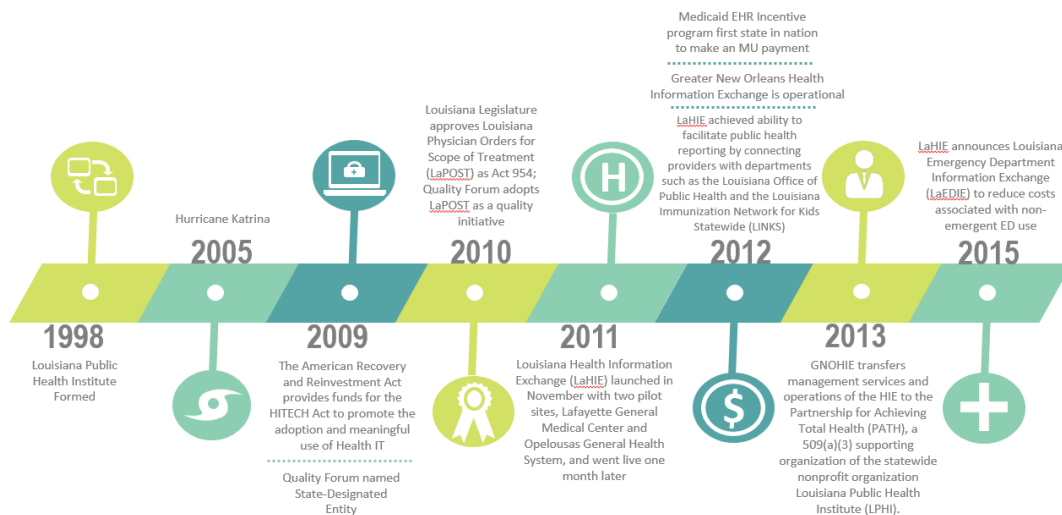
4.2. Impact of Federal Health IT Programs and Policies

Federal funding and various initiatives have supported the state's progress in health IT. While this is not an exhaustive list, the programs included below have contributed to the development and implementation of the Louisiana health IT landscape.

Agency for Health Care Quality and Research

In 2005, the Health Information Security and Privacy Collaboration (HISPC) grant was awarded to LDH to support multi-state collaboration to address privacy and security challenges of health IT. Louisiana was one of the original 34 states represented in this collaboration.[14]

American Recovery and Reinvestment Act (ARRA)/HITECH

ARRA, which included HITECH, funded almost $27 billion to support expansion of health IT across the nation through various programs including, but not limited to:[15]

- MU Incentive Programs. Between 2011 and December 2017, Louisiana providers participating in the Medicaid or Medicare EHR Incentive Programs received over $735 million.[16]

- State HIE Cooperative Agreement Program awarded to the Louisiana Health Care Quality Forum (Quality Forum) $10,583,000 as the State-Designated Entity to build capacity for exchanging health information across health systems.[17]

- As of 2013, 254 students were trained in Louisiana as part of the Health IT Workforce Development program.[18]

Patient Protection and Affordable Care Act (ACA)

Signed in 2010, the law includes creation of new payment models and expansion of Medicaid. As a result of Medicaid expansion in Louisiana in 2016, over 464,000 have gained access to coverage.[19] There are at least seven accountable care organizations (ACOs) successfully operating in Louisiana.[20]

Connecting Health and Care for the Nation

In 2015, the Office of the National Coordinator (ONC) released its *Connecting Health and Care for the Nation: A Shared Nationwide Interoperability Roadmap Version 1.0* (Interoperability Roadmap). This document outlines the collaborative pathway to build and use the health IT infrastructure in a way that puts consumers at the center of their care; enables providers to seamlessly secure access

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[14] Agency for Healthcare Quality and Research. https://healthit.ahrq.gov/ahrq-funded-projects/privacy-and-security-solutions-interoperable-hie-la

[15] Quality Matters Archive. The Commonwealth Fund, 2011.
http://www.commonwealthfund.org/publications/newsletters/quality-matters/2011/june-july-2011/in-focus

[16] CMS Data and Program Reports. https://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/Downloads/December2017_PaymentsbyStateProgramandProvider.pdf

[17] HITECH Programs and Advisory Committees. https://www.healthit.gov/policy-researchers-implementers/state-health-information-exchange

[18] HITECH Workforce Programs Dashboard. https://dashboard.healthit.gov/quickstats/pages/FIG-Students-Trained-for-Health-IT-Employment.php

[19] Louisiana Department of Health, Healthy LA Dashboard. http://www.ldh.la.gov/HealthyLaDashboard/

[20] CMS 2018 ACO Performance Data. https://data.cms.gov/Special-Programs-Initiatives-Medicare-Shared-Savin/Performance-Year-2018-Medicare-Shared-Savings-Prog/28n4-k8qs/data

and use of health information from different sources; and connects public health agencies to research that accelerates learning, development, and delivery of cutting-edge treatments.[21]

Broadband

In 2010, the National Telecommunications and Information Administration (NTIA) awarded an $80 million grant to the Louisiana Broadband Alliance, a collaboration among six state agencies, to bring high-speed internet access to more than 80 community anchor institutions. The 3,488 square mile service area included 12 impoverished parishes.[22]

Other Broadband Technology Opportunities Program grants included a total of over $90 million to the State Library of Louisiana, Deaf Action Center of Louisiana, Portland State University, Nexus Systems Inc., University Corporation for Advance Internet Development, and the Louisiana Division of Administration.

The Federal Communications Commission (FCC) and the U.S. Department of Agriculture (USDA) awarded almost $16 million to the LDH to bring broadband connectivity to 160 health care facilities. The project was managed by the State Designated Entity (SDE) for HIE, the Quality Forum.

The USDA Rural Utility Service Community Connect awarded over $50 million to further expand broadband access into rural communities.

Addiction and Recovery

The Comprehensive Addiction and Recovery Act (CARA), signed into law in 2016, made grants available to states to implement strategies to improve access to overdose reversal medications and education programs for comprehensive opioid abuse response.[23] Louisiana was awarded over $8 million from the Substance Abuse and Mental Health Services Administration (SAMHSA) to enhance existing statewide prevention, treatment, and recovery support services.[24] States that receive federal funding to fight opioid abuse are required to enforce the use of Prescription Drug Monitoring Programs (PDMP) by providers and pharmacies per the Prescription Drug Monitoring Act of 2017.[25]

4.3. State Health IT and HIE Governance in Louisiana

HIT Coordinator[26]

The Louisiana State Health Information Technology (HIT) Coordinator currently reports to the State CIO and serves as an advisor on issues related to health IT and HIE. The coordinator assists with the planning, development, and oversight of the Medicaid EHR Incentive Program. The coordinator

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[21] https://www.healthit.gov/sites/default/files/nationwide-interoperability-roadmap-version-1.0.pdf

[22] Louisiana Broadband Initiative. http://lagic.lsu.edu/Broadband_Working/lbi_grants_workshops.asp

[23] American Society of Addiction Medicine. https://www.asam.org/advocacy/issues/opioids/summary-of-the-comprehensive-addiction-and-recovery-act

[24] Louisiana Department of Health. http://www.dhh.louisiana.gov/index.cfm/page/2842

[25] PDMP/TTAC. http://www.pdmpassist.org/pdf/2017_PDMP_Legislation_20170824.pdf

[26] Louisiana State Medicaid HIT Plan (SMHP). March 17, 2014.

works with multiple stakeholders to determine priorities and provide recommendations that facilitate and expand health IT and HIE.

Louisiana State Designated Entity

The State-Designated Entity for HIE, the Quality Forum, operates the Louisiana Health Information Exchange (LaHIE). LaHIE is managed by a volunteer board representing major regions of the state across providers, payers, purchasers, and consumers, while also receiving input from various volunteer committees and workgroups. The current board includes former Governor Kathleen Babineau Blanco, but does not include an active LDH representative. The Greater New Orleans Health Information Exchange (GNOHIE) is also managed by a volunteer board of directors, and does not include an LDH representative.

Health Care Information Technology and Infrastructure Advisory Collaborative[27]

In 2008, Revised Statute (RS) 40:1165.2 provided for a Health Care Information Technology and Infrastructure Advisory Collaborative to "advise the secretary of the Louisiana Department of Health on strategies for the advancement of the use of electronic health IT through the identification of state laws and regulations that impede such advancement, including but not limited to those laws and regulations that concern the form of consent to medical treatment and authorization for other health care transactions, and matters related to facilitation of telemedicine consultations." The Collaborative was comprised of members from the Quality Forum and the Louisiana Rural HIE.

HITAC was announced on July 8, 2015.[28] Committee members include representatives from LDH, hospital and health systems, ambulatory providers and specialists, health care associations and societies, payers, and technology and business sectors.

HITAC is not sanctioned by the State and does not meet regularly, according to stakeholders. However, members attend weekly LDH health IT planning meetings.

4.4. Health IT-Related Louisiana State Legislation and Policy

Health Data Collection[29, 30]

Title 40:1173.3 outlines LDH's data collection authority, and enables LDH to collect data from provider organizations to support cost and quality evaluation. To support this authority, Title 40:1173.4 provides for a Health Data Panel to advise the State Department of Health. The intent of the Health Data Panel is to define and identify the data elements around the core health care cost, quality, and performance to be reported to the LDH OPH. These data elements must be reported in accordance with existing national and international data standards for core health data

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[27] https://www.legis.la.gov/legis/Law.aspx?d=409418 https://www.legis.la.gov/legis/Law.aspx?d=964710
[28] http://new.dhh.la.gov/index.cfm/newsroom/detail/3443
[29] https://www.legis.la.gov/legis/Law.aspx?d=409421), https://www.legis.la.gov/legis/Law.aspx?d=96473
[30] (https://www.legis.la.gov/legis/Law.aspx?d=409422 https://www.legis.la.gov/legis/Law.aspx?d=964732

elements. These data elements are used for consumer's meaningful comparison of costs for specific health care services, as well as specific quality of care measures between and among medical facilities, health care providers, and health plans. Data collection is paramount to evaluating quality and outcomes necessary to alternative payment model programs. LDH may elect to capitalize upon its authority under Title 40:1173.3, and in collaboration with stakeholders and community members, develop provider-driven initiatives to support collection of attainable and agreeable data. This data would be used to measure and evaluate provider performance in accordance with the needs of value-based payment (VBP) approaches in Medicaid.

EHR Loan Program[31]

In 2009, RS 40:1167.4 established an EHR loan program which authorized LDH to pursue funding for EHR adoption and the Medicaid EHR Incentive Program, to participate in the ARRA program, and to enter cooperative endeavor agreements to support promotion and adoption of Certified Electronic Health Record Technology (CEHRT), including telemedicine technology.

Louisiana Physician Orders for Scope of Treatment (LaPOST)[32]

Act 954 effective August 15, 2010, established the LaPOST program and form, which enables an individual to receive life-sustaining medical treatment through a standing medical order. It provides civil and criminal immunity from liability for health care providers, physicians, and persons acting under the direction of a physician.[33]

Currently, Louisianans must present their LaPOST form before their end-of-life wishes can be considered by a physician. An electronic LaPOST registry will create an online, searchable database for providers to locate their patient's advanced directive documentation. The electronic LaPOST registry is listed as a CMS-approved activity in the latest Implementation Advanced Planning Document (IAPD) federal funding request.

Telemedicine[34,35,36]

The Louisiana's Board of Medical Examiners 2015 regulations state that an initial in-person visit is not required if the technology used is sufficient to enable the provider to practice at an acceptable level of skill and safety.

House Bill (HB) 570, 2016, eliminates a prior requirement that physicians practicing in telemedicine maintain an office in Louisiana or contract with in-state providers. This also changed the modality to include "interactive audio" instead of the more restrictive requirement for "two-way video".

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[31] https://www.legis.la.gov/legis/Law.aspx?d=964715
[32] Louisiana Department of Health. State Implements Tool for End-of-Life Care Planning. http://dhh.louisiana.gov/index.cfm/newsroom/detail/3162
[33] RS 40:1299.64.1-1299.64.6) House Bill (HB) 1485 Mills.
[34] http://www.lsbme.la.gov/sites/default/files/documents/Notices%20of%20Intent/NOI%20and%20NOA/NOA/Telemedicine%20NOA%2008%2009.pdf
[35] https://www.legis.la.gov/legis/ViewDocument.aspx?d=913737
[36] https://www.legis.la.gov/legis/ViewDocument.aspx?d=1008018

HB 480 (Act 252), 2016, amends prior state law to allow physicians to prescribe controlled substances through telemedicine technology when they treat patients in a licensed health care facility currently registered with the Drug Enforcement Agency (DEA).

4.5. State Health IT Infrastructure and Related Programs

Medicaid EHR Incentive Program

The adoption, implementation, or upgrade (AIU) to EHR technology is critical to ensure health care providers have access to robust information to improve and ensure the delivery of safe, efficient, and patient-centered care. Louisiana was the fourth state in the nation to launch a Medicaid EHR Incentive Program in January 2011, and the first in the nation to make an MU payment.

National Electronic Health Records Survey (NEHRS) Data Analysis
While the State has made significant achievements in the transformation of the state's health care system, Louisiana still lags behind national rates in terms of health IT adoption. According to the most recent NEHRS data from 2015, 75 percent of office-based physicians in Louisiana have adopted some form of EHR technology.[37] The NEHRS findings also indicate Louisiana's adoption of EHR technology for office-based physicians trails both neighboring states (93 percent) and the national average (87 percent).

Table 2: EHR Adoption Rates – Office-Based Physician. Source: the Centers for Disease Control and Prevention (CDC)

State	Percent of All Physicians That Have Adopted Any EHR	Percent of All Physicians That Have Adopted Basic EHRs	Percent of All Physicians That Have Adopted Certified EHRs
Arkansas	96	46	85
Louisiana	75	40	69
Mississippi	88	64	83
Texas	93	54	79
Bordering State Average	93	54	82
United States Average	87	54	78

According to the CDC, the 2015 NEHRS sample consisted of 10,302 office-based physicians. Data collection took place from August through December 2015, using a mixed mode of data collection from the Internet, by mail, and by telephone. NEHRS is conducted as a sample survey of patient care physicians, excluding anesthesiologists, radiologists, and pathologists. The CDC reports an overall unweighted response rate of approximately 52 percent.

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[37] National Electronic Health Records Survey 2015: Centers for Disease Control and Prevention. https://www.cdc.gov/nchs/data/ahcd/nehrs/2015_nehrs_web_table.pdf

The 2017 report from Specialized Knowledge and Applications (SK&A) reports that Louisiana is among the bottom five states in terms of health IT adoption, with 62.1 percent of respondent states reporting some form of EHR technology use.[38]

Table 3 EHR Adoption Rates – Office-Based Physician. Source: SK&A

State	Percent of All Physicians That Have Adopted Any EHR	Percent of All Physicians That Have Adopted Basic EHRs
New York	62.7	61.7
Louisiana	62.1	60.8
New Jersey	61.7	60.8
Rhode Island	58.4	58.3
District of Columbia	58.2	56.85

SK&A Report is based on telephone interviews with 296,834 medical offices between September 2016 and February 2017.

Medicaid EHR Incentive Program Data Analysis

The current program totals for the Medicaid EHR Incentive Program shown below include eligible providers (EP) by provider type, and the total number of eligible hospitals (EH) that have attested to AIU. An AIU attestation is usually received from a participating provider or hospital that is new to the program and has taken initial steps to acquire or install an EHR, begin using and training staff to use the technology, or expanding existing technology to be designated as certified EHR technology.

Areas of key significance are as follows:

1. **Number of providers, by provider type, and hospitals that have attested to AIU for all program, all time.**

Providers: 3,472

Hospitals: 107

Total: 3,579

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[38] SK&A Market Insights. EHR Adoption Trends: Current and Historical Insights.
http://www.skainfo.com/reports/physician-ehr-software-usage

Table 4 AIU Count of Unique EPs by Type

Provider Type	Count of Unique EPs
Dentist and Dental Group	301
Doctor of Osteopathy (DO) and Doctors of Osteopathy (DO) Group	25
Nurse Practitioner and Nurse Practitioner Group	837
Nurse-Midwife	17
Optometrist and Optometrist Group	34
Physician (MD) and Physician (MD) Group	1,647
Physician Assistant	38
Prescribing Only Provider	2
#N/A	571
Total	3,472

Note: All year 1 payments were counted as AIU payments. Some providers above could have potentially attested to MU in their first year. These numbers do not include providers who received an AIU payment from another state and later received MU payments from Louisiana. The numbers do not include providers whose payments were reversed. #N/A represents Program Year (PY) 2016 providers whose type was not able to be identified.

2. **Number of providers, by provider type, and hospitals that have attested to MU for all program, all time.**

Attestations that demonstrate MU of certified technology include objectives and associated measures that a provider or hospital must meet or exceed. Each objective is required in order for an EP or EH to show they are meaningfully using their certified EHR. Objectives have changed throughout the program years from core objectives that focused solely on data collection (e.g., record and chart changes in vital signs, record demographics, etc.), to objectives that concentrate on the use of advanced clinical processes and improved health outcomes (such as providing a summary of care record for each transition of care, or referral or use of secure electronic messaging to communicate with patients on relevant health information). The ability to meet several of these objectives indicate a proficient level of readiness in achieving HIE. The number of providers (by provider type) and hospitals who have demonstrated MU in Louisiana are listed below.

- Providers: 990
- Hospitals: 65
- Total: 1,055

Table 5. MU Count of Unique Eligible Providers by Type

Provider Type	Count of Unique EPs
Dentist and Dental Group	11
Doctor of Osteopathy (DO) and Doctors of Osteopathy(DO) Group	13
Nurse Practitioner and Nurse Practitioner Group	219
Nurse-Midwife	11
Optometrist and Optometrist Group	13
Physician (MD) and Physician (MD) Group	703
Physician Assistant	6
#N/A	14
Total	990

Note: The numbers do not include providers whose payments were reversed. #N/A represents PY2016 providers whose type was not able to be identified.

3. Top 10 Eligible Provider CEHRT Vendors

There are many vendors that provide certified EHR technology. In Louisiana, many of the large hospital systems utilize a specific vendor; however, the project team reviewed whether providers were utilizing one particular vendor, or a small group of vendors above others. The table below provides the top 10 types of CEHRT used for PY 2015 attestations for EPs. EHR and HIE integrations enable providers to directly receive Admission, Discharge, and Transfer (ADT) notices, lab results, transcriptions, and other important health information directly in their EHR. This integrated connectivity can enhance interoperability by supporting ease of use at the provider level. In order to expand and increase utilization of HIE in Louisiana, the State may choose to prioritize interoperable connections with these key vendors.

Table 6 Top 10 EP CEHRT Vendors – PY 2015

Rank	Vendor Name	Count of Providers
1	Epic	882
2	Greenway Health, LLC	147
3	AthenaHealth	75
4	eClinicalWorks, LLC	74
5	Allscripts	58
6	Sevocity	48
7	Gehrimed	46
8	Practice Fusion	44
9	e-MDs, Inc	42
10	Cerner Corporation	33

Note: The data in this table was pulled from PY 2015 EP attestations. Providers report CEHRT ID into the State-Level Repository (SLR), and Myers and Stauffer receives a report with CEHRT ID, vendor name, and product name. Many different CEHRT IDs were associated with each vendor name. Some CEHRT IDs reported by providers reflected 2011 edition CEHRT. We are unsure if this is a self-reporting error.

4. **Eligible Providers Practicing in Louisiana FQHCs**

FQHCs provide comprehensive primary and preventative care to Louisiana residents regardless of their ability to pay. As EHR adoption rates in these safety net clinics increase, providers may have greater access to information at the point of care to make the best decisions for their patients. Many providers practicing in these FQHC and RHC networks have received funding from the Medicaid EHR Incentive Program. Based on attestation data from PY 2011 to 2015, 25 FQHCs were manually identified as participating in the Medicaid EHR Incentive Program.

5. **Potentially Eligible Hospitals and Eligible Providers for Future PY Participation**

Additional data below provides the number of providers and hospitals that attested to AIU, but did not return to the program to attest for MU. These figures are critical to the program's long-term success, as these providers and hospitals are still potentially eligible to participate through PY 2021.

AIU EPs and EHs (PY 2011 – 2016)

- Providers: 1,894

- Hospitals: 11

- Total: 1,905

6. **Louisiana Medicaid EHR Incentive Program Payments (2011 – 2016)**

The table on the following page provides incentive payment totals for PY 2011 through 2016.

Table 7 EHR Incentive Payments to Date

EHR Incentive Payments to Date (11/15/2017) Program Years 2011 – 2016	
Eligible Professionals	
Unique EP Count	3,603
# AIU Payments	3,472
AIU Payments Total	$73,621,344
# MU Payments	3,844
MU Payments Total	$32,586,181
Total EP Payments to Date	$106,207,525
Eligible Hospitals	
Unique EH/CAH Count	108
# AIU Payments	107
AIU Payments Total	$111,310,944
# MU Payments	231
MU Payments Total	$91,023,493
Total EH Payments to Date	$202,334,437

Note: EP and EH counts do not include providers whose payments were reversed.

4.6. HIE and Interoperability

The Louisiana Health Care Quality Forum[39]

In 2006, RS 39:100.51 established the State's Health Care Redesign Fund[40] which allowed for the development of the LA Health Care Redesign Collaborative (Collaborative). This Collaborative recommended the creation of the Quality Forum. In 2007, RS 40:1165.2; pursuant to a Senate Concurrent Resolution, LDH established the Quality Forum. The Quality Forum, a 501(c)(3) nonprofit entity, is the official entity designated by LDH to operate LaHIE within the state of Louisiana. The Quality Forum is considered a neutral convener of Louisiana's health care stakeholders.

The Cooperative Endeavor Agreement (CEA) between the Quality Forum and LDH allowed for collaboration on projects of mutual interest. Projects included the Quality Forum's work assisting providers and health systems with improving the quality of care provided to Louisiana's vulnerable populations. This was done by monitoring and analyzing population health measures including patient-centered medical home (PCMH) transformation; EHR implementation and integration with LaHIE; quality measures identification and capture; and LaPOST.

Louisiana Health Information Exchange

Launched in 2011, LaHIE is a secure network that enables authorized health care providers and organizations to share health-related information from authorized locations across the state. LaHIE served as the state's REC and currently provides similar services to increase provider adoption of CEHRT across the state.[41]

LaHIE offers the infrastructure to support public health reporting; secure the exchange of data between providers; serve as a data repository for access to Continuity of Care documents (CCD) and longitudinal patient history across care settings; as well as support data analytics. Over 94 million transactions go over the LaHIE infrastructure monthly. There are over 4.6 million unique patient records and over 300 participants of varying types.

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[39] https://legis.la.gov/Legis/law.aspx?d=964710).
[40] http://legis.la.gov/legis/Law.aspx?d=452749
[41] Louisiana Health Care Quality Forum. https://lhcqf.org/for-providers/lahie

Figure 4: LaHIE Technology Solution
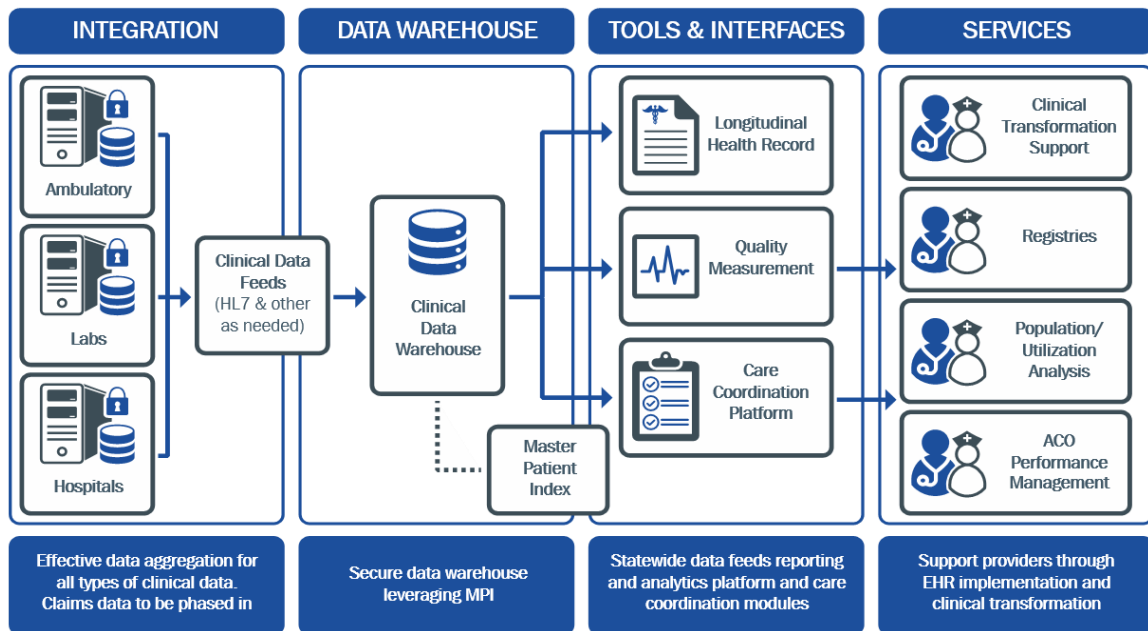
According to the LaHIE website, current services include Direct Secure Messaging (DSM) with CCD/Consolidated Clinical Document Architecture (C-CDA) document exchange, clinical portal with single sign on, public health reporting, analytics, and a patient portal. LaHIE also offers a master patient index (MPI), record locator services, audit trail, provider registry, consent management, and user identity and authentication. LaHIE offers a longitudinal patient history view across care settings. The Louisiana Emergency Department Information Exchange (LaEDIE) is a core service of the LaHIE.

LaHIE has supported several Implementation Advanced Planning Document (IAPD)-funded projects in collaboration with LDH including:

- Medicaid Provider Outreach Initiative.

- HIE Integration Assistance Program.

- Department of Corrections (DOC) EHR Technical Support and Assistance.

- PCMH Transformation Initiative.

- Louisiana Physician Orders for Scope of Treatment.

- LaEDIE improvements.

Louisiana Emergency Department Information Exchange

The 254 SR [42] charged LDH with creating a special committee to address the use of EDs for primary care, especially among Medicaid beneficiaries. An SR Legislative Workgroup identified facets of

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[42] State of Louisiana. Department of Health and Hospitals Corporation.
http://www.dhh.louisiana.gov/assets/docs/LegisReports/DHH_SR29_SCR47_20150212_Final.pdf

ED use by Medicaid recipients and established key strategies to decrease primary care utilization in hospital EDs which included: 1) establishment of an electronic ED visit registry in partnership with the Quality Forum; 2) launching a patient communications campaign; 3) issuance of prescribing recommendations for discharging narcotics for those seeking prescriptions in EDs; 4) promoting use of the Prescription Monitoring Program; and 5) development of baseline and progress measures.

LaEDIE, launched in 2015, is a LaHIE-operated application that receives and compiles ED utilization data from participating hospital EDs across the state. It was developed in support of the state's efforts to reduce non-emergent ED use among the at-risk Medicaid population. According to the Quality Forum, by the end of 2016, 72 percent of Louisiana's 110 hospitals with EDs signed LaEDIE contracts, and 83 percent were actively contributing data. The state's Medicaid managed care organizations (MCOs) may have an opportunity to utilize this data to target specific member populations in order to improve health outcomes and reduce costs.

Greater New Orleans Health Information Exchange

The Louisiana Public Health Institute (LPHI) in New Orleans received a $13.5 million award over three years to launch a Beacon Site program for showing measurable improvements in quality through health IT. Named the Crescent City Beacon Community (CCBC), the goal was to improve population health in Jefferson and Orleans counties in the wake of Hurricane Katrina. The initiative, completed in 2013, has transitioned to the Partnership for Achieving Total Health program. This program initiated the region's first real-time automatic notification system from EDs to PCMHs to support transitions of care. It also operationalized an HIE, the GNOHIE.[43]

GNOHIE offers a number of valuable services including an MPI, event notification service, clinical data repository, data analytics, alerting services, provider portal, and DSM. GNOHIE offers single sign on access through Epic and Athenahealth. As of 2016, there were 300,000-plus active patient data entries in the MPI, most of which are Medicaid beneficiaries.

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[43] Louisiana Public Health Institute. http://www.lphi.org/work/clinical-transformation/crescent-city-beacon-community-ccbc/

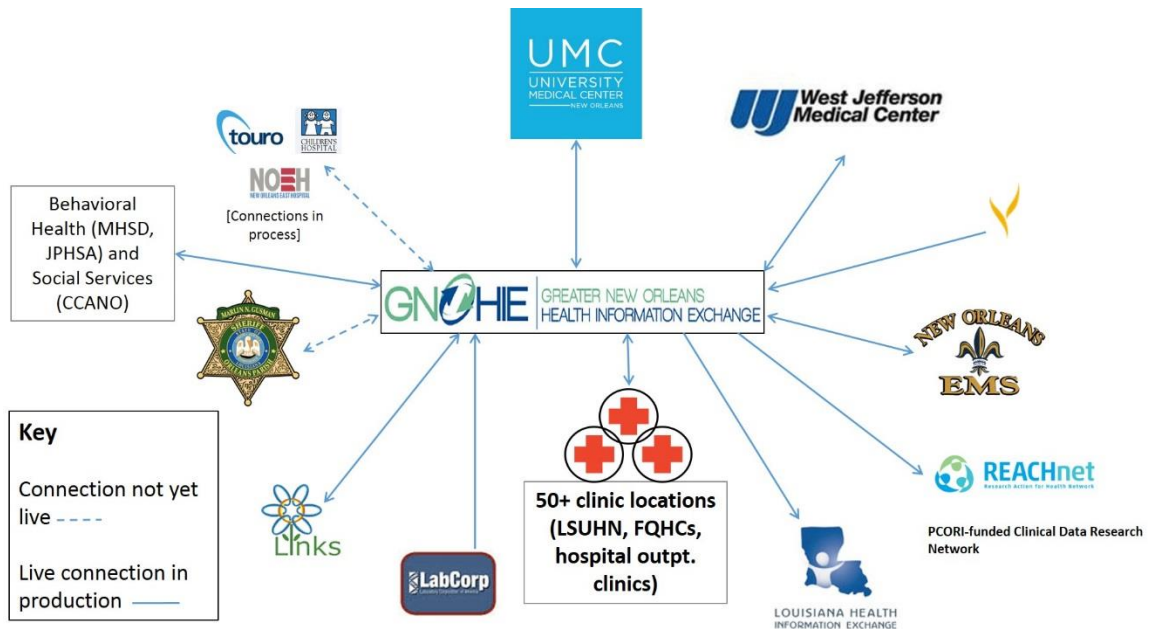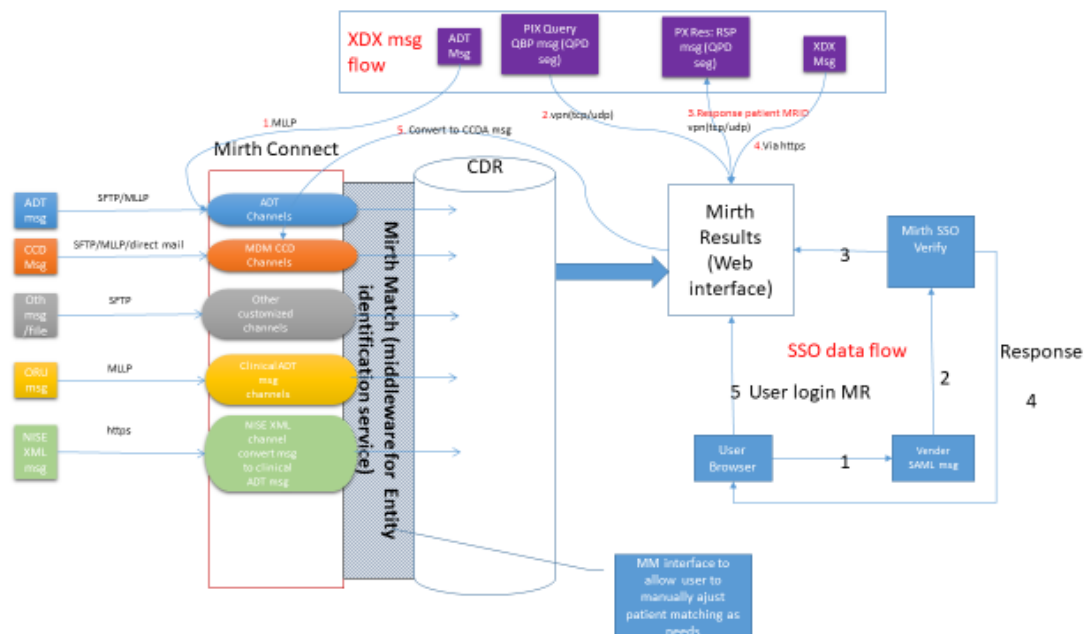*Figure 5: Greater New Orleans Partners*

Figure 6: Greater New Orleans HIE Solution

GNOHIE is currently working with FQHCs across the state, in conjunction with the Louisiana Primary Care Association (LPCA), to create a robust statewide database driven by the FQHCs and governed by providers. GNOHIE is building a centralized data warehouse that will collect claims

data to support a statewide, clinically integrated care network. This is currently a pilot project based in New Orleans. Three FQHCs are currently sub-licensing the necessary software. GNOHIE is offering practice transformation assistance as part of this initiative. The goal is to support robust analytics and business intelligence tools to serve population management, shared savings programs, and clinical quality requirements. Providers benefit from data tools to manage costs and quality through clinical and financial management integration.

GNOHIE is exploring the possibility to create a regional network organization, in coordination with LPCA to bring together FQHCs that represent approximately 100,000 Medicaid beneficiaries to work with Medicaid and MCOs to design value-based contract amendments. Re-engaging the FQHC and RHC network for provider outreach, for the Medicaid EHR Incentive Program could prove valuable as providers participating in these locations may not have elected to redirect payment to an organization, and instead, receive an incentive payment directly.

Louisiana Public Health Information Exchange

The Louisiana Public Health Information Exchange (LaPHIE) is a bi-directional exchange of surveillance data from the LDH OPH. This data is exchanged between OPH and eight medical centers across the state, alerting clinicians within participating facilities when a patient may be unaware of their human immunodeficiency virus (HIV) status or is out of care. LaPHIE alerts are issued via a standard Health Level 7 (HL7) Patient Problem Response (PPR) message and presented to providers on the opening screen of the patient electronic medical record. Additionally, LaPHIE uses a health care provider model to directly contact patients to facilitate referrals to or re-engage with health care providers.

This program was developed over the course of three years and was initially funded through a Health Resources and Services Administration (HRSA) Special Project of National Significance (SPNS) grant. This grant was awarded to Louisiana State University's (LSU) Health Care Services Division. LaPHIE is now conducted at medical centers in seven regions of the state: Alexandria, Baton Rouge, Hammond/Slidell, Houma, Lafayette, Lake Charles, and New Orleans. In 2011, OPH received a new HRSA Special Project of National Significance (SPNS) grant to expand LaPHIE to a private, nonprofit hospital in Baton Rouge. As of April 2013, LaPHIE has successfully identified over 1,000 individuals out of care. Of the 854 persons who were alerted as of December 31, 2012, 69 percent were linked to care within 90 days.

Louisiana Public Health Institute

The LPHI is a 501(c)(3) nonprofit organization that serves as a partner and convener to improve population-level health.

The CEA between LPHI and the LDH Bureau of Health Services Financing allows for the recruitment of Medicaid providers into GNOHIE, and to offer financial assistance to help offset the initial upfront costs associated with GNOHIE integration.

REACHnet

The Research Action for Health Network (REACHnet) is a Patient-Centered Research Outcomes Institute (PCORI) funded program housed within LPHI, which has established health informatics

driven data collection, recruitment of patients, and trial management for research. REACHnet provides access to longitudinal clinical data for over three million patients across Louisiana and Texas. As the REACHnet partnership grows, there may likely be opportunity to expand clinical data exchange efforts.

Health IT Infrastructure in Rural Louisiana

One of Louisiana's challenges, like many states in the nation, is adequately addressing health services in rural areas. Several rural definitions are provided below. *Figure 7* below illustrates the USDA Business and Industry eligible locations with greater than or equal to 50,000 people with adjacent and contiguous urbanized areas. The Office of Management and Budget (OMB) Metropolitan Statistical Area designation is defined as a core urban area with greater than or equal to 50,000 people, together with adjacent counties, that have a high degree of social and economic integration (as measured by commuting to work) shown in *Figure 8*.

Figure 7: USDA Rural Definition
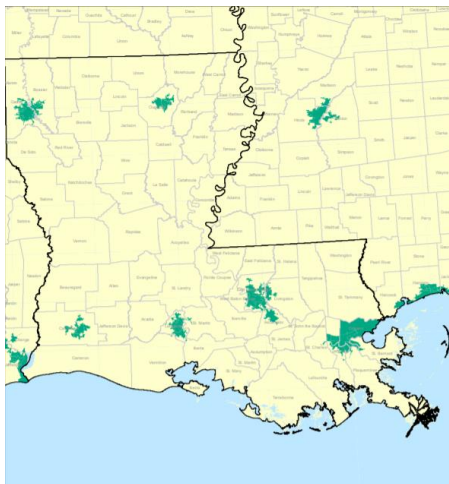
Figure 8: OMB Rural Definition

Louisiana Rural Health Information Exchange

In 2007, the State entered into a CEA with the Rural Hospital Coalition, Inc. (the Coalition), to establish the Louisiana Rural Health Information Exchange (LARHIX), a multi-regional health care information exchange. With $13 million in funding, seven rural hospitals acquired EHR technology and were linked to LSU's Health Sciences Center – Shreveport (LSUHSC-S) via a state-of-the-art integration engine, permitting a panel of specialists to access a rural patient's medical record in real-time, while consulting with the patient over the telemedicine equipment located at the rural hospital. In 2008, the State entered into a five-year CEA with the Coalition and provided funding to expand the network to seven additional rural hospitals. LARHIX has been distinguished as a network model receiving multiple award nominations by national technology organizations.

The Louisiana Hospital Coalition is a statewide 501(c)(6) trade organization consisting of 48 small rural hospitals. A key accomplishment of the Coalition was passage of the Louisiana Rural Hospital Preservation Act of 1997, which secured special protections for rural hospitals including maximum reimbursements.

4.7. Louisiana State Programs and Community Collaborations Adopting and Utilizing Health IT

Crescent City Participant Community

The Crescent City Participant Community is administered by LPHI and its partners include the New Orleans Health and Police Departments, homeless court, metro human services, Orleans Parish Forensic Mental Health Coalition, and the Partnership for Achieving Total Health. The initiative seeks to use health IT and HIE to share management and coordinate care among participating entities by aggregating data from EHRs, public community-level records, public health information, and the GNOHIE. The project aims to improve care and reduce costs for 400 people who are diagnosed with a mental illness.

Louisiana Health Center Controlled Network (HCCN)

The Louisiana HCCN is administered by the Louisiana Primary Care Association (LPCA) in partnership with the LPHI. HCCN is a HRSA-funded initiative of 31 FQHCs across Louisiana focused on quality improvement through adoption of health IT. The project provides technical assistance to help participating health centers meet core objectives in health IT implementation and meaningful use, data and quality reporting, population health management, and quality improvement. The Louisiana LCPA represents 35 federally-funded community health centers across Louisiana.

Louisiana Emergency Response Network[44]

The Louisiana Emergency Response Network (LERN) within LDH, created by the legislature in 2004, maintains a statewide system of care coordination for patients stricken by traumatic injury or time-sensitive illness. LERN is organized into nine geographic regions, which are guided by a Regional Commission.

A key strategic priority was the establishment of state registries for trauma, stroke, and segment elevation myocardial infarction to facilitate injury prevention efforts and performance improvement. As of 2015, seven hospitals have submitted data to the state trauma registry, totaling over 39,000 records. The nine regional commissions continue to engage local Emergency Medical Services (EMS) in improving responses to trauma and time-sensitive illness.[45]

Electronic Rural Health Information Technology[46]

The Electronic Rural Health Information Technology (E-RHIT) organization was established in 2011 as a result of a merge with LERN and the Quality Forum. As of 2017, the network supports 33 ambulance providers. Through the program, resources are provided for the adoption and use of Electronic Patient Care Reporting. The network has developed and employed a National EMS Information System (NEMSIS), a compliant EHR template, a data dictionary, and data that can be

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[44] https://lern.la.gov/
[45] http://www.dhh.la.gov/assets/docs/budget/FY2017-2022LDHStrategicPlan.pdf
[46] https://www.ruralhealthinfo.org/community-health/project-examples/795

used to inform ambulance services on areas for improvement, injury trends, and identifying areas of disconnect.

Center for Public Health Informatics (CPHI)

The Center for Public Health Informatics (CPHI) is charged with driving overall data policy. According to the LDH strategic plan, "CPHI supports the agency's capacity to manage and use data to optimize operations and perform coordinated analytics to advance core public health functions." CPHI serves as a collaborator across agencies to support data sharing and analytics between agencies, and works to strengthen public access to agency data.

In 2015, CPHI launched an EHR system in its 64 parish health units. CPHI trained clinical staff to utilize the EHR technology and coordinated with all public health programs. This approach enabled EPs to attest to meeting MU requirements that supported the EHR installation.

The most recent LDH strategic plan indicates CPHI is a member of the Traffic Records Coordinating Committee which utilizes claims data from EDs via Louisiana Hospital Inpatient Discharge Data (LaHIDD) system to improve traffic safety throughout the state.[47]

CPHI EHR Systems Implementation Update

In 2015, CPHI launched an EHR in 64 parish health units, which replaced a paper-based system with only basic claims submission capabilities among disparate systems. The new system allows for clinical quality measurement and meeting MU goals. Staff across all parishes now have access to all patient information. The implementation and transition was completed in partnership with the Quality Forum.

In late 2016, the Quality Forum partnered with the Louisiana Department of Public Safety and Corrections (DPS&C) to assess and select a certified EHR system for the DPS&C headquarters, seven state correctional facilities, and more than 30 EPs. Representatives from both groups are currently working together to implement and integrate the EHR system. Scheduled for completion in July 2018, the system is designed to support the department's ability to monitor and improve the health and safety of approximately 17,000 incarcerated offenders in DPS&C's custody. The system will allow expanded access to patient data, enabling data generation related to clinical outcomes and patient profile/demographics, and will ensure patient data is electronically available to incarcerated individuals and their providers upon release.[48]

Office of Technology Services

In 2013, the state of Louisiana began an information technology (IT) consolidation process. On July 1, 2014, the Office of Technology Services (OTS) was formed, pursuant to Act No. 172 and Bill No. 481. This legislation provided authority to the State to procure IT systems and services. OTS is currently serving LDH through several infrastructure improvements and application modernization. The components of most interest, according to key OTS stakeholders, are master data management and warehousing, including master person and entity indexes. While core infrastructure is available, the main barriers include lack of data sharing agreements, collaboration,

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[47] Louisiana Department of Health Strategic Plan 2017 – 2022, Section 09-326 Office of Public Health, page 7.
[48] https://www.lhcqf.org/e-news-june-2017

and standards. OTS is beginning to address these issues by promoting stakeholder collaboration and establishing the Enterprise Services Group. This group is charged with developing an Enterprise Data Management Plan, including a data sharing agreement template. The goal is to support the individual mission of each agency, and break down any cultural data silos that exist in order to maximize the full potential of an integrated infrastructure.

OTS also plays a role in overall data governance, infrastructure improvements, and modernization across state agencies. OTS noted two key groups involved in general IT governance agency-wide: an Enterprise Data Governance (EDG) Group, of which LDH is not a member, and the Enterprise Services Group, of which LDH is a member. The aim of OTS according to state agency stakeholders is to collaborate and set an agreeable, structured set of guidelines for data sharing among state agencies.

4.8. Health IT/HIE Initiatives Supporting Louisiana State Medicaid

Louisiana, like many states, is in the process of updating legacy Medicaid systems. The state is currently planning improvements to the MMIS by leveraging existing enterprise architecture and procuring new systems. This includes modernization of the eligibility and enrollment system, use of a single sign-on portal, and exploration of master data management and data warehousing.

Managed Care

The goal of Louisiana's managed care program is to manage cost, utilization, and quality. Louisiana's Bayou Health program currently includes five managed care plans:

- Aetna Better Health of Louisiana (new entrant).

- Amerigroup Louisiana, Inc. (current prepaid incumbent).

- AmeriHealth Caritas Louisiana, Inc. (current prepaid incumbent).

- Louisiana Health Care Connections (current prepaid incumbent).

- United Health Care Community Plan (current shared savings incumbent).

Plans are required to report Healthcare Effectiveness Data and Information Set (HEDIS), Consumer Assessment of Health Care Providers and Systems, and other clinical and administrative performance measures LDH deems appropriate. Doctors and other medical providers can sign contracts with as many MCOs as they wish and may remain Medicaid fee-for-service (FFS) providers to treat any patients who are not enrolled in Bayou Health[49].

Public Health Reporting

The timely submission of public health data to registries allows clinicians to make more informed decisions when providing care. Access to easily available public health data provides historical data that contributes to overall public health, and supports timely and effective prevention and response. LDH currently offers registries that accept submissions to achieve MU. While providers attest to

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[49] http://dhh.louisiana.gov/index.cfm/newsroom/detail/3154

meeting several specialized registries at the state level, a complete list of registries that have declared readiness for MU submissions is unverified.

Technical connections exist between provider's CEHRT and several state public health registries, yet registry participation data was not provided during the Roadmap project. Currently, efforts are underway to ensure transmission from provider's CEHRT to the state registries through LaHIE; however, investments are on hold. As illustrated by New York, central Texas, Indiana, and New Mexico, public health systems integration with HIE can result in improvements in care coordination, clinical efficiency, and data quality, however several states cite challenges in HIE integration efforts.[50]

Immunization Registry

The Louisiana Immunization Network for Kids Statewide system (LINKS) was mandated in 2017 by House Concurrent Resolution (HCR) 51 which states providers must enter all vaccinations into the system. As such, the registry consolidates vaccination history for patients who visit multiple providers and protects the public from over or under immunization. Previously, as the name suggests, the registry collected vaccination records solely for children; however, under the new 2017 HCR 51, this mandate has been extended to cover adults regardless of age. Providers who submit immunizations to the registry may be eligible to meet certain objectives under the Medicaid EHR Incentive Program and Quality Payment Program. For submission of quality measure reporting, national guidance recommends bi-directional exchange and standard formatting for reporting immunizations. The registry is currently able to accept unidirectional submissions through LaHIE and has bidirectional capability with LSU, Oschner Health System, and several other large hospital systems. The registry is currently working with GNOHIE to establish a unidirectional connection.

Syndromic Surveillance Registry

The Louisiana Early Event Detection System (LEEDS) is the state's syndromic surveillance system. It processes hospital ED and urgent care data to identify records that are indicative of one or more of the syndromes tracked by OPH.[51] Per LaHIE, the HIE provides unidirectional transmissions to the registry.

Electronic Laboratory Reporting Registry

LaHIE provides unidirectional transmissions to the registry according to the Quality Forum. Electronic Laboratory Reporting submissions are accepted for the purposes of meeting MU by the sexually transmitted infection/HIV combined program, which additionally shares data with LaPHIE to create an out-of-care list that is updated daily. When patients enter a facility, an alert is generated to ensure providers can appropriately treat or refer patients with infectious disease.

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[50] https://www.healthit.gov/sites/default/files/FINAL_ONC_PH_HIE_090122017.pdf
[51] http://www.dhh.louisiana.gov/index.cfm/page/1994

Cancer Registry

The Louisiana Tumor Registry is located at the LSU Health Sciences Center. Currently, all cancer cases throughout the state are reported to the registry per the 2001 revision.[52] The Cancer registry has declared readiness to accept transmissions from EPs. To date, several EPs are connected and actively transmitting to the registry. The registry is currently connected to several national and state major pathology labs (hospital-based and freestanding). The registry also receives ADT messages with International Classification of Diseases, 10th Revision codes for clinically-diagnosed cases from 10 hospitals. In addition, the registry receives cancer-related pathology results for greater than 90 percent of microscopically-confirmed cases in the state. The cancer registry is another candidate for integration with the state Medicaid agency and LAHIE, GNOHIE, and other HIE organizations.

Electronic Clinical Quality Measures

Electronic Clinical Quality Measures (eCQM) measure the performance of hospitals, clinicians, and others who provide health care services. eCQMs primarily look back at recent activities to determine whether the evidence-based standard of care was adhered to for each patient. Before advancing to the next stage of quality improvement, CQMs must take place.[53] Once CQMs have been completed, clinical decision support in tandem with electronic CQMs tailored to a patient's own history, preferences, and data to customize care recommendations can be utilized. Louisiana has published the priority CQMs in the Medicaid state plan, but may consider harmonizing across all plans. LDH has the opportunity to collaboratively work with MCOs to create a meaningful business tool for the provider community. Additionally, LDH does not currently have a planning framework to incorporate the collection of state-specific or quality objectives and measures into the Medicaid enterprise architecture.

Louisiana Department of Corrections

The Louisiana Department of Corrections is anticipating the launch of CEHRT in April 2018, with technical support provided by the Quality Forum, and funding through HITECH. Utilization of health IT within corrections facilities can aid in streamlining post-release coordination of care. The aim is to reduce the likelihood of re-incarceration by promoting informed primary care, behavioral health, and substance abuse services upon release.

Prescription Drug Monitoring Program[54]

In 2006, RS 40:1004, established the State's prescription drug monitoring program. The PDMP was created by the Louisiana Board of Pharmacy in 2006 to monitor controlled substances and other drugs of concern in the state. RS 40:1006 outlines PDMP reporting requirements and RS 40:1007 outlines PDMP access and audit rules.

In 2010, Louisiana was one of the first states[55] to require doctors and prescribers to search drug histories before prescribing certain medications. In 2017, SB55 and SB75 won approval from the Senate Health and Welfare Committee. These rules require anyone licensed to prescribe opioids

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[52] https://sph.lsuhsc.edu/louisiana-tumor-registry/cancer-reporting/
[53] https://ecqi.healthit.gov/content/about-ecqi
[54] http://www.legis.la.gov/legis/ViewDocument.aspx?d=1027240
[55] http://www.govtech.com/policy/In-Opioid-Epidemic-States-Intensify-Prescription-Drug-Monitoring.html

to be automatically enrolled in the PDMP, mandate enrollment, and require continuing education credits for continued use of the system. The rules would also require additional consumer representation on health professional licensing boards.

As a component of Louisiana's approved Section 115 Substance Use Disorder (SUD) demonstration, the State is developing and implementing a SUD Health IT Plan that includes 1) enhancing the health IT functionality to support PDMP interoperability; and 2) enhancing and/or supporting clinicians in their usage of the state's PDMP.[56] The Roadmap aligns with the current future state and summary of actions needed in the State Health IT / PDMP Assessment and Plan.

Claims and other Health Data Collection

The LaHIDD project was mandated by legislature in 2010. By 2015, collection and processing of this data had been streamlined, updated, and simplified to remove barriers for facilities to report. This is a critical source of data for chronic disease and other health data used by internal sources within LDH, as well as external sources. LDH plans to reach out to non-reporting facilities to ensure compliance with requirements.

CPHI is in the process of promulgating a 2015 ruling that required claims data to include emergency and ambulatory care data from EDs. The Health Data Panel has been reconvened in this process. The goal is to enable OPH access to ED data related to injury, opioid abuse, Medicaid case management for inappropriate ED use, and other disease outcome studies.

4.9. Stakeholder Engagement Themes

Roadmap stakeholder engagement activities and data analysis produced the following four main themes or areas of importance and focus as described below.

Theme 1: Stakeholder Engagement, Governance, and State Vision for Health IT

One of Louisiana's greatest assets is its community of health care leaders and genuine interest in advancing HIE. There is a strong need for a shared HIE vision in the state to ensure the community is aware of the planning, implementation, and evaluation of health IT and HIE projects. The community also needs to be able to make recommendations to ensure duplicative projects are not simultaneously funded. Information regarding project status updates, barriers, target population, stakeholder participation, and financing is often unavailable, causing confusion and frustration to the community at large. Currently, there is not a clearly defined authority to ensure health IT coordination among statewide stakeholders and establish a clear and coherent communication plan for the State to create, review and approve messages to the community. Louisiana does not have a formal structure to advocate to create or maintain policy or law, nor promote health IT adoption or national incentive programs. With the breadth of activity and variability of projects, there is still a strong willingness from stakeholders to assist the State in defining this vision. While

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[56] http://ldh.la.gov/assets/docs/BehavioralHealth/News/SUD-Implementation.PDF

stakeholders are not aware of a coordinated statewide vision or plan on health IT interoperability, many expressed a desire to improve communication with the State.

When asked to envision LDH's role in supporting areas of HIE and HIE growth, stakeholders provided the following responses:

- *"Better communication of the HIE/HIT strategy and activities within LDH".*

- *"Drive standardization across the board".*

- *"Promotion and governance".*

- *"Leading the discussion to enable cooperation and trust among disparate stakeholders".*

- *"Incentivize providers to participate in the HIE".*

- *"Assist agencies to connect to HIEs for data exchange".*

- *"Provide technical support for adopters of HIT".*

Survey findings indicate a wide distribution of prioritized goals and areas of focus among stakeholders, as shown in *Figure 9* below.

Figure 9: Quantitative Survey Results – Priority Areas

Rank each of the following healthcare related objectives in order of priority for your organization to address over the next 12 months (Rank your top 5 in order of priorities*)

Answered: 59   Skipped: 21
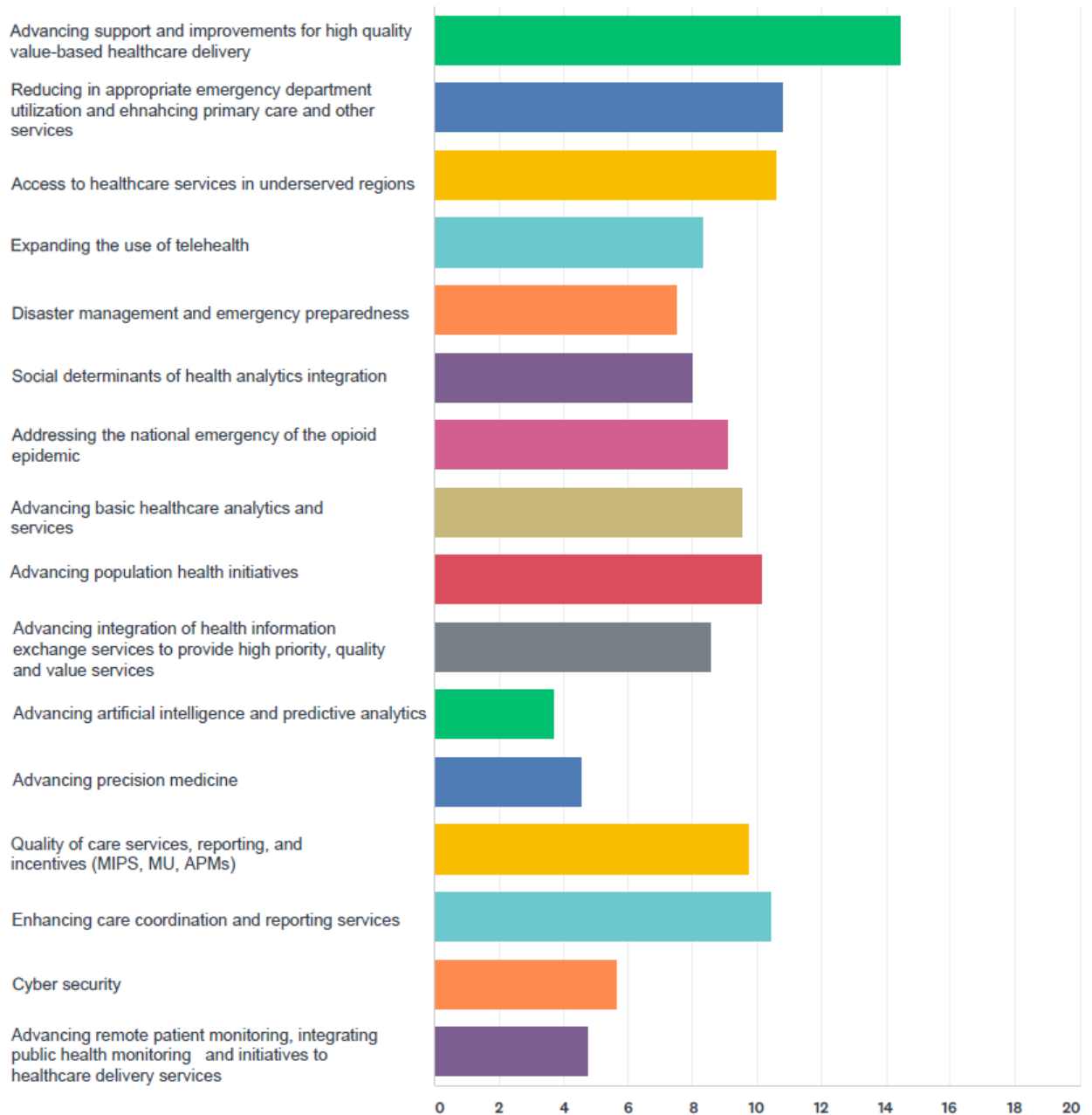
Use of Stakeholder Input

LDH currently does not have a method by which stakeholder engagement and provider outreach occurs to ensure all health organizations, including large hospital systems, are participating and not hindering data exchange. Ensuring health IT/HIE supports providers in health care service delivery is critical to ensure applications integrate successfully into workflows and are utilized by health care professionals. Stakeholders acknowledge the LDH is willing to gather their input but then makes decisions regardless of stakeholder feedback. Ensuring providers are active participants in decisions surrounding health IT and HIE is critical to ensure information is available to a patient-centered care team based across the continuum of care.

Stakeholder recommendations regarding key areas the LDH can better leverage health IT and HIE include:

- Optimizing the completeness, availability, and accessibility of population health (chronic disease management and wellness) parameters at the individual patient level.

- Overcoming the limitations of proprietary, vendor-based EHR data silos through vendor independent data standards.

- Working toward a local cooperative demonstration of a community (or regional)-level population health infrastructure.

- Establishing a statewide provider directory to be made available to all state health care organizations, including management and maintenance infrastructure, to keep the data current and accurate.

- Expanding the capabilities and use of LaPHIE, a cooperative health IT effort of LDH OPH LSU Health Care Services Division.

- Overcoming the challenges of data and process deficiencies related to managing the social determinants of health.

- Addressing the overutilization of EDs, especially by Medicare recipients in finding solutions to the clinical care processes and clinical information needs associated with the pre- and post-ED components of the care continuum.

Finally, several stakeholders recognized that innovation is occurring in silos, and there is a need for the LDH to serve as a convener to create guidelines and standards in support of specific initiatives. Additionally, stakeholders reported in general, there is a lack of vision and leadership in regard to integration of existing HIEs, or development of a network model that would promote interoperability among existing service providers. Other important topics to the community were reporting of CQMs, reimbursement for and support of telehealth utilization, patient identification issues, lack of a provider directory, data blocking, and there were polarized views on the scope of potential legislation.

Theme 2: Data Availability and Data Quality

Stakeholders throughout the engagement process expressed a need for access to quality data and for a decision-making entity to assist in determining data standardization. Also mentioned were specific challenges associated with locating patients, and needs for a unique patient identifier among disparate systems. Participants cited data availability as an issue – the need for data that would greatly improve population health if it were made available. Several stakeholders expressed frustration that LDH was already collecting rich community data; however, that data is not made available at the point of care, where it is needed most.

> *"Data ownership is a real thing and transparency is necessary."* – *Louisiana Stakeholder*

Data currently exists in silos or in disparate health systems that lack interoperable connections. Discussions with stakeholders collected through a qualitative survey affirmed a need for data management, data governance, and ensuring data is shared between organizations.

When requested to describe specific tasks to improve data availability and exchange through a qualitative survey, respondents noted the following:

- "Timeliness of information – not require provider to log in to multiple platforms to access information."

- "Single point of data entry and ability to transfer data from one system to another. Connected health technology for patients and monitoring of patients with effective reimbursement models to support. Care management reimbursement models to reflect extensive interdisciplinary coordination. Transparency into how HIEs are governed and function. Effective and working committee structures. Alignment with national strategy around cyber risk and effective communication and solutions. Collaboration (sharing) across surveillance and health care providers. EHR interoperability with financial databases and other applications (peer review, credentialing, etc.)"

- "Recognize the nature of the "regional" exchange that has produced results – also require hospital systems – particularly the largest one in the state, to exchange data with the HIE."

During an internal LDH Discovery Session, it was telling that while session participants demonstrate enthusiasm for specific HIE exchange analytics and use cases, it appears the group also recognizes the need to first establish core governance, standards, and infrastructure enhancements for data to be exchanged. Participants came to an agreement that the agency needs a better understanding of what data is available, what data is important to stakeholders, and how those align. The following are internal stakeholders' suggested actions to improve data quality within LDH and across state agencies:

- Conduct an assessment of current and needed data sources.

- Review data privacy and security standards.

- Establish clear policies and procedures regarding data management.

LDH has an engaged and committed prioritization team holding regular, formal monthly meetings to discuss actionable items to achieve robust data governance, which is paramount for the LDH to achieve long-term goals of improved health care delivery, quality, and outcomes.

Theme 3: Health IT/HIE Adoption and Utilization Readiness

EHR Adoption and Utilization

Quantitative survey respondents were asked to rate the level of effectiveness on strategies to increase adoption, exchange, and use of electronic health information. Weighted averages indicated "technical assistance with implementation of HIE" and "continued support of EHR adoption efforts" would be most effective. Additionally, respondents ranked "access to high-speed internet (e.g., broadband, cable)" and "lack of technical support or expertise" as the top two barriers to organizations' use of electronic exchange with outside organizations. While the Quality Forum has focused efforts to increase adoption of health IT throughout the state, overall adoption of health IT products and services continue to be limited with an ongoing need for technical assistance. As illustrated in *Figure 10* below, 83 percent of respondents indicated they have implemented an EHR in their practice and are being utilized by the majority of providers (over 75 percent). Sixty percent of respondents reported their clinic's use of charts for patient information tracking is entirely paperless.

Figure 10: Quantitative Survey Results – EHR System Status

Which phrase best describes your use of an EHR system?

Answered: 58   Skipped: 22
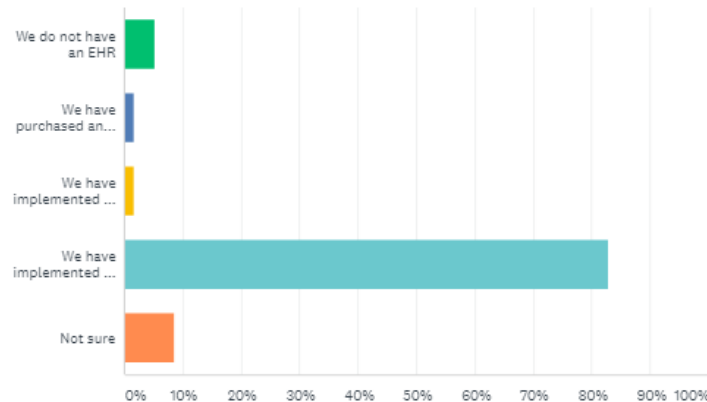
ANSWER CHOICES	RESPONSES	
We do not have an EHR	5.17%	3
We have purchased an EHR, but aren't using it yet	1.72%	1
We have implemented an EHR, but it is not used by the majority of providers	1.72%	1
We have implemented an EHR, and it is in use by the majority of providers (over 75%)	82.76%	48
Not sure	8.62%	5
TOTAL		58

HIE Readiness in Louisiana

There are a number of notable observations surrounding Louisiana's HIE activities. First, there are multiple ongoing state and community HIE projects ranging from single, focused initiatives to upwards of 70 multi-faceted projects. The number of projects occurring are a result of provider-driven need and/or interest from segmented stakeholder groups. Several organizations are choosing not to collaborate in HIE due to discordant leadership and competing interests, which directly impacts the health and wellbeing of the community. These competing priorities and lack of prioritization by the State prevent stakeholders from rallying around one or two focused initiatives to support. There is a strong willingness to exchange electronic health data; however, there is a lack of understanding of the value proposition for joining an HIE. Stakeholders noted a lack of leadership in promoting use of and integrating HIE services in the state.

In the quantitative findings shown in *Figure 11* below, 69 percent of respondents reported their organization offers a patient portal, and 69 percent of respondents answered in the affirmative that their EHR is able to generate an electronic summary of care record.

Figure 11: Quantitative Survey Results – HIE

Is your EHR able to generate an electronic summary of care record (e.g., a continuity of care document) for patients who require a referral to another provider, or transition from one setting of care to another (e.g., hospital, primary care clinic, nursing home, home health)?

Answered: 55   Skipped: 25
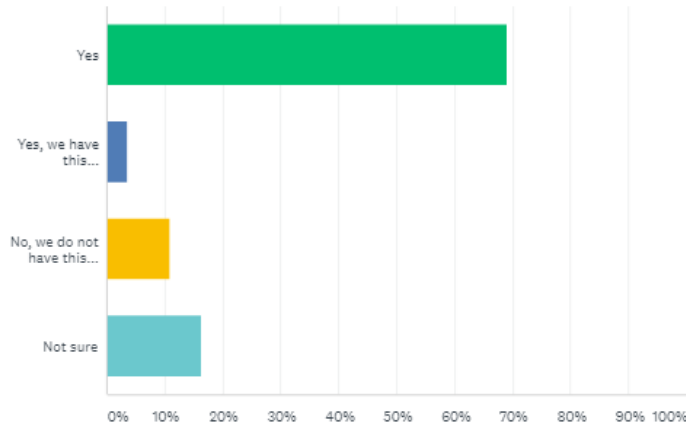
ANSWER CHOICES	RESPONSES	
Yes	69.09%	38
Yes, we have this functionality, but it is turned off or we do not use it (provide explanation below)	3.64%	2
No, we do not have this functionality	10.91%	6
Not sure	16.36%	9
TOTAL		55

The following are respondents' perceptions regarding HIE:

- **Need a Productive Path Forward.** In order to achieve a ubiquitous, secure network infrastructure, the AIU to certified EHR technology must take place. As cited previously, national studies indicate Louisiana has made only moderate advancements in the adoption of health IT; however, through information collected for the purposes of developing the Roadmap, we have found responses indicate that respondents have an EHR and are ready for HIE. One major barrier to participation in LaHIE cited by stakeholders was the disassociation of its cost to join the statewide HIE without a compelling value proposition.

- **Value-added Services.** A statewide provider and patient directory were each noted as a potential value-added service for LaHIE. Additionally, stakeholders noted that since LaHIE does not collect robust data from a range of providers, especially those in smaller, independent practices, offering population health services to providers would also be difficult.

- **Unstructured Network of HIE Organizations within Louisiana.** While LaHIE is the SDE, other private HIEs exist and are emerging. GNOHIE serves as a valuable tool to the health care community of New Orleans, as reported by key stakeholders. However, the services are generally transactional at this point, and it is a regionally-based HIE. In general, stakeholders agreed that multiple HIEs could exist while the federal and state-funded HIEs may elect to merge. There must also be a central governing body to ensure HIEs are operating under standard policies and procedures, especially around consent; ensuring consistency and standardization to support data sharing across platforms; and establishing a commitment to data sharing between organizations.

Emerging HIEs in Louisiana

The health care community has begun to respond to the apparent lack of statewide HIE connectivity and services in Louisiana. Two key stakeholder groups described plans to develop and launch interoperability solutions.

In November, 2017, the Louisiana State Medical Society (Society) announced a partnership with KaMMCO Health Solutions, Inc. (KHS) to launch a statewide HIE with supportive analytics tools.[57] The key drivers behind were cited as a need for 1) MACRA preparedness; 2) reliable, robust statewide HIE infrastructure and services; and 3) motivation and willingness to share data. Outreach and onboarding to Society members is anticipated to begin between March 2018 and April 2018, followed by connectivity negotiations with LaHIE, GNOHIE, LDH, and major hospital systems, coordinated by the Louisiana Hospital Association (LHA). A key benefit of the KHS solution was the ability to use a secure, web-based portal for review of records, which is anticipated to help rural providers especially, meet the demands of MACRA and improve care coordination.

LHA is currently reviewing an encounter alerting service that would provide a value-added service to their more than 150 members. This would be an expansion of an existing quality initiative that tracks readmission rates with home health agencies, which relies upon ADT alerts, which is widely cited as a key value to providers as it offers real-time, critical information. The Louisiana Health Information Network (LHIN) has been collecting and sharing hospital data since 1985, including aggregated Louisiana hospital-based data submitted by the LHA. LHIN is a statewide all-payer data

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[57] Louisiana State Medical Society Press Release. http://lsms.org/news/376163/LSMS-to-Partner-with-KaMMCO-Health-Solutions-for-Statewide-HIE-and-Analytics-Tools.htm

sharing program which provides participating facilities with access to current, patient-level data. An agreement is expected to be executed within the first quarter of 2018.

At the time of stakeholder engagement activities, LHA and the Society have yet to initiate development and/or promotion of their respective HIE organizations.

Telehealth

Stakeholders interested in utilizing telehealth noted they may expect the State to reimburse for services similar to private payers rates. The State does not pay at the same rates as an in-person visit, and only reimburses the distant site provider; however, stakeholders recognized the potential of telehealth, especially in serving rural communities.

An Effective Health IT Tool: Louisiana Emergency Department Information Exchange

Louisiana presently does not have a statewide notification service. An effective health IT tool, ADT notification services provided by several state organizations and HIE organizations, are noted to have value to stakeholders. Currently, there are several entities providing notification services including the quality forum's LaEDIE, event notification services (ENS) through the GNOHIE, and other emerging event notification, including services provided by the LHA. Notifications to ACOs have proved valuable. With minimal financial investment, these feeds are an important way to assist providers in care coordination. Through discussions with stakeholders and information obtained from survey results, as shown in *Figure 12* on the following page, stakeholders reported these feeds to be utilized primarily by hospitals, and to date, have not been widely adopted for use by primary care providers. Only six percent of respondents reported receiving notifications from hospitals outside a provider's health system, while the percentage increased to 19 percent within the provider's health system.

Figure 12: Electronic Notification Service

Do your providers receive automatic electronic notification (i.e., an alert) when any of their patients visit a hospital emergency department? (Select all that apply)

Answered: 52   Skipped: 28
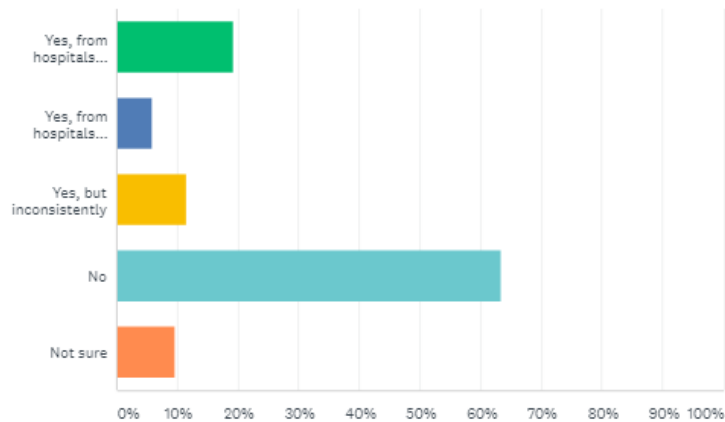
ANSWER CHOICES	RESPONSES	
Yes, from hospitals within our health system	19.23%	10
Yes, from hospitals outside our health system	5.77%	3
Yes, but inconsistently	11.54%	6
No	63.46%	33
Not sure	9.62%	5
Total Respondents: 52		

There is apparent strong health care provider and Medicare ACO support for LaEDIE, the ADT notification service provided by LaHIE. ADT notifications are the most sought-after and utilized type of data exchange functions among Medicare ACOs. However, the LaEDIE system does not go beyond ED encounters, and must be supplemented by data directly from ACO participants. LaEDIE would increase in value if the service expanded beyond ED to include inpatient notifications as well.

LaEDIE received low to moderate support from other hospital-based stakeholders. The LHA has been collecting and sharing claims data from over 100 hospitals for over 20 years, and noted members like the ADT feed because it is faster and more efficient. LHA anticipates launching its own encounter alerting service for its members within the next year.

While cost of participation in LaEDIE was not noted as a barrier by stakeholders, lack of financial incentive or knowledge of what to do with the data, as well as general lack of transparency of data quality and integrity, were each noted as barriers to utilization, especially without 100 percent of hospitals participating.

Additionally, providers outside of health systems, including behavioral and mental health providers, are not yet receiving notifications. Specialty consultation notifications, especially to behavioral

health providers, would be an important step for the state's behavioral health clinics, allowing providers to understand their patients are hospitalized when they miss appointments for physical or speech therapy.

Patient Consent

The State does not have a formal policy around consent specific to HIE outlined in statue or regulations[58], therefore, basic consent requirements apply. In effect, Louisiana is an opt-in state with respect to state-supported HIE.[59] According to LaHIE's 2011 policies and procedures, "each participant that is providing data may elect to adopt an individual consent policy" and relies upon the Health Insurance Portability and Accountability Act (HIPAA) Privacy Rule's provisions for "optional consent". The Partnership for Achieving Total Health governance for GNOHIE shifted to an opt-out consent model in July, 2014,[60] but includes explicit policies around sensitive data.[61] GNOHIE's policies and procedures documents noted a scheduled review date of May 20, 2014, and no specific patient consent document was available.

Interviewees also expressed that the Veteran's Administration (VA) and the Department of Defense have "opt-in" policies, creating difficulty for organizations to access records.

The lack of clarity around consent is a further frustration for the community. Respondents of the quantitative survey, shown in *Figure 13* on the following page, indicated that the method of tracking patient consents is through scanned paper consents; signed paper consents are scanned into the EHR. Additionally, nearly 77 percent of respondents indicate that their clinic's EHR limits users to view only the information they need based on their role or staff function. If Louisiana remains an opt-in state, a standardized and transparent policy available across all HIEs operating in the state, as well as electronic consent management services, may aid to ensure participating providers are able to share and access available data.

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[58] https://www.healthit.gov/sites/default/files/State%20HIE%20Opt-In%20vs%20Opt-Out%20Policy%20Research_09-30-16_Final.pdf
[59] https://www.healthit.gov/sites/default/files/Individual%20State%20HIE%20Organizations%20Consent%20Policy_20160930_FINAL.PDF
[60] http://gnohie.org/wp-content/uploads/2015/03/GNO001-Website10.pdf
[61] http://gnohie.org/wp-content/uploads/2015/03/GNOHIE-Sensitive-Data-Policy_Renewal-5-20-14.pdf

Figure 13: Quantitative Survey Results – Patient Consents

How does your facility track patient consents?

Answered: 52   Skipped: 28
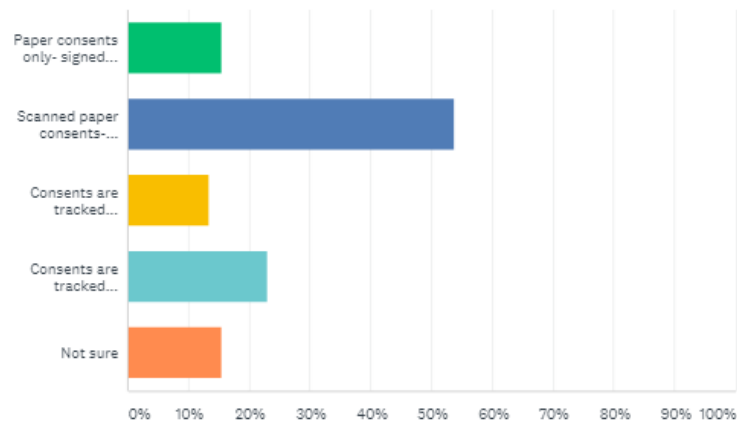
ANSWER CHOICES		RESPONSES	
▾	Paper consents only- signed consents are filed as paper	15.38%	8
▾	Scanned paper consents- signed paper consents are scanned into the EHR	53.85%	28
▾	Consents are tracked electronically (with check boxes, electronic signatures, etc.) but the system can only capture one consent preference per patient	13.46%	7
▾	Consents are tracked electronically (with check boxes, electronic signatures, etc.) and the system can capture multiple consents per patient	23.08%	12
▾	Not sure	15.38%	8
Total Respondents: 52			

Another issue associated with patient consent is stakeholder's concern for privacy and security regarding adding mental health data to EHRs. The referral process to developmental centers, for example, often still takes place on paper through fax. A stakeholder representing a behavioral facility within Louisiana is accepting electronic referrals with notifications and updates to follow solely through a major hospital system.

Theme 4: Provider Burden and Data Submission

Representatives of provider organizations participating in interviews discussed the need to streamline the way quality measures are obtained by the State. Interviewees discussed the need for a single sign-on portal from which providers could submit quality metrics in lieu of five separate MCO portals. In addition, interviewees adamantly requested LDH prioritize revision of the CQM submission process. See CQM tracking results in *Figure 14* on the following page.

Figure 14: Quantitative Survey Results – CQMs

How are most quality measured including clinical quality measures (CQMs) tracked?

Answered: 52   Skipped: 28
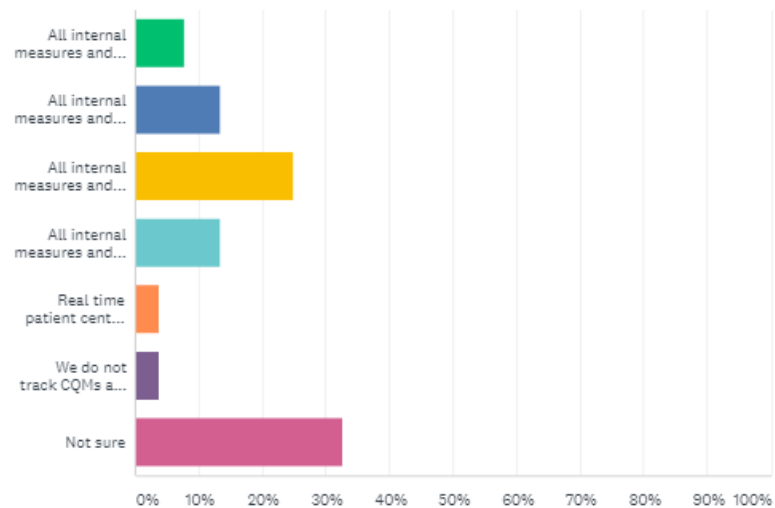
ANSWER CHOICES	RESPONSES	
All internal measures and CQMs are tracked manually	7.69%	4
All internal measures and CQMS are tracked electronically and reported ad-hoc	13.46%	7
All internal measures and CQMs are tracked electronically through an EHR	25.00%	13
All internal measures and CQMs are tracked electronically through an EHR in near real-time	13.46%	7
Real time patient centric eCQMs calculated across systems, contracts and popluations	3.85%	2
We do not track CQMs at this time	3.85%	2
Not sure	32.69%	17
TOTAL		52

5. The Louisiana Health IT Roadmap

5.1. Louisiana Health IT Roadmap Initiatives

The Roadmap reflects the ultimate goals of the State to bring together people, employ appropriate resources, and implement the technology and policies necessary to enhance care coordination, strengthen the state's health IT infrastructure, and reduce health care costs, while improving health outcomes for Louisianans. The Roadmap is designed for use by LDH and community stakeholders as they collectively move away from costly, fragmented, care delivery and FFS payment structures. They will have the ability to focus on the development and implementation of the health IT infrastructure and processes, to enable improved care coordination and innovative VBP models.

Roadmap development was based on four factors: 1) Louisiana health care stakeholder input; 2) fact gathering regarding existing and planned health IT assets in Louisiana; 3) use of guiding principles; and 4) the application of the following health IT/HIE industry best practices:

- Enable use of health IT modular functions.

- Advance interoperable use of health and non-health information, including expanded use of certified technology and standard-based information.

- Accelerate exchange of information across the Louisiana health care landscape.

- Ensure stakeholder engagement and participation in the statewide health IT/HIE infrastructure.

- Encourage electronic quality data collection to support VBP and service delivery model reform.

By applying these factors in collaboration with LDH, Myers and Stauffer identified, prioritized, and outlined 18 Roadmap Initiatives for implementation over four years to enhance, expand, and sustain Louisiana's health IT/HIE infrastructure. The Roadmap addresses the following top needs and opportunities available to LDH and the Louisiana health care stakeholder population:

- A focused collaboration among Louisiana's public and private sectors, and health care stakeholders, to set forth a path to develop and enhance Louisiana's health IT infrastructure.

- Substantially increase Louisiana Medicaid provider adoption and use of EHRs and HIE.

- Perform activities to significantly expand Louisiana's health IT/HIE landscape. Onboard/connect systems and advance the HIE architecture to allow for the use of health data, data exchange and connectivity, analytics, and reporting capabilities to support clinical integration, transparency, new payment models, and continuous innovation.

- Address areas of the Louisiana health IT infrastructure that can be enhanced to allow for a unified view of health data from across Medicaid, and the statewide network-connected health care systems, including the HIE network. Doing so will help support the State's integrated health care goals and achieve LDH's vision of enhancing care coordination, improving quality, reducing related health costs, and eliminating health IT-related burdens on providers.

To simplify the suggested approaches and best practices outlined here, all of the Initiatives are organized within one of five focus areas and associated with a specific development level as described below.

Focus Areas

1. Stakeholder Engagement

Initiatives to identify, engage, and collaborate with statewide stakeholders within health care, technology, business, and other areas, to gain insight of their health IT and data sharing needs and wants.

2. Governance

Initiatives to develop, organize, and implement policies, procedures, structure, roles, and responsibilities to enforce rules of engagement, decision rights, and accountabilities for effective management of health information and related technology for data sharing – both across the statewide health IT infrastructure, and within state government data management systems.[62]

3. Health IT/HIE Infrastructure

Initiatives to build and enhance the existing technology capabilities necessary to successfully sustain a secure and stable health information sharing infrastructure. This infrastructure will enable meaningful and sustainable changes to Louisiana health care delivery and payment systems in alignment with the triple aim of improved population health, better care, and greater value for care spending.

4. Health IT/HIE Adoption and Utilization

Initiatives focused on stakeholder engagement that raise awareness and engage individuals and organizations to increase adoption, exchange, and use of health IT and HIE.

5. Sustainability

Initiatives employing key strategies to enable secure, stable streams of long-term funding; create strong mechanisms providing full-bodied statewide health IT and policy infrastructure oversight[63]

Development Levels

While all of the Initiatives identified in this Roadmap are necessary to support the State's successful development and implementation of its health IT infrastructure, each Initiative has been given a specific designation – Foundational, Intermediate, or Value-Add.

Foundational

A Foundational Roadmap Priority is recommended as a required element that serves as the building blocks necessary for the basic components of the Louisiana health IT infrastructure.

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[62] John Ladley & Danette McGilvray – The Data Warehousing Institute Data Governance Fundamentals
[63] Connecting Health and Care for the Nation – A Shared Nationwide Interoperability Roadmap, Office of the National Coordinator. Final v.1.0

Intermediate

While not a building block component, an Intermediate Roadmap Priority is recommended, as necessary, to further grow, expand, and sustain the established Louisiana health IT infrastructure.

Value-Add

A Value-Add Roadmap Priority is recommended, as necessary, for the significant advancement of the Louisiana health IT infrastructure through system interoperability to support payment reform, quality measurement, and population health.

Initiative Description

Each Initiative template presents the following:

- Detailed descriptions, rationale, and strategic value of the Initiative.

- Best practices and suggested approaches to perform the Initiative.

- Anticipated outcomes.

- Feasible timeframe to begin the Initiative:

Immediate-term: within first 120 days.

Near-term: 4 to 12 months.

Mid-term: 12 to 24 months.

Long-term: 24 to 48 months.

- Possible prerequisite activities to take place before the start of a specific Initiative.

- Potential funding sources.

- Where available, examples of states having implemented a similar type of Initiative.

Table 8: Summary of Health IT Roadmap Initiatives

Focus Areas	Development Phase	Initiatives
Stakeholder Engagement	Foundational	**Initiative 1:** Statewide Health Information Exchange Summit
	Foundational	**Initiative 2:** Louisiana Stakeholder Listening Sessions Statewide Tour
	Foundational	**Initiative 3:** LDH State Agency Discovery Sessions
Governance and Planning	Foundational	**Initiative 4:** Louisiana Statewide Health IT/HIE Governance Model
	Foundational	**Initiative 5:** Data Governance at LDH
	Foundational	**Initiative 6:** LDH State Agency Data Source Inventory
Health IT/HIE Infrastructure	Foundational	**Initiative 7:** Louisiana Medicaid – HIE Connection
	Intermediate	**Initiative 8:** Louisiana Department of Corrections – HIE Connection
	Foundational	**Initiative 9:** Louisiana Provider – HIE Connections
	Intermediate	**Initiative 10:** EMS – HIE Connection
	Value-Add	**Initiative 11:** Louisiana PDMP – HIE Connection
	Value-Add	**Initiative 12:** LaPHIE Services Expansion
	Value-Add	**Initiative 13:** Expand and Enhance Event Notification
Health IT/HIE Adoption and Utilization	Value-Add	**Initiative 14:** Advanced Louisiana Public Health Readiness Assessment
	Value-Add	**Initiative 15:** Use Case Work Group to Expand Louisiana Statewide Health IT/HIE Services
Sustainability	**Financial Sustainability**	
	Foundational	**Initiative 16:** Health IT Financial Sustainability
	Infrastructure Sustainability	
	Foundational	**Initiative 17:** Assessment of the State-Designated Entity for Long-Term Sustainability
	Foundational	**Initiative 18:** State Agency Oversight and Support for Health IT/HIE Capabilities and Sustainability

FOCUS AREA 1:

Stakeholder Engagement

INITIATIVE 1: STATEWIDE HEALTH INFORMATION EXCHANGE SUMMIT

FOCUS AREA	DEVELOPMENT PHASE
STAKEHOLDER ENGAGEMENT	FOUNDATIONAL

Description

Conduct a multi-day *Statewide Health Information Exchange Summit* (HIE Summit), convened by LDH, including leadership from all (existing and emerging) HIEs within Louisiana, as well as recognized leaders from the provider community. The HIE Summit is a professionally-facilitated, collaborative event where opportunities are identified and barriers and challenges are addressed.

Rationale and Strategic Value

Several health IT and HIE assets exist within Louisiana including the LaHIE, the SDE, operated by the Quality Forum. These important assets need to be well coordinated among contributing organizations across Louisiana, including LDH and other state agencies, to reduce the risk of duplication of efforts and waste of resources, and address low rates of health IT/HIE adoption and utilization. The HIE Summit may enable key stakeholders to collaborate in a professional, well-facilitated, neutral, and open environment to discuss opportunities for health IT product/service alignments, strategies regarding health IT/HIE long-term sustainability, and address complex issues and potential risks.

The opportunity exists to create open methods of communication between Louisiana's interoperability hubs (HIEs) in order to:

1) Discover synergies among their technology and policies.

2) Increase connectivity between systems.

3) Define specific needs of each HIE for long-term sustainability.

4) Align efforts, where possible, to combine or integrate assets of HIEs and interoperable systems, rather than stand up duplicate components for Medicaid, HIE, and other systems being funded by CMS and the state of Louisiana.

Best Practices and Suggested Approach

LDH coordinates and provides resources for summit details and activities. The following are suggested steps to produce and manage the Louisiana HIE Summit:

Identify HIE Summit attendees including, but not limited to leadership from the following organizations:

- LDH
- LaHIE (State Designated Entity)
- GNOHIE
- LaPHIE
- LaRHIX

The opportunity exists for LDH to coordinate with a professional event facilitator to draft an event layout in preparation for the summit. Below is a sample outline:

Day 1:
Invite each HIE organization to make a presentation regarding the following:
- HIE organization products and services offerings.
- Service utilization by product type, provider type, and geographic location.
- Specific needs for their HIE organization such as new technology features or upgrades, expanded services to specific provider population, technical assistance for policy design, use case development, and/or data standardization.

INITIATIVE 1: STATEWIDE HEALTH INFORMATION EXCHANGE SUMMIT

FOCUS AREA	DEVELOPMENT PHASE
STAKEHOLDER ENGAGEMENT	FOUNDATIONAL

Meeting Takeaways:
- Documented current state matrix of HIE offerings (existing and planned).
- Documented state coverage of provider types and geographic reach/coverage.
- List of specific items or areas the group agrees upon, and those the group needs to address further.

Day 2:
Morning Session: Invite Day 1 set of provider organization leaders to discuss their interoperability needs, concerns, and plans for the future. (Could invite a wide provider representation or narrow to two or three specific provider types such as LHA and/or LPCA to start, with the intent to invite other provider type organizations).
- Employ meeting facilitator's techniques to gather information from provider representatives.
- Use session to identify critical needs and other potential use cases. (This activity provides information to LDH and the HIEs regarding the health IT needs and wants of the health care community.)

Afternoon Session: For LDH and HIE organizations only. HIE Summit participants:
- Review previous day takeaways and make adjustments where necessary.
- Define future provider organization engagement by category.
- Discuss potential risks, identify mitigation methods, and address areas of possible conflict between the HIE organizations.

Meeting Takeaways:
- Document frequency and schedule of next HIE Summit meetings.
- Assign tasks to HIE leaders to perform between HIE Summit meetings.
- Determine potential topics to address at upcoming HIE Summit meetings, including provider type organizations.
- Document a simple, go-forward agreement between HIE organizations to advance development and implementation of a robust health IT infrastructure across Louisiana.

Actions for LDH health IT resources to perform to prepare for HIE Summit event:
- Reserve a neutral location for HIE Summit such as a conference room at LSU or a public library.
- Hire a professional focus group facilitator for the two-day event.
- Reach out, at the discretion of LDH health IT leadership, to each HIE organization leader in advance of event, to discuss purpose of the summit, address any concerns the invitee may have about the event, and mitigate potential risk for miscommunication or misunderstandings.

Anticipated Outcomes

- Generate a common understanding among event participants regarding current and planned data exchange, as well as analytics capabilities, concerns, and outstanding needs from the health care stakeholder community.

- Increase trust among HIE organizations and state agencies to enable collaborative use case and technology deployment.

- Generate wider insight into the Louisiana state government overall health IT vision, including potential forms of support to drive provider adoption and utilization of certified EHR technology, HIE, and development/ implementation of value-added services.

- Build agreement between LDH and HIE organizations concerning roles and responsibilities for the production and offering of specific health IT features and functionality to providers and other key stakeholders in the state.

- Draft a schedule and agree upon frequency of future statewide HIE Summit meetings over the subsequent 12 months.

INITIATIVE 1: STATEWIDE HEALTH INFORMATION EXCHANGE SUMMIT

FOCUS AREA	DEVELOPMENT PHASE
STAKEHOLDER ENGAGEMENT	FOUNDATIONAL

- Facilitate agreement and documentation amongst event participants on a set of next steps for HIE Summit attendees to execute, ensuring future summit meetings are relevant and productive.

Timeframe

Immediate-term: Initiate within the first 120 days.

Suggested Prerequisite: Enhance the Louisiana State Health IT Coordinator position (see *Initiative 18: State Agency Oversight for Health IT/HIE Capabilities and Sustainability*) as this Initiative must be led by LDH health IT leadership.

Potential Funding Source(s)

16-003 SMD Letter 90/10 funding for provider outreach/education services.

INITIATIVE 2: LOUISIANA STAKEHOLDER LISTENING SESSIONS STATEWIDE TOUR

FOCUS AREA	DEVELOPMENT PHASE
STAKEHOLDER ENGAGEMENT	FOUNDATIONAL

Description

Execute a well-coordinated and thorough statewide tour of listening sessions and technical advisory meetings with targeted stakeholder organizations and subject matter experts, to gain valuable insights.

Rationale and Strategic Value

Sponsored by LDH, this Initiative may provide an opportunity to collaborate with key health care stakeholders and facilitate the sharing of ideas. This discussion may provide LDH with insights and enable ways they can encourage continued public and private sector collaboration and participation.

Listening sessions have the potential to generate valuable conversation and can provide opportunities for LDH to promote existing health IT/HIE infrastructure, as well as any infrastructure that may be in development. Taking the time to consider and understand the concerns and challenges health care stakeholders have about health IT-related burdens allows LDH to not only use the event to champion progress and explore potential opportunities, but also improve unity between LDH, state health care stakeholders, the SDE, and other HIEs, and provide use case validation for future health IT infrastructure development.

Best Practices and Suggested Approach

The following are possible LDH-supported activities to facilitate listening sessions with key health care community organizations and individuals. Following these listening sessions, the State would benefit from performing technology and policy readiness assessments of key provider organizations and provide technical assistance where possible.

1) **Statewide Listening Session Tour:** Design a well-coordinated statewide tour of listening sessions.
   a. Identify stakeholders from across the statewide health care community spectrum to engage starting with the list generated from the HIE Summit.
   b. Designate a group facilitator.
   c. Prepare a written summary of all brainstorming ideas to circulate among all participants with a description of next steps.

2) **High-Level Post-Listening Session Community Readiness Assessment:** Create a high-level community readiness assessment to deliver a systematic analysis of providers' ability to undertake a health IT transformation.

3) **Community Survey:** Following the statewide tour of listening sessions, LDH may circulate a survey among the broader community. Survey questions may be influenced by discussions had during the sessions, with the ultimate goal of identifying whether or not the concerns and issues discussed were reflective of the broader stakeholder community.

4) **Statewide Health IT Conference:** Coordinate a one to two-day statewide health IT conference to share findings and continue the discussion of statewide HIE transformation.

5) **Relationship Building – Identify Health IT Champions:** Identify health IT champions across Louisiana who bring valuable grassroots insight, critical feedback, resources, and tools to potentially serve in the development of health IT/HIE governance at the state level. Consider engagement of possible health IT champions such as providers, administrators, both small and large practices, other health organizations, and patient advocacy groups, to ensure community voices and experience can be leveraged.

Anticipated Outcomes

Meeting with major stakeholders across the state may provide an opportunity to discuss upcoming health IT opportunities for stakeholders to develop and participate in the long-term development of statewide HIE. Maintaining

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INITIATIVE 2: LOUISIANA STAKEHOLDER LISTENING SESSIONS STATEWIDE TOUR

FOCUS AREA	DEVELOPMENT PHASE
STAKEHOLDER ENGAGEMENT	FOUNDATIONAL

an open dialogue with these state partners may not only provide valuable insights into the community, but allow for the creation of a database of information and knowledge to explain future courses of action taken by LDH.

Timeframe

Immediate-term: Initiate within the first 120 days.

Suggested Prerequisite: Conduct Initiative 1: Statewide Health Information Exchange Summit.

Potential Funding Source(s)

CMS SMD Letter 16-003 90/10 funding source.

INITIATIVE 3: LDH STATE AGENCY DISCOVERY SESSIONS

FOCUS AREA	ROADMAP PRIORITY
STAKEHOLDER ENGAGEMENT	FOUNDATIONAL

Description

Conduct professionally facilitated and coordinated Discovery Sessions with health-related state agency business and IT leaders and their staff. Identify and prioritize activities and projects necessary for secure data exchange and to meet the State's data management and predictive analytics needs in support of a data-driven enterprise.

Rationale and Strategic Value

Internal state agency Discovery Sessions may uncover high-level initiatives and the underlying tasks to gather specific requirements, identify dependencies, and investigate potential challenges and barriers to electronically sharing health information.

Best Practices and Suggested Approach

Beginning with the state Medicaid agency, Discovery Sessions may initially address their specific needs. Other state agencies may include Public Health, Behavioral Health, Corrections, and OTS, among others, to address health data exchange needs of the agencies and external health care stakeholder organizations.

The professional facilitator's experience and background may include considerable state health and human services knowledge in order to guide and advise each group about the opportunities and potential challenges that could arise during the session. Discovery Session discussion may include prioritizing projects, potential funding sources, and next steps.

Anticipated Outcomes

- Thoughtful exploration of the needs for state agencies is adequately performed with details documented and shared with leadership and other decision makers to support a business case, prioritizing and funding each identified initiative and related projects.

- Challenges and barriers are identified, and mitigation strategies may be defined to prevent unnecessary delays and additional costs to each project timeline and budget.

- Each Discovery Session may yield information regarding specific use cases addressing unique technical and legal guidelines to ensure protection of health information.

- Agency leadership and their staff may acquire sufficient information to make an informed decision about the go-forward strategies and tactical plans to ensure efficient and effective health data exchange to support their long-term initiatives, including predictive analytics capabilities.

Timeframe

Immediate-term: Initiate within the first 120 days.

FOCUS AREA 2:

Governance and Planning

INITIATIVE 4: LOUISIANA STATEWIDE HEALTH IT/HIE GOVERNANCE MODEL

FOCUS AREA	DEVELOPMENT PHASE
GOVERNANCE	FOUNDATIONAL

Description

LDH health IT leadership to lead a collaborative effort to examine existing governance structures, including the HITAC, LaHIE, and GNOHIE Board of Directors, to identify appropriate ways to establish and declare a statewide health IT and HIE governance structure.

Rationale and Strategic Value

The success of health IT and HIE in several other states can be largely attributed to a statewide governance model. States with fragmented health IT and HIE governance, rather than well-coordinated, collaborative structures, have experienced limited ability to promote value proposition, expand the use of data sharing among providers, and maintain the long-term sustainability of HIE organizations.

Furthermore, states with the most successful governance models are those that are organized as a public-private collaborative with wide representation from the health care, business, technology, consumer, academia, and government organizations within the state.

The public-private governance model allows for the collaboration and exchange of ideas, and the ability to identify and harness benefits while addressing concerns regarding existing barriers and challenges. Widespread buy-in from government and community leaders may successfully mitigate significant delays in technology, organization, and policy decisions, actions, and/or outcomes, increasing the State's opportunity to quickly address population health concerns.

Best Practices and Suggested Approach

Similar to the first Initiative, LDH health IT leadership may engage the leaders of LaHIE and GNOHIE to devise a statewide governance model in which these organizations, as well as others, would participate to collectively represent health care, technology, business, consumers/patients, payers, state and federal government, and many other relevant industries and organizations.

While fragmented, Louisiana has a number of existing health IT/HIE governance organizations that may be leveraged to create a multi-sector, public-private collaborative. Ultimately, this collaborative could become the Louisiana statewide health IT/HIE governance organization with accountability to state and community leadership, specifically responsible for identifying, recommending, and executing strategies to safeguard sustainability of the State's health IT/HIE vision long term.

Discussions may address ways to incorporate and leverage HITAC, a valuable LDH asset. As described to CMS, HITAC is an *"all-volunteer committee, comprised of key stakeholders, that is charged with providing support and guidance in LDH's strategic planning and implementation related to the promotion of health IT and HIE through meaningful advising of the Secretary of the LDH and CIO. The committee will provide evidence-based strategies to improve the health of Louisianans and work directly with other LDH contracted partners."* [64]

This foundational Initiative is aligned to ONC's *A Shared Nationwide Interoperability Roadmap* for near-term wins. This Initiative also supports five critically important actions that stakeholders in both the public and private sector, may choose to take in the near term to enable statewide interoperability of electronic health information through health IT. As recommended by the ONC, these actions include the following:

1) Produce a coordinated governance framework and process for statewide health IT interoperability.

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[64] Louisiana FFY 2018 – 2019 IAPD.

INITIATIVE 4: LOUISIANA STATEWIDE HEALTH IT/HIE GOVERNANCE MODEL

FOCUS AREA	DEVELOPMENT PHASE
GOVERNANCE	FOUNDATIONAL

2) Establish the organization's governance mission, vision, and guiding principles to operate with transparency and openness, build stakeholder trust, maintain neutrality, offer personal choice for patient consent, foster a culture of innovation, employ privacy and security best practices to protect health data, promote health IT/HIE solutions while leveraging existing initiatives and resources, preserve a focus on their collective primary purpose, and place emphasis on building a learning health system.

3) Enhance incentives for sharing electronic health information according to common technical standards, starting with a common clinical data set.

4) Clarify privacy and security requirements that enable interoperability.

Additionally, in collaboration with community-level stakeholders, LDH is in a position to develop a solid set of policies much like other statewide HIE organizations. LDH and its stakeholder partners can leverage the ONC State HIT Policy Levers Compendium to create, re-examine, and update existing policies as new provider organizations are added to the State's health IT infrastructure over time.

Anticipated Outcomes

- The statewide health IT/HIE governance structure may allow for stakeholders to collaboratively select a statewide health IT/HIE governance model for Louisiana with participants' roles and responsibilities well-defined, agreed upon, and documented.

- In an effort to avoid duplication of Louisiana health IT assets and inefficient use of federal and state funding, governance may define and agree to a network of networks approach to provide HIE infrastructure to health care stakeholders across the state.

Timeframe

Immediate-term: Initiate within the first 120 days.

Suggested Prerequisite: Perform Initiative 1 – Louisiana Health Information Exchange Summit; Perform Initiative 2 - Louisiana Stakeholder Listening Sessions Statewide Tour.

Potential Funding Source(s)

HITECH 90/10 Funding. The two recent APDs to CMS (Federal Fiscal Year [FFY] 2017 – 2018 and FFY 2018 – 2019, Activity 5) include funding requests to cover costs associated with the HIT Advisory Committee. These requests have been approved by CMS.

State Example(s)

Georgia

Georgia's flexible governance structure allows organizations within a public-private collaborative to respond to market changes and effectively meet the needs of its providers and other health care stakeholders as the technology infrastructure and policy framework evolves. The State's health IT/HIE governance structure is provided by the Georgia Health Information Network (GaHIN), the SDE. GaHIN is responsible for connecting local/regional HIEs and other health care stakeholder organizations from within Georgia and across state borders. GaHIN also acts as the State's technical and policy advisor providing direction for Georgia's health IT infrastructure development.

INITIATIVE 4: LOUISIANA STATEWIDE HEALTH IT/HIE GOVERNANCE MODEL

FOCUS AREA	DEVELOPMENT PHASE
GOVERNANCE	FOUNDATIONAL

Kansas

State law provides for a regulatory organization (formerly a private corporation and now a state office) to set certification criteria and monitor HIEs operating in the state. The regulatory organization itself does not provide HIE services, but oversees two certified HIEs.

ONC State Health Policy Levers Compendium

The ONC has provided a comprehensive list of policies regarding health IT and HIE from across the country into the State HIT Policy Levers Compendium. This document illustrates many ways policies have driven the adoption and use of health IT and HIE features and functionality. (https://www.healthit.gov/policy-researchers-implementers/health-it-legislation-and-regulations/state-hit-policy-levers-compendium)

INITIATIVE 5: ENTERPRISE DATA GOVERNANCE (EDG) AT LDH

FOCUS AREA	DEVELOPMENT PHASE
GOVERNANCE	FOUNDATIONAL

Description

A department-wide implementation of a data governance framework for establishing strategy, objectives, and policy for effectively managing data. It consists of the processes, policies, standards, and technologies required to manage and ensure the availability, usability, integrity, consistency, auditability, and security of data across LDH.

Rationale and Strategic Value

Health care data is complex, containing different clinical terminologies, variations in demographic information, and may contain incomplete patient attribution. Even when using tools to profile data and assess its quality, results can be abstract and disconnected from how the data is actually to be used in reports and analysis – leaving users unable to gauge the quality of data. The following are ways that data governance plays a critical role an organization's success:

- Streamlines and unifies the approach to managing data.

- Ensures the right resources are involved in determining standards, usage, and integration of data across projects, subject areas, and lines of business.

- Minimizes silos of project delivery and implementation.

- Aids in limiting challenges associated with managing systems.

- Reduces persistent data quality issues and improves confidence.

A data governance organization can assist the LDH enterprise in improving operational components by allowing for new technologies to be seamlessly implemented. The value of data governance can be recognized by the following:

- Improving data quality, resulting in greater confidence in information and reduction in duplicated efforts across LDH.

- Having reliable data formats and structures to reduce time to analyze and design new integration solutions.

- Having consistent data flows and data formats that reduce complexity, redundancy, and cost.

- Reducing time and cost spent retrieving data from disparate systems with faster, more consolidated data.

- Having clear and consistent guidelines and accountability established for stakeholders, improving data quality.

- Improving processes with automated workflow and reducing unnecessary manual efforts.

- Improving data quality, reducing redundancy, and establishing an enterprise view of data.

- Sufficiently preparing LDH for future use of business intelligence tools, HIE, dashboards, and reports.

Best Practices and Suggested Approach

Best practices for data governance apply a three-phase approach to establish and implement a new data governance organization.

INITIATIVE 5: ENTERPRISE DATA GOVERNANCE (EDG) AT LDH

FOCUS AREA	DEVELOPMENT PHASE
GOVERNANCE	FOUNDATIONAL

Figure 15: Data Governance Best Practice

1) A current state assessment is conducted using stakeholder interviews and input to identify the current level of data governance throughout LDH.

2) After the current state assessment is complete, define recommendations, a "to-be" data governance framework, and a roadmap based on findings and industry best practices.

3) Once the roadmap has been devised and approved, the final step includes implementation of the EDG organization through a series of workshops to engage stakeholders and champions throughout LDH.

Anticipated Outcomes

Launching an EDG project within LDH produces the following:

- Creation of a formal Data Governance Organization (DGO) and processes to effectively manage and control information assets.

- Improved coordination and communication on data-related issues, changes, and questions between the many offices and divisions.

- Designated business ownership of data, making enterprise-wide conformity easier and simpler to attain.

- Improved adherence to information architecture standards and guidelines across the LDH's programs and offices.

- Enhanced reporting capabilities that stem from confirmed business definitions for data elements and business rules.

- Established procedures to address inconsistent identification of change impact and communication of those changes to affected areas.

- Creation of a data governance framework across LDH to formalize many existing processes and build off of best practices used by the different offices and business units. Within LDH, the new DGO would oversee all data-related aspects.

INITIATIVE 5: ENTERPRISE DATA GOVERNANCE (EDG) AT LDH

FOCUS AREA	DEVELOPMENT PHASE
GOVERNANCE	FOUNDATIONAL

Figure 16: LDH Organizational Chart
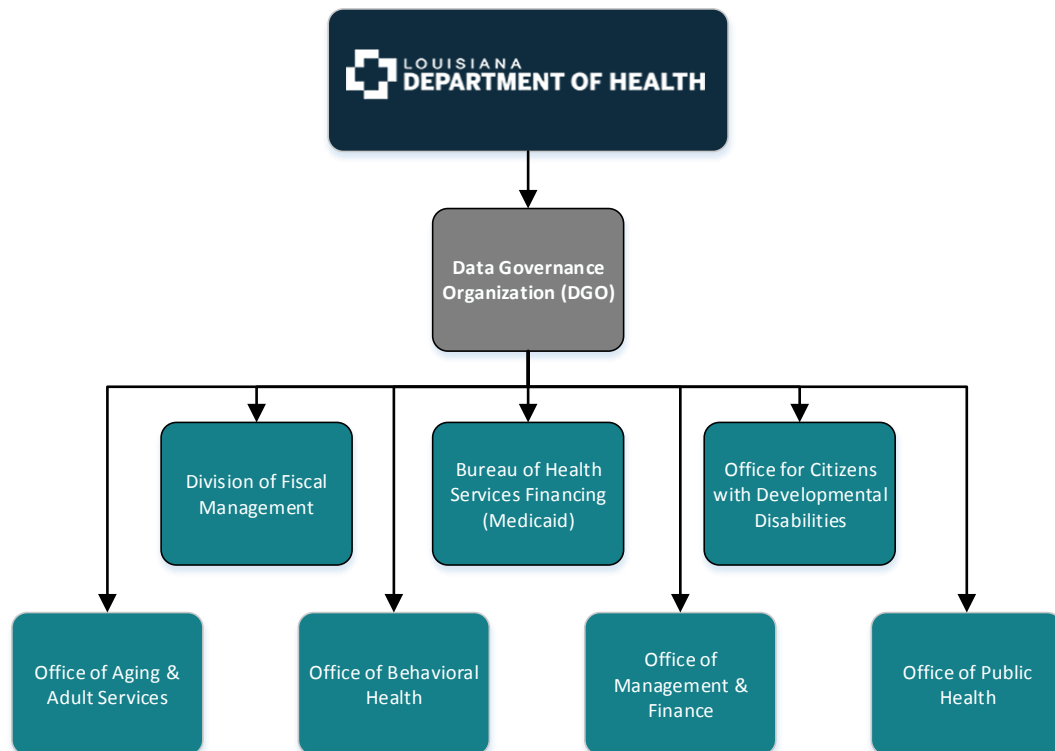
The DGO consists of decision makers from all offices and divisions to ensure thorough and widespread representation. A top-down and bottom-up data governance structure is recommended so policies, processes, and standards can be implemented and enforced uniformly within all offices and business units. As data issues arise within the offices and divisions, a formal framework would be defined to ensure issues navigate the proper channels and are brought up to the top decision makers only when necessary. The DGO typically includes the following components:

Data Governance Board – Led by decision makers from the various offices and divisions to set the vision and priorities for the LDH.

Data Steward Council – Data experts who are in charge of enforcing and implementing the policies, processes, and standards of the DGO.

Office/Division – Must follow the policies, processes, and standards defined by the DGO, but also provide feedback, recommendations, and best practices back. Each office or division is represented on both the Data Governance Board and Data Steward Council.

Steering Committees – Created for special projects/initiatives that span the entirety of LDH.

INITIATIVE 5: ENTERPRISE DATA GOVERNANCE (EDG) AT LDH

FOCUS AREA	DEVELOPMENT PHASE
GOVERNANCE	FOUNDATIONAL

Timeframe

Near-term: 4 to 12 months.

Suggested Prerequisite: Perform Initiative 2 – LDH State Agency Discovery Sessions.

Using the three phase approach of a current-state assessment, followed by development of recommendations, and implementation of the new data governance organization, the initiative could occur over five to seven months.

1. **Current State Assessment** – 2 to 3 months.

2. **To-Be State and Data Governance Roadmap** – 1 to 2 months.

3. **Implementation** – 2 months.

While the initial project may occur over the course of five to seven months, once the DGO is established, data governance processes most often become part of the Department's overall policies, processes, and standards.

Potential Funding Source(s)

HITECH, MMIS, and E&E funding cost allocated.

State Example(s)

Nevada

Nevada's Department of Health and Human Services (DHHS) conducted an as-is assessment of the current data governance organization and related processes. From the assessment, a new data governance organization and framework were outlined based on best practices and findings from the as-is assessment. Nevada DHHS has implemented an updated framework which spans the entire Department and has improved communication and coordination between divisions. Policies, processes, and standards related to data are now aligned and the Department has a new sense of confidence in the accessibility, accuracy, and quality of their data. They are now able to exchange data with state agencies where historical efforts had not been successful. A more robust data profile has allowed the Department to address certain public health and social service issues such as identifying otherwise Medicaid eligible mothers and newborns receiving services through a homeless shelter.

Indiana

Indiana's Family and Social Services Administration (FSSA) identified a need to compile and centralize high-level system information from the various divisions, which is the first step in moving towards an EDG organization.

INITIATIVE 6: LDH STATE AGENCY DATA SOURCES INVENTORY

FOCUS AREA	DEVELOPMENT PHASE
GOVERNANCE AND PLANNING	FOUNDATIONAL

Description

The Louisiana Data Sources Inventory initiative produces a detailed summary of the business requirements including inventories of metrics, reports, metadata, and data requirements.

Rationale and Strategic Value

The Louisiana Data Sources Inventory is a critical part of understanding the LDH's technical infrastructure as it generates a comprehensive list of:

- All systems and applications identified during interviews and from supporting documents.
- All system interfaces identified during interviews and from supporting documents.
- All datasets identified during interviews and from supporting documents.
- All standard and ad hoc reports identified during interviews and from supporting documents.
- All performance metrics identified from supporting documents.
- All metadata sources gathered from stakeholders.

Any data governance organization formulated without a comprehensive overview of these areas may be incomplete.

This Initiative may benefit LDH by presenting a solid and tangible understanding of where information lives within the enterprise, as well as aid LDH in confirming the agency's "source of truth" data and ensuring it is accurate and reliable.

Best Practices and Suggested Approach

The Data Sources Inventory is typically compiled during the first phase of an EDG project (outlined in *Initiative 5* above). Gathering the information during the data governance current-state assessment streamlines the information gathering process, while also engaging many stakeholders to improve awareness of both projects.

Anticipated Outcomes

The Louisiana Data Sources Inventory aims to assist LDH in cataloguing all assets that are related to data governance and data management. The document is usually created during the current-state assessment of the EDG Initiative. Once compiled, the Louisiana Data Sources Inventory becomes a key foundational tool for LDH and the DGO. As the document is updated further, it becomes a critical tool in defining future projects and goals under the enterprise-wide data governance structure.

Timeframe

Near-term: 4 to 12 months.

Suggested Prerequisite: It is recommended that the Louisiana Data Sources Inventory be initially compiled during the first phase of the EDG project. After implementation of the EDG organization, it is imperative the Louisiana Data Sources Inventory is maintained and updated frequently.

Potential Funding Source(s)

HITECH, MMIS, and Eligibility and Enrollment (E&E) funding cost allocated.

State Example(s)

Nevada

Nevada's DHHS conducted an as-is assessment of their DGO and related processes. From the assessment, a new, future DGO and framework were outlined based on best practices and findings from the assessment. DHHS has implemented the new framework which spans the entire Department and has helped to improve communication and coordination. Policies, processes, and standards related to data are now aligned, and DHHS has a new sense of confidence in the accessibility, accuracy, and quality of their data.

Indiana

Indiana's FSSA identified a need to compile and centralize high-level system information from the various divisions, which is the first step in moving towards an EDG organization.

FOCUS AREA 3:

Health IT/HIE Infrastructure

INITIATIVE 7: LOUISIANA MEDICAID-HIE CONNECTION

FOCUS AREA	DEVELOPMENT PHASE
HEALTH IT/HIE INFRASTRUCTURE	FOUNDATIONAL

Description

LDH to lead effort to establish an interoperable connection between its MMIS and the Louisiana SDE HIE.

Rationale and Strategic Value

Creating an interoperable data exchange connection between MMIS and the SDE in a coordinated fashion may benefit LDH by:

1) Supporting Louisiana EPs and EHs in meeting MU requirements. May also enable Louisiana eligible clinicians and groups to participate in the Quality Payment Program Advancing Care Information Objectives and Measures.

2) Establishing infrastructure to leverage long-term financial advantages for both the state agencies and community HIE partners as LDH transitions from HITECH to MMIS funding for health IT/HIE.

3) Allowing for interoperable connections to be established. These connections are critical elements of a state's health IT infrastructure, providing data sources to both the providers participating in the HIE and to state agencies seeking to reduce provider reporting burdens, satisfy data requirements for VBP models, and improve service delivery based on data-driven insights.

4) Advancing the state Medicaid agency along the Medicaid Information Technology Architecture (MITA) 3.0 and anticipated MITA 4.0 maturity scales.

5) Making health data available from Medicaid claims to the Louisiana SDE supports the HIE's value proposition and attracting Medicaid providers to the HIE's services.

Best Practices and Suggested Approach

This Initiative can enable a standards-based, secure, bi-directional connection between MMIS and the SDE to:

- Allow health data from Medicaid claims to be made available to Medicaid providers utilizing the HIE. While this health data may be lagged by 90 days or more, it may also be the only available health data a provider has access to for the patient they are treating.

- Make Medicaid beneficiary health data from the Louisiana HIE available for LDH data warehouse storage and data analytics capabilities. This presents the possibility for near real-time data driven insights for policy and programmatic improvement.

Prior to executing this Initiative, LDH may consider applying outcomes from Initiatives 1 and 4 to collaborate with the SDE and other HIEs in Louisiana, and ensure data integration takes place to make health data from Medicaid claims available to all Louisiana HIEs.

Anticipated Outcomes

It is the goal for all health and social service-related state agencies to have interoperable connections with Louisiana HIE(s) for appropriate and efficient data exchange, as needed, allowing providers and organizations to achieve seamless interoperability.

Timeframe

Near-term: Initiate within 4 to 12 months.

Suggested Prerequisite: Enhance the Louisiana State Health IT Coordinator position (see *Initiative 18: State Agency Oversight for Health IT/HIE Capabilities and Sustainability*) as this Initiative must be led by LDH health IT leadership.

INITIATIVE 7: LOUISIANA MEDICAID-HIE CONNECTION

FOCUS AREA	DEVELOPMENT PHASE
HEALTH IT/HIE INFRASTRUCTURE	FOUNDATIONAL

Potential Funding Source(s)

CMS SMD Letter #11-004 and 16-003.

INITIATIVE 8: LOUISIANA DEPARTMENT OF CORRECTIONS – HIE CONNECTION

FOCUS AREA	DEVELOPMENT PHASE
HEALTH IT/HIE INFRASTRUCTURE	INTERMEDIATE

Description

The Quality Forum is currently working with the Louisiana Department of Corrections (DOC) to provide technical support and assistance in implementing CEHRT within DOC facilities. Once implementation is complete within the DOC, the technology may be available for further development to create an interoperable connection between the DOC, the Louisiana SDE, and other HIEs in order to securely share health data with providers outside of DOC facilities, and provide for more streamlined coordination of care for the patient.

Rationale and Strategic Value

Creating an interoperable data exchange connection between the DOC and state agencies via the SDE/HIEs may allow for:

- **Improved discharge planning –** Correctional staff who are responsible for discharge planning may use the EHR to provide reliable diagnostic information, medication history, and other personal health data to ensure continuity of care for people with serious mental illness and other chronic conditions who are transitioning from the jail to the community.

- **Greater disease surveillance capabilities –** The LDH OPH may have greater access to information and the ability to reliably track the incidence of disease among the incarcerated population and issue reports to the correctional facility leadership and other officials. Increased transparency regarding health conditions in DOC facilities is critical for advancing programmatic and policy solutions for combatting public health issues such as disease prevention, treatment, and reducing transmission to the community.

- **Data analytics insights –** The DOC EHR system may be utilized to track injury, self-harm, health outcomes, and disparities, as well as apply data analytics to allow practitioners from both justice and health systems to discern potential patterns of abuse and systemic inequities.

Best Practices and Suggested Approach

Once implemented, the technology operated by the Quality Forum can be integrated with the LaHIE. Integration would enable data exchange for effective and efficient communication between medical, mental health, and other clinical providers delivering care across facilities at points such as medical intake, admittance to an infirmary, and treatment in other clinics. Within the correctional system, there are often large gaps in clinical information available to providers, as patients have been incarcerated and care has been provided in the correctional facility. In addition, correctional facility providers will have access and the ability to query for incarcerated patients at the point of care.

The following are possible steps forward to establish an interoperable connection between the DOC EHR system and LaHIE to enable data sharing between community providers and correctional facilities:

1) Set regular collaborative meetings. Include representatives from Medicaid, correctional departments, and other community providers to define common goals and identify a relevant data sharing use case that promotes public health and public safety.

2) Address common barriers of privacy, security, consent, and technology adaption to provide health care to the justice-system involved population.

Anticipated Outcomes

Bidirectional, query-based exchange connection established between the Louisiana DOC CEHRT and statewide HIEs.

Timeframe

Near-term: Post-implementation of the DOC EHR system. Initiate within 4 to 12 months.

Suggested Prerequisite: Enhance the Louisiana State Health IT Coordinator position (see *Initiative 18: State Agency Oversight for Health IT/HIE Capabilities and Sustainability*) as this Initiative must be led by LDH health IT leadership.

State Example(s)

Alabama

The state of Alabama created the Alabama Secure Sharing Utility for Recidivism Elimination (ASSURE) project aiming to promote information sharing between health and justice stakeholders using a secure, web-based portal. Corrections and mental health commissioners formed a coalition that included the Alabama Department of Mental Health, community mental health centers, substance use treatment providers, the Alabama Board of Pardons and Paroles, and the state DOC, to improve access to community-based service for high-need populations who repeatedly cycle between corrections and community health systems.

Minnesota

Hennepin Health, in Hennepin County, Minnesota, established a comprehensive shared patient record to improve care coordination between a system that includes 100 network providers and ACOs who contract with the Minnesota Department of Health to provide services to Medicaid beneficiaries. Hennepin Health uses a single patient record that is shared by clinics, hospitals, correctional facilities, behavioral health providers, and social services in the network. Also included are team members dedicated to case management and the creation of a shared care plan. Recognized benefits include:

- Number of primary care visits has increased, and the use of emergency rooms has declined, resulting in a 52 percent drop in ED costs, and a 72 percent drop in inpatient admissions.
- Quality of care for formerly incarcerated people has improved, as evidenced by data describing chronic health conditions.
- Total costs have dropped 55 to 75 percent, mostly in reductions of service use among people who frequently use health services and justice resources. These savings have been reinvested in systems improvements.

South Dakota

South Dakota Correctional Health implemented a correctional EHR system provided by the South Dakota Department of Health. This system allowed for inmates to receive care at the correctional facility. An interoperable connection with South Dakota Health Link allows correctional health care providers to contribute data to the state's HIE network.

INITIATIVE 9: LOUISIANA PROVIDER – HIE CONNECTIONS

FOCUS AREA	DEVELOPMENT PHASE
HEALTH IT/HIE INFRASTRUCTURE	FOUNDATIONAL

Description

In addition to current HIE onboarding activities taking place by LaHIE and GNOHIE, this Initiative focuses on a coordinated effort between Louisiana's HIEs. HIEs can possibly leverage interoperability opportunities to quickly establish interoperable data exchange connections with provider organizations within Louisiana and across state borders.

Rationale

Establishing interoperable connections with health care systems not only allows more data to be shared between authorized providers for use at the point of care and improving population health, but also expands and strengthens the overall Louisiana health IT infrastructure for more robust data exchange. The activities outlined below are focused on onboarding providers to Louisiana HIEs necessary to further expand a robust infrastructure.

Best Practices and Suggested Approach

LDH SDE and other HIEs may work collaboratively with other health care stakeholders to identify ways to quickly onboard providers and health care organizations to HIEs, leveraging advantages, and mitigating challenges. Coordination is necessary to avoid duplication of Louisiana health IT assets and inefficient use of state and federal funding.

LDH may consider the following approaches for rapid provider onboarding and expansion of the Louisiana health IT/HIE landscape:

1) **CommonWell and Carequality**
Query and retrieve access to C-CDA payloads has been rapidly accelerated with the growth and connection of CommonWell Health Alliance and Carequality national networks. These private sector organizations are supported by all of the major EHR vendors in the hospital and clinical markets, meaning Louisiana does not necessarily need to build new capability for query-based exchange. The query and retrieve services offered by CommonWell and Carequality are integrated into commonly used EHR systems, making adoption significantly easier among providers. However, specialty vendors, like those targeted toward behavioral health, home health, and long-term/post-acute care providers, are not yet participating in these national efforts. LDH may consider working with the SDE to develop a lightweight query interface to allow earlier adoption by providers whose core EHR vendors are not participating.

2) **State-to-State Exchange**
Based upon the information gathered, it does not appear either of Louisiana's HIEs have extended their services across state lines to establish interoperable connections with other state HIEs. Considering Louisiana's many attractions, including the city of New Orleans, which in 2015, hosted a record-setting number of nearly 10.5 million visitors, the Louisiana HIEs may consider focusing on initiatives that create interoperable connections with states across the country. Establishing query-based connections across state borders gives Louisiana providers the ability to obtain longitudinal health records of the state's permanent, transient, and visiting populations.

Anticipated Outcomes

- Defined and documented strategies to rapidly onboard providers and health care organizations to Louisiana HIEs, including tactics to ensure providers adequately utilize HIE services to improve care coordination.

- Engagement of the CommonWell and Carequality vendors by the SDE, in collaboration with the Louisiana health IT/HIE governance organization, (see *Initiative 4: Louisiana Statewide Health IT/HIE Governance Model*) to identify those EHR vendors and their provider customers who may be gathered together for cost-effective one-and-done connections to HIEs.

INITIATIVE 9: LOUISIANA PROVIDER – HIE CONNECTIONS

FOCUS AREA	DEVELOPMENT PHASE
HEALTH IT/HIE INFRASTRUCTURE	FOUNDATIONAL

Strategic Value

Cost-effective, rapid onboarding of downstream providers to Louisiana HIEs.

Timeframe

Mid-term: 12 to 24 months.

Suggested Prerequisites:

Initiative 1: Statewide Health Information Exchange Summit.

Initiative 2: Louisiana Stakeholder Listening Sessions Statewide Tour.

Initiative 3: LDH State Agency Discovery Sessions.

Potential Funding Source(s)

Coordination effort and onboarding costs: CMS SMD Letter 16-003.

INITIATIVE 10: EMERGENCY MEDICAL SERVICES (EMS) – HIE CONNECTION

FOCUS AREA	DEVELOPMENT PHASE
HEALTH IT/HIE INFRASTRUCTURE	INTERMEDIATE

Description

Establish an interoperable connection between Louisiana EMS and the Louisiana SDE or other HIE/interoperable systems.

Rationale and Strategic Value

This initiative may produce the following benefits:

1) Improved data sharing from EMS to local EDs to improve the speed and delivery of care for urgent cases on site.

2) Increased access to relevant health care data among first responders to enable appropriate treatment at the point of service, reduce unnecessary utilization of EDs, and improve disaster response efforts.

3) Submission of information by EMS to enhance quality metrics and access patient longitudinal records to support APMs.

4) Improved disaster response planning with access to information from EMS.

Best Practices and Suggested Approach

The Search, Alert, File, and Reconcile (SAFR) model developed by the state of California Emergency Medical Services Authority advances bidirectional data exchange between EMS and the receiving facility, and enables access to valuable data to drive clinical decision making at the point of care in the field. Additionally, EMS data can be collected via the HIE and incorporated into the patient record for quality improvement and research. This model has been utilized to develop unique EMS use cases for HIE in other states including Colorado, Indiana, New York, and Oklahoma. Key success factors reported by these states are:

1) Identify a strong EMS champion.

2) Engage with EMS agencies early in the initiative development process.

3) Allow time to educate EMS providers on HIE.

4) Utilize national EMS data standards.

5) Assess the EMS agency environment and tailor accordingly.

6) Assess readiness of the HIE to ensure proper resources and availability of patient data.

7) Engage with vendors to understand capabilities.

8) Design a process to evaluate and improve upon pilot projects.

INITIATIVE 10: EMERGENCY MEDICAL SERVICES (EMS) – HIE CONNECTION

FOCUS AREA	DEVELOPMENT PHASE
HEALTH IT/HIE INFRASTRUCTURE	INTERMEDIATE

Figure 17: Illustrated SAFR model for HIE

1. **Search:** EMS looks up patient from HIE and incident is posted
2. **Alert:** Hospital Hub™ alerts the receiving ED
3. **File:** Demographic information is sent to the HIE via Admit Discharge Transfer (ADT) message
4. **File:** Once incident is finished, a Continuity of Care Document (CCD) is posted to the HIE
5. **Reconcile:** Following additional care, Observation and Results (ORU)/CCD clinical outcomes are received by EMS

LDH may consider coordinating with the Emergency Medical Services Task Force[65] to begin the planning efforts to:

1) Understand the level of knowledge of HIE among the community.

2) Develop relationships with the key stakeholders.

3) Assess technical readiness and best use cases for EMS and HIE among the agencies.

4) Design a pilot project initiative.

Concurrently, LDH may also coordinate with the SDE, LaHIE, and the GNOHIE in order to determine available technical and operational resources, analyze available data in order to drive use case design, and understand vendor capabilities and current vendor participation.

Anticipated Outcomes

- Improved strategies to decrease inappropriate use of emergency/urgent care services and increase access to the right health/social services resources within a community.

- Development of integrated care delivery models that include EMS dispatch services in the home (i.e., program development), leveraging all available clinicians to address health care shortage areas.

- Ability to utilize additional quality metrics from EMS providers to evaluate the care continuum against outcomes (e.g., cardiac, trauma, and stroke events).

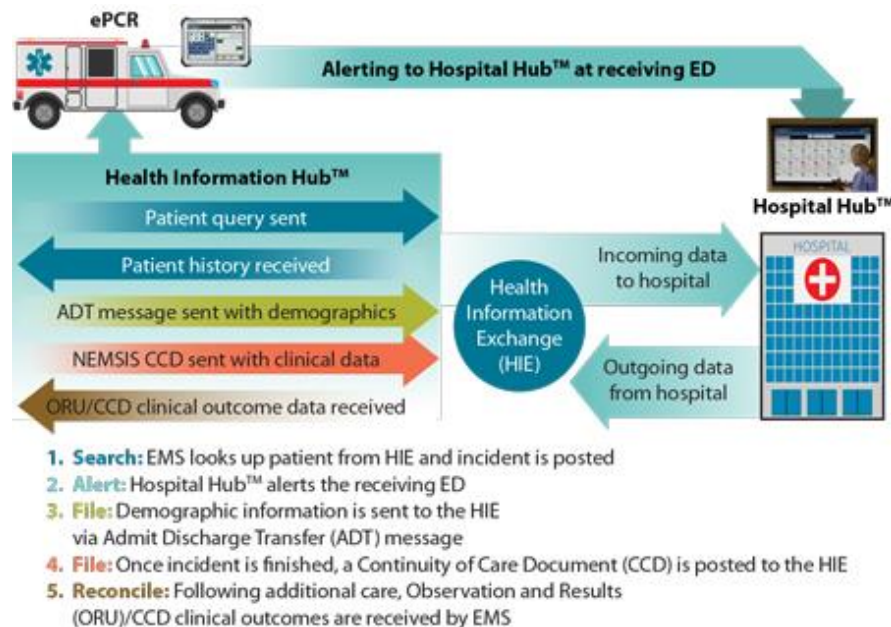[65] http://ldh.louisiana.gov/index.cfm/page/1752

INITIATIVE 10: EMERGENCY MEDICAL SERVICES (EMS) – HIE CONNECTION

FOCUS AREA	DEVELOPMENT PHASE
HEALTH IT/HIE INFRASTRUCTURE	INTERMEDIATE

- Access to valuable social determinants data, like home environment, to guide population health programming.

- Ability to leverage EMS data to target and address super utilizers (hot spotting).

- Enhanced, field-level data for improved disaster preparedness.

Timeframe

Mid-term: 12 to 24 months.

Potential Funding Source(s)

SMD Letter 16-003 updates the availability of CMS 90/10 funding to support HIE onboarding and systems for EMS providers (if the EMS provider is coordinating care with an EP).

State Example(s)

Several state initiatives that have focused on allowing EMS access to electronic health information have demonstrated successes.[66] The ability for EMS to access up-to-date health information in the field can enable qualified providers to help manage chronic conditions and deliver safe, effective care, without unnecessary utilization of an ED. Additionally, connection between EMS and the Louisiana SDE or other HIE/interoperable systems can enhance resource coordination and patient tracking as a part of a disaster preparedness plan. Reduction in unnecessary ED utilization and disaster preparedness are both key priorities for Louisiana.

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[66] https://www.healthit.gov/sites/default/files/emr_safer_knowledge_product_final.pdf

INITIATIVE 11: LOUISIANA PDMP – HIE CONNECTION

FOCUS AREA	DEVELOPMENT PHASE
HEALTH IT/HIE INFRASTRUCTURE	VALUE-ADD

Description

LDH, in coordination with the Louisiana Board of Pharmacy, may consider creating an interoperable connection between the SDE, LaHIE, and Louisiana PDMP (LaPDMP), to monitor Schedule II-V controlled substances dispensed to residents in the state of Louisiana.

Rationale and Strategic Value

The LaPDMP is a key component in fighting the epidemic of prescription drug abuse within the state and across the country as its purpose is to assist in the reduction of the abuse of controlled substances and the duplicative prescribing and overprescribing of controlled substances. By way of the LaHIE-LaPDMP connection, prescribers may use their EHR system to directly access LaPDMP to look up, view, and print controlled substance prescriptions issued to their patients. Prescriber use of LaPDMP via their EHR system may enable more consistent use of the prescription database to search for patient medication, providing a more complete view and understanding of the patient's medical history. By connecting the PDMP to the HIEs, this will avoid costly integration projects with each individual vendor serving providers in the state.

Best Practices and Suggested Approach

Specialized Registry: State PDMP

Suggested Steps:

1) Convene a PDMP/HIE Workgroup within the statewide HIE governance organization that includes state agencies, physicians, pharmacists, and other stakeholders.

2) Determine the State's HIE focus and align with the Substance Use Disorder (SUD) Health IT Plan. Does it include providing a complete medication history to aid in the prevention of adverse medication events and medication errors, including opioid drug overdose?

3) Define which PDMP/health IT integration use case(s) is applicable.
   o Health IT to in-state PDMP directly.
   o Health IT to Hub to PDMP.
   o Health IT to HIE/pharmacy intermediary to PDMP.

4) Begin with the State's PDMP goals to determine best use case.
   o Focus on reducing provider burden. Design/develop the infrastructure to streamline the provider's workflow, thus eliminating the need for them to open a new portal or website to look up a patient's controlled substance prescription history.
   o Assist medical, pharmacy, and public health professionals in the identification and prevention of prescription drug abuse.
   o Assist law enforcement and regulatory agencies in the identification and investigation of illegal prescription drug diversion.
   o Promote a balanced use of prescription data that preserves the professional practice of health care providers and legitimate patient access to optimal pharmaceutical-assisted care.

5) Define PDMP clinical objectives.
   o Consider health care provider real-time access at the point of care to patient clinical decision support prescription history to:

INITIATIVE 11: LOUISIANA PDMP – HIE CONNECTION

FOCUS AREA	DEVELOPMENT PHASE
HEALTH IT/HIE INFRASTRUCTURE	VALUE-ADD

- ▪ Identify aberrant drug use (e.g., doctor/pharmacy shopping) indicating possible misuse, addiction, or diversion.
- ▪ Initiate referral to appropriate assessment, treatment, and recovery services.
- ▪ Increase confidence in prescribing/dispensing decisions.

6) Explore functionality challenges.
   - o A significant challenge is the accurate and consistent linking of identities across multiple facilities to create a single view of the patient. This requires a near-zero tolerance of a false positive match rate with a low tolerance of a false negative match rate.
   - o MPI and patient matching must be in place and requires accurate cross-entity and cross-source patient identity management functionality.

7) Explore HIE registration policies and PDMP law requirements.

8) Analyze different user types able to access specific data sources.

9) Explore possibility to integrate with other data sources.

10) Define data transfer, storage, translation, and system capacity requirements.

11) Establish expectations for user support and help desk services.

12) Prioritize functionalities.
   - o Determine whether filtering data regarding controlled substances or all medication identification pertaining to high-risk patients is applicable.
   - o Notification to prescribers/dispensers – solicited or unsolicited.

13) Explore interstate data sharing.
   - o Legislative changes required.
   - o Interstate agreement changes required.

Timeframe

Mid-term: 12 to 24 months to **Long-term:** 24 to 48 months.

Potential Funding Source(s)

CMS SMD Letter #11-004 and 16-003

State Example(s)

Washington

As of 2015, the State only had about 30 percent of its prescribers registered to use the PDMP, as it is voluntary. The primary issue cited was ease of access. The state HIE, OneHealthPort, offers a secure, bidirectional connection to the Washington State Department of Health. Provider organizations have multiple connectivity options to the HIE. When a licensed prescriber sends a query for medication history to the PDMP repository, a response is received in real time. Washington received approval for Stage 2/3 MU as a Specialized Registry for the PDMP. As of 2016, 76 hospitals have gone with an integrated PDMP connection with EPIC and there has been a significant increase in queries via the HIE connection versus the online portal. This was part of an ONC-sponsored pilot project. The process is seamless and EPIC has released the update to all customers statewide.

INITIATIVE 11: LOUISIANA PDMP – HIE CONNECTION

FOCUS AREA	DEVELOPMENT PHASE
HEALTH IT/HIE INFRASTRUCTURE	VALUE-ADD

Nebraska

On January 31, 2018, Nebraska became the first state in the nation to require reporting of all dispensed prescription drugs to the PDMP. This allows for monitoring of all prescribed drugs, and the ability to track readmissions connected with improper medication usage, drug-drug interactions, or patients that did not fill their prescriptions as requested by their physician. Sharing timely and accurate patient health information allows providers to be alerted to potential issues such as opioid abuse.

INITIATIVE 12: LaPHIE SERVICES EXPANSION

FOCUS AREA	DEVELOPMENT PHASE
HEALTH IT/HIE INFRASTRUCTURE	VALUE-ADD

Description

In 2007, the OPH partnered with seven LSU HCSD hospitals to exchange OPH's surveillance data to alert LSU clinicians that a patient in their care may have an untreated case of HIV, tuberculosis, or syphilis requiring medical attention. LaPHIE is a bidirectional, electronic information exchange and uses OPH surveillance data to generate point of care messages for providers at hospitals. This intervention facilitates the ability to identify and link out-of-care patients back to care and treatment.

Initially, LaPHIE was implemented in eight public hospitals. Since its initial launch, nine out of 10 public hospitals were transitioned to the private sector or closed. LaPHIE is currently operating in four hospitals. This Initiative focuses on the expansion and preservation of LaPHIE services as new EHRs are implemented in hospitals.

Rationale and Strategic Value

Between 2009 and August 2016, LaPHIE alerts were generated for nearly 1,600 patients; 75 percent of those patients who were out of care were linked back into care within 90 days.[67] Careful planning and collaboration with health care systems may enable expansion of the LaPHIE services and could possibly influence incremental advancements to improve both individual and population health in Louisiana.

Best Practices and Suggested Approach

LDH conduct a Discovery Session with LaPHIE to examine the current use case and determine how their notification services can be expanded to additional hospitals and downstream providers.

Consider expanding on the Discovery Session and inviting LaPHIE to collaborate with the Louisiana SDE and other active HIEs. Discovery Session expansion would allow for exploration of possible opportunities to leverage the collective purchasing power of these organizations which would lead to cost-effective technology improvements/upgrades and enhanced functionality. Additionally, support state HIE organizations including GNOHIE in supplementing LaPHIE data where possible. This continued collaboration may establish a strategic alignment to boost provider adoption and utilization of LaPHIE services, as well as significantly increase the number of HIV, tuberculosis, or syphilis patients who are linked back into care.

LaPHIE's existing infrastructure and success may be expanded to include an opioid surveillance program, linking individuals identified with substance use disorders back into appropriate treatment or for referral.

Anticipated Outcomes

A collaborative approach between Louisiana's active HIEs and LaPHIE may result in enhancements and expansion of the notification services. Opportunities would arise for advanced care coordination efforts targeting the HIV, tuberculosis, and syphilis patient population, as well as other serious conditions such as opioid abuse and overdose.

Timeframe

Mid-term: 12 to 24 months.

Potential Funding Source(s)

SMD Letter 16-003 updates the availability of CMS 90/10 funding to support HIE onboarding.

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[67] https://careacttarget.org/ihip/case-study-louisiana-public-health-information-exchange-laphie

INITIATIVE 13: EXPAND AND ENHANCE ENCOUNTER NOTIFICATION SYSTEMS (ENS)

FOCUS AREA	DEVELOPMENT PHASE
HEALTH IT/HIE INFRASTRUCTURE	VALUE-ADD

Description

LDH and Louisiana HIEs may collaborate with health care stakeholders to identify and prioritize specific use cases for secure health data exchange, while defining value propositions, gaining buy-in from the provider community, and avoiding the possibility of implementing duplicate health IT assets within the state.

Rationale and Strategic Value

In order to drive HIE adoption and utilization, services offered must align with the needs of the end users. The provider community ENS are widely cited as key value-add services for HIE from the provider perspective and have proven to serve as a key function for HIE nationwide.

Knowing when patients have visited an ED, or when patients are admitted to or discharged from a hospital, providers can improve care coordination and transitions, save time, and increase patient safety while ultimately reducing costs and reducing hospital readmissions. ADTs offer a wealth of information and are a reliable source of data for care coordination efforts.

Best Practices and Suggested Approach

Statewide Event/Encounter Notification System (ADTs) *(Service Enhancement)*

ENS notifies an HIE member in real time when one of its patients or health plan members has an encounter at a participating hospital in the state. The HIE can receive notifications in real time for any patient admissions, transfers, or discharges in the state, and has the ability to send notifications of these specific hospital events to HIE members who wish to track their patient populations.

LaHIE currently supports an alert notification infrastructure, LaEDIE, used by Medicaid hospitals and MCOs. The LaEDIE ENS feature could be utilized by Louisiana Medicaid hospitals to send notifications giving participating providers the opportunity to better coordinate follow-up and transitional care. However, as stakeholders reported, there is limited usage of the LaEDIE service beyond the MCOs, and while there is potential, this service is not being utilized statewide.

ENS available to hospitals and care managers for care coordination and care follow up is a foundational use case; however, there are several other usage opportunities for the LaEDIE tool. For example, skilled nursing facilities and long-term care services can use alerting capabilities to better manage transitions of elderly and frail patients to and from a hospital setting. Additionally, ADT information is critical to "hot spotting", or identification of individuals who are disproportionately high users of hospital services. These use cases each support the provider's need for actionable data, especially when moving into shared savings and value-based purchasing models of care.

The LaEDIE tool has other possible use cases as described in detail below:

1) **Community Providers (Behavioral Health):** The Louisiana Assertive Community Treatment (ACT) is a community-based service that provides intensive mental health services to individuals with the highest mental health needs and enables service recipients to transition from institutions and live in the community. ACT teams in the state are designed to address every aspect of an individual's needs, including medication management, therapy, crisis intervention, social support, employment, substance abuse disorder treatment, and housing. The service is provided by an interdisciplinary team of professionals, including, but not limited to, a licensed mental health professional, housing specialist, employment specialist, substance abuse service provider, nurse, peer support specialist, and psychiatrist. The team is available 24 hours a day, and its members are the primary providers of recovery-oriented services for the individual in the community.[68]

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[68] http://www.lamedicaid.com/provweb1/providermanuals/manuals/BHS/BHS.pdf

INITIATIVE 13: EXPAND AND ENHANCE ENCOUNTER NOTIFICATION SYSTEMS (ENS)

FOCUS AREA	DEVELOPMENT PHASE
HEALTH IT/HIE INFRASTRUCTURE	VALUE-ADD

ACT teams provide mobilized crisis intervention in various environments, such as the recipient's home, schools, jails, homeless shelters, streets, and other locations. Alerting team members and dispatching them to locations can be a challenge. Louisiana HIE ENS can be utilized to provide alerts to ACT team members when their patients are admitted or discharged from the hospitals or other designated facilities so interventions and successful continuity of care can take place.

2) **Community Providers (Department of Children and Family Services):** The Department of Children and Family Services (DCFS) currently does not have the ability to electronically notify case managers (CMs) when a child on their case load has visited the ED or been admitted to the hospital. CMs may not become aware for several days/weeks that the child had a serious health event, what the outcome was, and the need for follow-up care. The ENS product can notify the assigned DCFS CM and other authorized personnel, as needed, whenever a child on their case load is admitted or discharged from the ED or hospital.

Statewide ENS Services

Due to limited availability of ENS services, several grassroots and regional efforts have emerged to address community needs:

1) GNOHIE also offers a regional event notification service that provides real-time alerts directly to relevant community providers and care managers, and includes C-CDA clinical summaries with the notification.

2) Additionally, the LHA is in the final stages of contracting to develop and enable a robust encounter alerting service at no cost to its 150-plus members, going beyond the Medicaid MCO use case supported by LaEDIE. This would be an expansion of an existing quality initiative that tracks readmission rates with home health agencies.

With an existing ENS infrastructure, LDH and the HIE organizations with need for ENS services collaborate through Initiative 1 and/or 4 to determine the best path forward to expand and accelerate availability, adoption, and utilization of a statewide ENS, and avoid duplication of Louisiana health IT assets and inefficient use of state and federal funding.

Anticipated Outcomes

- Increased participation in and utilization of HIE.

- Extended ENS services to improve care coordination among providers and reduced hospital readmissions.

Timeframe

Near-term: 4 to 12 months to **Long-term:** 12 to 36 months.

Potential Funding Source(s)

SMD Letters 11-004, 10-016.

State Example

Indiana

The Indiana HIE provides health plans and Medicare ACOs with alerts within 24 hours of when a member visits the ED or is admitted to a hospital. A hospital alert pilot in Indiana provided notice of hospital encounters to health plans. ENS alerts were used to identify cases of non-urgent ED utilization. Members were given information about the plan's

INITIATIVE 13: EXPAND AND ENHANCE ENCOUNTER NOTIFICATION SYSTEMS (ENS)

FOCUS AREA	DEVELOPMENT PHASE
HEALTH IT/HIE INFRASTRUCTURE	VALUE-ADD

24-hour nurse line, were encouraged to contact their primary care physician for questions and follow-up care, and frequent ED users were given more personalized support.

The results showed the alerting system yielded a 53 percent reduction in unnecessary utilization of the ED, 68 percent increase in visits to the primary care physician, and a $2 to $4 million reduction in cost of care over six months. Additionally, the project showed significant out-of-network utilization among ACO beneficiaries.[69]

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[69] https://www.fiercehealthcare.com/it/indiana-hie-stresses-value-ed-alert-pilot-program

FOCUS AREA 4:

Health IT/HIE Adoption and Utilization

INITIATIVE 14: ADVANCED LOUISIANA PUBLIC HEALTH READINESS ASSESSMENT

FOCUS AREA	DEVELOPMENT PHASE
HEALTH IT/HIE ADOPTION AND UTILIZATION	VALUE-ADD

Description

As LDH and OPH consider electronic data exchange to and from Louisiana health care community stakeholders, it appears that such service may require modernization of their IT and related systems by making them integrated, interoperable, and standards-based. Therefore, these state agencies may consider conducting a comprehensive assessment of Louisiana public health registries, as well as a public health informatics profile to build a business case identifying program and/or information system and human resource needs for adequate data sharing.

Rationale and Strategic Value

OPH is a key stakeholder in Louisiana's health care transformation. As such, it may need to upgrade its systems in order to be a viable partner in health IT/HIE initiatives with the private health care sector. Conducting a readiness assessment can provide OPH and state leadership with useful information for planning and funding purposes.

Best Practices and Suggested Approach

14.1. Comprehensive Assessment of Registries and Technical Connections at LDH and Related State Agencies

Given the long-term commitment of resources associated with registries alongside limited public health funding, the State may design an assessment of both technical and administrative requirements for each registry to include the following:

1) Review of the function, duration, and scope of the registry.

2) Review of existing and planned technical connections, transmission types, and implementation guides.

3) Determine data elements.

4) Design and execute data collection and processing procedures.

5) Create data quality control procedures.

6) Draft documentation and framework for dissemination of registry data and findings.

LDH may consider informally appointing one Medicaid EHR Incentive Program staff member to serve as a public health liaison to develop fact sheets on HIE service offerings (such as submission to public health registries) and encourage providers to submit through an HIE to meet Stage 2 Objective 10: Public Health Reporting Measures. LDH may additionally consider developing public health registry-specific resources for both Medicaid EHR Incentive Program staff and the provider community to keep MU audiences apprised of registry status and availability.

LDH may seek to encourage provider use of public health registries and MU by publicly displaying a declaration of readiness on their websites, working with the Region 6 CMS HITECH Lead and CDC Liaison to ensure best practices are met. Declarations of Readiness may include reporting criteria and standards such as onboarding instructions, standard transmission types accepted by the registry, message quality frameworks, and implementation guides, as well as information specific to providers or organizations submitting for the purposes of meeting an MU measure. In addition, the liaison may assist in working with registries to determine readiness in accepting Stage 3 reporting requirements.

LDH and OPH Mitigation Strategies for Integrating Public Health Information Systems and HIEs

LDH and OPH may consider the following strategies when designing, developing, and implementing interoperable connections between state agencies and HIEs.

INITIATIVE 14: ADVANCED LOUISIANA PUBLIC HEALTH READINESS ASSESSMENT

FOCUS AREA	DEVELOPMENT PHASE
HEALTH IT/HIE ADOPTION AND UTILIZATION	VALUE-ADD

1) Public Health Standards.

   o Educate decision-makers on emerging and available standards and use cases.

   o Design for new transport protocols through the use of incremental integration for organizations that are already connected to public health using legacy transport protocols.

   o Support public health departments' flexibility in receiving information using multiple transport protocols adopted by HIE organizations and providers.

2) Gaps in Adoption and Existing Transport Standards.

   o Be aware of EHR vendor functionality development to enable public health reporting via available sets of transport protocols.

3) Harmonize Message Standards Across Domains.

   o Enhance implementation guides to address gaps, eliminate interpretation differences, and support use of data for multiple purposes.

   o Conduct regular meetings with public health, HIE organizations, and health IT developer representation to ensure common interpretation of standards and requirements.

4) Vocabulary Variation.

   o Obtain resources to perform mapping between local codes and standards.

5) Data Quality.

   o Identify resources to monitor data and assess data quality.

   o Work with data suppliers to align interpretation of standards.

   o Support HIE building of robust MPI if currently unavailable in LaHIE.

Using Health IT to Extend Louisiana Public Health Services

Public Health Investigation Use Case – Allows authorized OPH staff to query the Louisiana HIE for clinical data related to a particular case that has already been identified as a requirement for investigation through other means, such as lab reporting or contact tracing. Under this scenario, OPH may have use of a query-based exchange via a web-based portal to access clinical data needed for the public health investigation, as allowable by law.

Clinical Care in Louisiana Public Health Clinics – Health care providers servicing patients from within Louisiana public health clinics may query a Louisiana HIE via their EHR or web-based portal to retrieve the health data for their patient at the point of care.

Population-Level Quality Monitoring – The current methods of measuring quality of care. Reliance on chart reviews and/or claims-based analysis of various insured populations are time consuming, costly, and burdensome to providers and disruptive to their workflow. HIE can help to streamline efforts and create efficiencies in both costs and workload. To the extent that LaHIE and other Louisiana regional HIEs can penetrate across systems of care, they offer the possibility of measuring the quality of care delivered to members of a community across health plans and providers. The interoperable Louisiana infrastructure may be leveraged to provide core data elements such as medications, procedures, and diagnoses. The HIE and data warehouse may be integrated to use a system-generated identifier to link patients' data across different health care organizations. Or, without patient-level linking, summary quality measures from individual organizations may be aggregated at the HIE level with no risk to patient privacy.

INITIATIVE 14: ADVANCED LOUISIANA PUBLIC HEALTH READINESS ASSESSMENT

FOCUS AREA	DEVELOPMENT PHASE
HEALTH IT/HIE ADOPTION AND UTILIZATION	VALUE-ADD

Connecting Public Health Systems with HIEs – Two primary goals for connecting public health information systems with HIE organizations include:

1) Streamline the number of connections (and reduce associated costs) for health care providers, HIE organizations, and public health agencies to exchange public health information.

2) Support health care providers to achieve public health requirements for the Medicare and Medicaid EHR incentive programs.

Louisiana health care providers may fulfill their mandated public health reporting requirements through HIE organizations in two ways: 1) submit public health messages for the HIE organization to transmit to the OPH; or 2) send patient records or encounter summaries to the HIE organization to parse, identify relevant public health information, and transmit to the public health agency. Either of these approaches may be considered in lieu of health care providers submitting public health messages directly to the public health agency and sending patient information to the HIE organization.

14.2. Public Health Informatics Profile

A public health informatics profile is a comprehensive summary of an agency's current project information system needs and opportunities. The profile can be used to inform OPH's decisions and priorities regarding system modernization, defined as upgrading or modifying an information system to meet changing needs. Information in an OPH public health informatics profile can include the collection, analysis, and representation of data pertaining to the information systems that support the state's public health programs, as well as an assessment of future informatics needs and opportunities. Examples may include current and desired technical capabilities of information systems, current and future use of and need for public health information, current and desired information exchange partners and capabilities, and various other resource needs.

Timeframe

Mid-term: 12 to 24 months.

Suggested Prerequisite: None.

Potential Funding Source(s)

CMS SMD Letters #11-004 and 16-003.

State Example(s)

Minnesota

As bidirectional HIE took hold in the state, MDH decided to assess the agency's readiness and needs pertaining to HIE. The public health informatics assessment allowed MDH to gain insights into the information system needs of its various program areas and ways to use the information to discuss the overall agency-wide approach to information system modernization. As a result, MDH used the qualitative data generated by the assessment to identify challenges and action steps to create an agency-wide tactical plan for interoperability and integration of information.

South Carolina

South Carolina's EHR Incentive Program worked closely with public health registries, CDC, and CMS to ensure compliance in state Medicaid agency declaration of readiness for MU.

INITIATIVE 15: USE CASE WORK GROUP TO EXPAND LOUISIANA STATEWIDE HEALTH IT/HIE SERVICES

FOCUS AREA	DEVELOPMENT PHASE
HEALTH IT/HIE ADOPTION AND UTILIZATION	VALUE-ADD

Description

LDH and Louisiana HIEs may collaborate with health care stakeholders to identify and prioritize specific use cases for secure health data exchange, while defining value propositions, gaining buy-in from the provider community, and avoiding the possibility of implementing duplicate health IT assets within the state.

Rationale and Strategic Value

As a best practice, in order to drive HIE adoption and utilization, services offered must align with community needs. These services are widely cited as key value-add services from the provider perspective, and are key services in support of VBP models of care.

By supporting health IT/HIE services that providers need, the State is well positioned to promote full adoption and utilization in the near and long term. As health IT/HIE services are operationalized at the clinical level, providers will have achieved a greater readiness for quality-driving payment programs.

Best Practices and Suggested Approach

Below are six suggested areas for the use case work group to address.

1. **Statewide MPI** *(New Service)*

The MPI identifies patients across separate clinical, financial, and administrative systems, and is necessary to consolidate lists from various databases. As an HIE receives patient data from multiple, unaffiliated sources, the data is sent to a central MPD that allows a longitudinal view of the patient's health information across the continuum of care. The MPI contains records for all patients within the clinical data repository, and by utilizing personal identifiers, any ADT or CCD messages related to that patient and matches it with existing information. The MPI Enterprise Record consists of all facility records across all disparate, participating providers.

HIEs operating in Colorado, Maine and Michigan have reported 99 percent confidence levels in patient matching tools. In Louisiana, the GNOHIE has also seen success in utilizing MPI tools to allow providers to accurately access longitudinal data. To ensure a proper approach is taken to a statewide solution, LDH may choose to convene an advisory group as a part of the health IT/HIE governance activities to ensure the MPI solution is reliable.

2. **Statewide Provider Directory** *(Service Enhancement)*

A provider directory is an important component of the statewide HIE network because it is the source of trusted provider information for secure data routing, and is key to facilitate electronic communication and exchange of health information in a trusted manner among providers and other authorized health care professionals. Provider directories are critical tools to support VBP approaches in terms of quality measurement and coordination.

- Quality measurement: Attribution of quality/value to providers.
- Care coordination: Identification of providers with contact information.

Presently, the State does not have an authoritative statewide directory of health care providers. Instead, organizations use a multitude of isolated provider directories, spread across state and non-state systems.

LaHIE has begun to facilitate the onboarding of providers statewide to the provider registry. This Initiative relates directly to coordination of care CQMs and transition of care meaningful standards as it improves the overall ability for providers to communicate and coordinate patient care between one another. Additionally, a core feature of the provider registry is its ability to supply providers with the functionality for accurate direct messaging through secure email addresses, allowing the exchange of information, patient notes, etc., to occur. Providers also have the capability

INITIATIVE 15: USE CASE WORK GROUP TO EXPAND LOUISIANA STATEWIDE HEALTH IT/HIE SERVICES

FOCUS AREA	DEVELOPMENT PHASE
HEALTH IT/HIE ADOPTION AND UTILIZATION	VALUE-ADD

to exchange CCDs through the registry portal. However, there remains a need to 1) coordinate with other HIEs to expand the directory statewide; and 2) promote participation and data trust in the community.

Through the health IT/HIE governance activities, LDH can promote the standards, architecture, and policies necessary to support a statewide, single source of truth for provider directory.

3. Laboratory Order/Results *(New Service)*

HIE Lab Results Delivery Service gives providers access to patient lab results in a timely manner and in a standard format that allows for improved clinical decision support, trending analyses, and population health management – all of which are essential to delivering efficient and effective patient care. HIE's Lab Results Delivery Service includes:

- Lab results delivery (main service).

- Storing lab results for look-up.

- Technical assistance, including translation services (translation from local lab codes to Logical Observation Identifiers Names and Codes (LOINC) so data can more easily move between systems) and advisory services (outreach, education, and guidance about LOINC and lab exchange).

State Examples
- **Delaware Health Information Network (DHIN):** DHIN has served as the "report of record" for most lab results in the state. The organization attributes its success to achieving critical provider mass with over 90 percent of the state's providers signed up and using the network, with and partnering with all the major hospitals and commercial lab vendors early on.

- **Maryland's Chesapeake Regional Information System for Our Patients (CRISP):** "CRISP receives over 500,000 lab results in an average 10-day period from 32 of 46 acute care hospitals across the state. This equates to approximately 28 million results now available for query in its repository. The lab results enter CRISP's HIE infrastructure as HL7 V2.x messages, flowing over virtual private network (VPN) connections and through CRISP's interface engines. CRISP transforms the inbound lab messages so they conform to the organization's lab specification. CRISP determined that LOINC mapping is not critical for the organization to provide because the HIE entity is not delivering results to an end-point system. CRISP maintains the source system result codes and displays them to end users who search for and retrieve the information."[70]

4. Medication Management Services *(New Service)*

A Medication Management Service provides health care providers in acute and ambulatory settings the ability to reconcile medications that a patient is taking with access to information such as drug name, dosage, frequency, route, fill status, eligibility information, pharmacy benefit coverage, and group-specific formulary information. An HIE can build a system connection with the data source vendor, such as Surescripts or Dr. First, in order to send a provider's query to and return information from various data sources.

A Medication Management Service enables providers to:

- View list of all medications, including those prescribed by specialist or out-of-town health care professional.

- Determine what medications were prescribed at the ED for their patient.

- Have greater awareness of allergies and drug-to-drug interactions.

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[70] https://www.healthit.gov/sites/default/files/lab_exchange_bright_spots_synthesis_final_09302013.pdf

INITIATIVE 15: USE CASE WORK GROUP TO EXPAND LOUISIANA STATEWIDE HEALTH IT/HIE SERVICES

FOCUS AREA	DEVELOPMENT PHASE
HEALTH IT/HIE ADOPTION AND UTILIZATION	VALUE-ADD

- Access pharmacy benefit manager and health plan formularies to determine insurance coverage for prescribed medication.

- Identify narcotic drug-seeking patients.

State Example

- **Minnesota –** The Minnesota Medication Therapy Management System (MTMS) was collaboratively developed and requires pharmacists to enroll individually with the Minnesota Health Care Programs. MTMS includes performing or obtaining necessary assessment of the patient's health status through face-to-face or interactive video encounters done in an ambulatory care outpatient setting, clinic, pharmacy, or members home; formulating a medication treatment plan; monitoring and evaluating the patient's response; performing a comprehensive medication review; and documenting care delivery.

5. Medical Image Exchange (MIE) *(New Service)*

An HIE-based Medical Imaging Exchange (MIE) gives providers who are HIE members the ability to perform a query across all participating facilities, receive a comprehensive medical imaging study list, and view a specific study and report for a particular patient. The MIE service routes medical imaging studies from each HIE member Picture Archiving and Communication Systems (PACS) to a central cloud-based archive where it can be shared and viewed by providers through the HIE portal. An MIE HIE service allows providers to reduce time and costs to gather studies from disparate facilities by replacing point-to-point VPN connections and providing the capacity to upload and view content of patient CDs, with a federated query managed by the MIE vendor. Other benefits include improvement of patient care by having a full set of studies available at point of care, better care for trauma patients since studies are received before patient arrives from transferring facility, and image enabled the EHR (MU) with studies from across the state.

State Example:

- **New York –** HealtheConnections, a regional HIE in New York, and eHealth Technologies, partnered in 2011 to enable more efficient sharing of medical images among providers. Providers have the ability to view diagnostic-quality medical images at the point of care. Nearly 500 users among participating organizations have to visit one place to locate, view, and/or transfer medical images from other providers, and images are accessible within the electronic patient record. A process that may have taken days in the past has been drastically reduced, and images from multiple locations are now consolidated to a single patient record. HealtheConnections participants are transferring over 8,800 image studies per month.

6. HIE Connection to Telehealth

On June 26, 2017, the Louisiana Telehealth Access Task Force (TATF), an advisory body to the legislature and LDH, pursuant to HCR No. 88 of 2014, issued a report to the Governor and the legislature regarding the status of telehealth access in Louisiana. The report stated Louisiana "lack[ed] sufficient medical services", with 84 percent of Louisiana's parishes experiencing a primary care shortage area designation, and 92 percent of parishes within a mental health professional shortage area.[71] The TATF report cites telehealth as a central tool in addressing these shortages and recommends expanding the use of telehealth to address Louisianan's medical needs. The report also detailed the VA's use of telehealth to reduce both primary care and mental health care shortages, and the success of the VA's initiatives, reducing bed days by 56 percent, reducing readmissions by 32 percent, and decreasing total psychiatric admissions by 35 percent.

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[71] https://wwwcfprd.doa.louisiana.gov/boardsandcommissions/viewBoard.cfm?board=608

INITIATIVE 15: USE CASE WORK GROUP TO EXPAND LOUISIANA STATEWIDE HEALTH IT/HIE SERVICES

FOCUS AREA	DEVELOPMENT PHASE
HEALTH IT/HIE ADOPTION AND UTILIZATION	VALUE-ADD

Louisiana may consider adding telehealth discussions as a topic for the statewide listening tour (see *Initiative 2: Louisiana Stakeholder Listening Sessions Statewide Tour*) to explore opportunities to create interoperable connections between telehealth EHR systems and Louisiana HIEs, and to address potential telehealth barriers including provider reimbursement issues.

Anticipated Outcomes

- Use case group is established with a manageable approach to addressing complex health IT and data sharing features and functionality to be provided by the statewide infrastructure.

- Development of a standardized mechanism for scoping each project, gathering and documenting technical requirements, costs, and possible policy limitations.

- Opportunities to combine use cases to create more extensive stories for data sharing.

- Increased participation in and utilization of HIE with possible resulting including improved care coordination among providers and readiness for VBP programs.

Timeframe

Near-term: 4 to 12 months, extended to **Long-term:** 24 to 48 months.

Potential Funding Source(s)

CMS SMD Letters #11-004 and 16-003.

FOCUS AREA 5:

Sustainability

INITIATIVE 16: HEALTH IT FINANCIAL SUSTAINABILITY

FOCUS AREA	DEVELOPMENT PHASE
SUSTAINABILITY	FOUNDATIONAL

Description

LDH, the SDE HIE, and other key stakeholders participating in the Louisiana Health IT/HIE governance organization, may consider actively seeking funding opportunities within both the public and private sectors to further expand, enhance, and sustain the statewide data exchange infrastructure.

Rationale and Strategic Value

Perform activities to ensure long-term financial sustainability, including activities that generate stable streams of revenue and contain unnecessary costs.

Best Practices and Suggested Approach

Public Sector Funding

As 2021 approaches, LDH should build a strategic plan to leverage enhanced federal funding for the transition to sustainable funding sources including MMIS and E&E. Louisiana may continue to partner with CMS Medicaid HITECH team staff and other system program leads to initiate active planning sessions. Sessions will focus on the transition of the Medicaid EHR Incentive Program and HIE organizations or public health registries that rely on 90/10 funding sources such as State Medicaid Director Letter (SMDL) #10-016, SMDL #11-004, and SMDL #16-004, among others. Operations and other initiatives critical for long-term Medicaid operations may be potentially eligible for alternative funding sources after 2021.

1) **Primary sources of federal funding for state Medicaid systems acquisition, development, enhancement, and operations.**

   - MMIS and E&E.

     42 CFR §433.112: Federal Financial Participation (FFP) is available at the **90 percent rate in State expenditures for the design, development, installation, or enhancement** of a mechanized claims processing and information retrieval system.

     42 CFR §433.116: FFP is available at **75 percent of expenditures for operation** of a mechanized claims processing and information retrieval system approved by CMS.

   - HITECH.

     45 CFR § 495.322: FFP is available at **90 percent in State expenditures for administrative** activities in support of implementing incentive payments to Medicaid EPs.

2) **Current FFP Rates by System**

   Applicability of enhanced MMIS and E&E funding really is about the system, whereas applicability of enhanced HITECH funding is about the program (i.e., the Medicaid EHR Incentive Program), which includes:

   - Systems development/operations and program administration for the EHR Incentive Program.

   - HIE development and interoperability to help EPs achieve MU.

3) **Planning for the Post-HITECH Sustainability**

   Under federal statute and regulation, specifically the HITECH, CMS has made FFP available for state system implementation in support of the Medicaid EHR Incentive Program, including HIE and interoperability. HITECH funding also supports other administrative and oversight activities, such as, onboarding Medicaid providers,

INITIATIVE 16: HEALTH IT FINANCIAL SUSTAINABILITY

FOCUS AREA	DEVELOPMENT PHASE
SUSTAINABILITY	FOUNDATIONAL

implementing provider directories, building out public health infrastructure, developing communications materials, provider outreach, audits, appeals, etc.

However, HITECH funding has limitations. It is available to states for design, development, and implementation (DDI) only, and will expire at the end of FFY 2021.

Therefore, Louisiana may consider planning now for how they intend to fund their health IT infrastructure, including HIE systems not only after the 2021 expiration of HITECH funding, but also as assets transitions from development and implementation into maintenance and operations.

While states cannot merely switch from HITECH to other funding sources, such as MMIS and E&E to further support their health IT infrastructure and HIE system needs, Myers and Stauffer has identified CMS-recommended strategies and tactics for states to access and leverage these funding sources to protect and sustain their health IT assets and infrastructure investments.

For instance, with HITECH-funded DDI projects underway as FFY 2021 ends, the State may have the option to continue systems development using enhanced MMIS or E&E funding. Such projects must meet the Conditions and Standards and promote MITA maturity of the state's Medicaid IT enterprise. In addition, MITA 3.0 includes care management business areas addressing disease management, population health, and HIE. Therefore, HIE infrastructure under the control of the state Medicaid agency, is justified in switching from HITECH to MMIS funding to support their health IT infrastructure. This is just one of many approaches states can take now to ensure they successfully make the transition from HITECH to MMIS and/or E&E funding.

Another advantage of states transitioning from HITECH to MMIS and E&E funding is that FFP is available at a 90 percent match rate for state expenditures for DDI, and a 75 percent match rate for maintenance and operations expenditures. With the right strategies and infrastructure design in place, states can transition from HITECH to other more reliable and stable sources of funding for long-term sustainability.

4) **Potential revenue source for Louisiana HIEs.**

The Social Security Administration (SSA) is actively seeking connectivity with HIEs to enhance and streamline the disability benefits determination process. This type of connection presented a revenue-generating opportunity for HIEs.

Louisiana HIEs connected to the SSA provide a unique service to a specific participant population by acting as an information gateway, allowing medical providers to automatically respond to electronic disability requests from the SSA for rapid process of disability claims. Without HIE, providers are challenged by having to respond to multiple SSA documentation and disability requests that include a manual, paper-based, and often time-intensive process.

Benefits include:

- **Reduced timeframe for disability determination.** The disability determination period, under the current process, can take 18 to 24 months, and at least three to four requests for medical evidence per case are made. For veterans, the average wait time for a disability claim to be processed is 318 days. In recent Congressional testimony, VA officials have admitted to a backlog of nearly 900,000 claims. An automated, electronic process made available via HIE services may eliminate duplicate requests for information and/or limit the amount of missing or incomplete information gathered, thus significantly reducing the overall number of days to process a claim.

- **Sustainability.** An HIE to SSA connection provides a stable source of revenue for the HIE as it can receive a fee of up to $15 from the SSA for each claim it transmits electronically from the hospital or provider organization, to the federal agency. In addition, an HIE offering this feature may attract those providers who frequently interact with the SSA to join the HIE in order to receive this service.

INITIATIVE 16: HEALTH IT FINANCIAL SUSTAINABILITY

FOCUS AREA	DEVELOPMENT PHASE
SUSTAINABILITY	FOUNDATIONAL

5) **Federal health IT grants.**

LDH may choose to seek out and explore federal funding opportunities for public-private collaborative. Recent grant opportunities include:

- Implementation and Evaluation of New Health Information Technology (IT) Strategies for Collecting and Using Patient-Reported Outcome (PRO) Measures (U18) https://grants.nih.gov/grants/guide/pa-files/PA-17-247.html. This grant focuses on the use of PRO measures in primary care and other ambulatory care settings. Through initiatives 1 and 4 outlined in this Roadmap, collaboration between LDH, Louisiana HIEs, and primary care providers may be initiated to develop new health IT strategies to increase utilization of PROs in ambulatory care settings and contribute to improved patient-centered health outcomes and quality of care.

- Other federal grant opportunities include:

  o Health Information Technology to Improve Health Care Quality and Outcomes (R21): https://grants.nih.gov/grants/guide/pa-files/PA-17-246.html.

  o Utilizing Health Information Technology to Scale and Spread Successful Practice Models Using Patient-reported Outcomes (R18): https://grants.nih.gov/grants/guide/pa-files/PA-17-077.html.

Private Sector Funding

1) **Kresge Foundation** (https://kresge.org/opportunities)

The Kresge Foundation programs focus on specific objectives or focus areas to advance programmatic goals in several domains including health and human services. This organization has funding opportunities that take three forms: 1) open on an ongoing basis without deadlines, open for a limited time with specific deadlines, and by invitation from a Kresge program officer. As of March 2018, Kresge has grant opportunities in the area of Human Services – Advancing Innovative, Multi-Sectoral Policy Solutions in Human Services.

Under this focus area, Kresge is accepting proposals from organizations that:

- Advocate for policies that foster greater collaboration among sectors and high-impact approaches to human services.

- Clearly articulate a community and audience engagement strategy.

- Demonstrate application of research on outcomes-based, policy-driven approaches.

- Implement a highly targeted evaluation that can expand integrated, high-impact practices in the human services sector.

  Acceptance and review of proposals in this domain are on an ongoing basis. There is no deadline.

2) **Robert Wood Johnson Foundation** (https://www.rwjf.org/en/how-we-work/grants-explorer/funding-opportunities.html)

A New Jersey-based national philanthropic organization dedicated solely to health, the Robert Wood Johnson Foundation (RWJF) funds a wide array of research and initiatives to address some of the most pressing health challenges in the country.

In addition to deadline-based applications, RWJF currently has available the Pioneering Ideas Brief Proposal funding opportunities. RWJF is seeking proposals presenting ideas and concepts that have the greatest potential to transform the way we all think about health. (https://www.rwjf.org/en/how-we-work/submit-a-proposal.html).

INITIATIVE 16: HEALTH IT FINANCIAL SUSTAINABILITY

FOCUS AREA	DEVELOPMENT PHASE
SUSTAINABILITY	FOUNDATIONAL

Anticipated Outcomes

Relevant strategies and executable tactics are developed to enable access to stable sources and streams of revenue to ensure long-term sustainability of the Louisiana health IT/HIE infrastructure.

Timeframe

Immediate term to long-term timeframe. Continuous development and execution of funding strategies is suggested.

Potential Funding Source(s)

CMS SMD Letters #11-004 and 16-003.

INITIATIVE 17: ASSESSMENT OF THE LOUISIANA SDE FOR LONG-TERM SUSTAINABILITY

FOCUS AREA	DEVELOPMENT PHASE
SUSTAINABILITY	FOUNDATIONAL

Description

Perform a comprehensive assessment of LaHIE to ensure its long-term viability and sustainability.

Rationale and Strategic Value

Over the past decade, state and federal governments have invested in the development and implementation of statewide and regional HIEs. During the same time period, several HIEs have suffered significant financial losses and have been forced to close their doors, leaving many health care providers and other stakeholders without access to patients' longitudinal health record, and investors without return on their investments. As with many other state Medicaid agencies, LDH may consider evaluating its SDE to ensure its viability, and identify areas where assistance can be provided to the HIE organization to ensure its long-term sustainability.

Best Practices and Suggested Approach

Commission a third-party firm experienced in health IT/HIE evaluation to conduct an assessment of LaHIE. Tailor the assessment to examine key components, including but not limited to the following:

1) **Technical Architecture and Interoperability Maturity Level** – Examine the SDE's current enterprise technology architecture, features, functionality, security, interface development, HIE and related health IT infrastructure status and downtimes, scalability, terminology services, disaster recovery, and use of national technology standards in existing implementation, including quality of data exchanged (vocabulary, content, structure, and format).

2) **Provider Participation and Value of SDE** – Survey the providers, payers, state agencies, and other key stakeholders utilizing the SDE's infrastructure, products, and services. Identify and evaluate onboarding processes; assess various data sources and provider type connections (interfaces).

3) **Business Processes and Organizational Capabilities** – Review the following within the SDE's organization:

   o   Operations management processes.

   o   Stakeholder (participating providers and others) management processes to create value.

   o   Communications and marketing processes.

   o   Innovation and regulatory processes.

   o   Alignment and integration of tangible and intangible assets to enterprise strategy such as strategic job families, IT portfolio, organizational change agenda, and human, information, and organizational capital and readiness.

4) **Privacy and Security Capabilities** – Conduct an IT security risk assessment to identify IT security risks and potential security vulnerabilities. Assessments should be based on any existing requirements for the documented in service-level agreements or similar documents, and in accordance with state laws, rules, or regulations related to security, privacy, and/or the HIE; the HIPAA Security Rule and Privacy and Breach Notification Rule; and National Institute of Standards and Technology Special Publication 800-53. Design and execute specific audit strategy regarding IT performance, Service Organization Controls (SOC) 2 of SDE in accordance with the American Institute of Certified Public Accountants Statements for Standards of Attestation Engagements 18 (SSAE 18). Conduct ongoing, periodic (recommended annual) third-party audits of the SDE.

INITIATIVE 17: ASSESSMENT OF THE LOUISIANA SDE FOR LONG-TERM SUSTAINABILITY

FOCUS AREA	DEVELOPMENT PHASE
SUSTAINABILITY	FOUNDATIONAL

5) **Financial Sustainability** – Review the SDE's accounting and financial practices, its current sustainability model, productivity and growth strategies, and the stakeholder value proposition to determine the organization's ability to:

- o Improve cost structure and increase asset utilization.

- o Expand revenue opportunities and enhance stakeholder value.

- o Support current and future health reform goals.

6) **Health IT and HIE Product and Services Roadmap** – Assess the SDE's product development strategy and speed-to-market approach for its data exchange products and services.

Anticipated Outcomes

- Possible increase in LDH and participating stakeholder confidence in the Louisiana SDE product and services capabilities and long-term sustainability.

- Identification of potential areas within the SDE and/or its product and service offering that may need improvement to ensure continued viability of the organization.

Timeframe

Near-term: 4 to 12 months.

INITIATIVE 18: STATE AGENCY OVERSIGHT AND SUPPORT OF HEALTH IT/HIE CAPABILITIES AND SUSTAINABILITY

FOCUS AREA	ROADMAP INITIATIVE TYPE
SUSTAINABILITY	FOUNDATIONAL

Description

LDH develops and executes strategies, as described in this Initiative, to provide state-level oversight ensuring appropriate resource allocation to further advance health IT/HIE in the state, and to support a united approach to interoperability within state government health agencies in alignment with the statewide health IT/HIE governance organization (see *Initiative 4: Louisiana Statewide Health IT/HIE Governance Model*).

Rationale and Strategic Value

Significant investments in health IT and HIE, both financial and of other resources, have been made across Louisiana. Establishing accountable and strategically-placed roles of health IT professionals within state government may aid in enhancing privacy and security, interoperability, adoption of health IT and HIE, and collaborative governance. The suggested approach and activities outlined below allow for the protection and enhancement of these investments over time.

Best Practices and Suggested Approach and Activities

18.1. Establish the Louisiana Office of Health IT with Dedicated Resources

Establishing the Louisiana Office of Health Information Technology sets forth specific responsibilities for establishing and maintaining rules and regulations necessary for statewide interoperable HIE, and for coordinating health IT activities throughout the state.

The Louisiana Office of Health IT may have dedicated resources to enact and execute projects to enable more effective use of electronic health IT. These resources will be used to improve the delivery of health care services, promote health IT/HIE, and conduct outreach and education activities to encourage providers to adopt and utilize data exchange services, and provide leadership for statewide health IT/HIE governance framework, specifically in areas of privacy and security, use of standards, and patient consent.

18.2. Enhance the Statewide Health IT Coordinator Position with Specific Authorities

Currently, the role of the Louisiana HIT Coordinator, as described in the Louisiana FFY 2018 – 2019 IAPD, is limited in its responsibilities and accountabilities. LDH may consider restoring and establishing the authoritative role of the HIT Coordinator to include duties, as updated from the outline in the most recent Louisiana SMHP 2014, as described below:

The Louisiana State HIT Coordinator reports to the DHH Secretary, and serves as the key advisor on issues related to health IT and exchange. The Coordinator will assist Louisiana Medicaid with the planning, development, and oversight of the Medicaid EHR Incentive Payment System, growth of the Louisiana HIE infrastructure, and related activities. In addition, the HIT Coordinator will work cooperatively with multiple stakeholders – including health care providers, health plans, health profession schools, consumers, technology vendors, public health agencies, and health care purchasers – to determine priorities and provide recommendations that will facilitate and expand the electronic movement and use of health information.

The Coordinator will work in collaboration with the Louisiana SDE, other HIEs or interoperable systems, and other health care, business, and technology stakeholders to:

- *Maintain relationships with public and private partners/stakeholders to ensure coordination of electronic information systems planning, development, implementation, and exchange of information that meets national privacy and security standards, policies, and timelines.*

INITIATIVE 18: STATE AGENCY OVERSIGHT AND SUPPORT OF HEALTH IT/HIE CAPABILITIES AND SUSTAINABILITY

FOCUS AREA	ROADMAP INITIATIVE TYPE
SUSTAINABILITY	FOUNDATIONAL

- *Identify improvements in the management, availability, and use of public health and health care data to assess and improve the health status of Louisiana citizens.*

- *Assess the readiness of health care entities to meet MU and provide direction and assistance with achieving the required level of adoption necessary to participate in HIE.*

- *Identify new grant/funding opportunities and serve as principle investigator as needed for grants, and assist with the preparation of grant applications for long-term sustainability of health IT/HIE projects.*

- *Act as the State lead for health IT/HIE and participate in relevant state, regional, and national health/scientific meetings.*

- *Coordinate health IT/HIE activities across state and federal agencies, including Medicaid and public health, and ensure coordination of other federal programs in Louisiana.*

- *Execute financing strategies to secure additional funding needs and enable sustainability.*

- *Coordinate statewide activities related to the implementation of health IT/HIE in Louisiana in order to improve the efficiency and effectiveness of health data collection and analysis, and use to improve the health of individuals and their communities.*

- *Coordinate resources and activities to assist with readiness assessments of public and private health care entities to implement electronic information systems that meet state and federal requirements, and fit within the State HIE strategic and operational plan.*

- *Foster pilot projects and coordinate HIE-related activities in collaboration with the SDE, public and private health care providers, and health plans.*

- *Collaborate with federal standards and policy committees to develop common data reporting formats and methods of transmission within Louisiana and across state borders for all pertinent health data.*

18.3. HIE Certification Process

LDH may consider developing an HIE certification process to ensure secure, standards-based, interoperable, and sustainable data exchange is available for participating providers and consumers within Louisiana. The following are suggested components of the potential HIE certification process:

To operate as an HIE within Louisiana, the organization must be: 1) Certified by the Secretary of LDH; and 2) prescribe to the governing certification and operation of an HIE.

A Louisiana HIE must:

1) Comply with applicable requirements of state and federal law.

2) Have certain operational capabilities as defined by LDH or other governing bodies.

3) Be accredited (pursuant to the Louisiana Secretary of Health's accreditation).

Requires a Louisiana HIE to:

1) Pursue a certification renewal every three years.

2) Prescribe preset guidelines as to who may use an HIE.

3) Adopt certain policies and procedures to regulate access to and ensure the security of information retrieved, disclosed, or maintained using HIE.

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FOCUS AREA	ROADMAP INITIATIVE TYPE
SUSTAINABILITY	FOUNDATIONAL

4) Perform routine audits and annual risk assessments to ensure the safety of health information and compliance with federal law.

5) Issue an annual HIE business plan detailing the following:

    a. Governance, management, and organization.

    b. Products and services.

    c. Business development, sales, and marketing.

    d. Financial history and analysis, financial planning, and annual reports.

Regulation also prohibits a user of an HIE from:

1) Using, retrieving, or disclosing more health information than necessary from the HIE.

2) Using health information from an HIE for a prohibited purpose.

HIE certification can also set requirements regarding:

1) Standards for obtaining patient consent before retrieving a patient's health records from an HIE, revoking consent.

2) Commercially available data.

3) Sharing health information across the public and private sectors.

4) Support public health and population health initiatives and collaboration between organizations and governmental entities working in the fields of public health and population health.

5) Services available to users of the HIE to assist in meeting the MU requirements pursuant to HITECH criteria.

6) Use of an enterprise MPI and Master Provider Directory for the secure and efficient exchange of health information.

7) Use of interoperable infrastructure and technology for the efficient and secure exchange of information, including, without limitation, clinical data between HIEs, health care providers, and other persons involved in the provision of health care.

8) Service Level Agreement requiring the HIE to be operational for at least 99 percent of each month.

9) Possession of a nationally-recognized accreditation for the HIEs or comparable accreditation standards approved by the Secretary (state governmental official).

18.4. Establish Louisiana's Patient Consent Model for Electronic Health Data Sharing

Currently, the consent model for the exchange of electronic health information in Louisiana appears to be ambiguous. LaHIE applies an opt-in approach, while GNOHIE applies an opt-out model.

LDH may consider selecting a patient consent model for Louisiana that allows for data exchange at the point of care. The table on the following page details each consent model type.

Consent Model Options:

Opt-out: All patient protected health information (PHI), except pre-determined Sensitive Health Information (SHI) is automatically eligible for exchange, with a provision that patients must be given the opportunity to opt-out in full.

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FOCUS AREA	ROADMAP INITIATIVE TYPE
SUSTAINABILITY	FOUNDATIONAL

Opt-in: No patient data is automatically made available for exchange. Patients can make all of their PHI available for exchange by actively opting in.

Advantages and Disadvantages

ISSUE	OPT-OUT	OPT-IN
Consumer Trust	Allows patient choice to opt-out of the exchange.	Allows patient choice to opt-in to the exchange.
Completeness of Medicaid Record	Creates day-one-ready HIE. Will not include SHI.	Must wait for enough patients to opt-in. Will include all SHI for those that opt-in (i.e., all or none).
Administrative Burdens	Must track patients that opt-out. Must distribute educational materials regarding the HIE. Must sequester SHI.	Must track patients that do not opt-in. Must distribute educational materials regarding the HIE. Must deliver and retrieve consent forms.
Integration of Regional HIEs	Will integrate seamlessly because no additional patient consent is needed.	Patients in regional HIEs will have to opt-in to the HIE.
Sequestering SHI	Certain categories of SHI must be sequestered from automatic disclosure.	SHI will not have to be sequestered if HIE uses comprehensive consent form.

PHI and SHI may have to be subject to different consent models based on state and federal laws that protect the disclosure of medical information.

HIPAA creates an exception for disclosure of PHI for Treatment, Payment, and Health Care Operation purposes.

Categories of SHI:

Federal law requires affirmative patient consent prior to disclosure of the following categories of SHI through an HIE:

- Alcohol and drug abuse records.
- Mental health records.
- Generic information.
- HIV/AIDs information.
- Records of persons with intellectual disabilities.

LDH legal counsel should be engaged, and Louisiana law should be reviewed prior to selecting the State's patient consent model.

INITIATIVE 18: STATE AGENCY OVERSIGHT AND SUPPORT OF HEALTH IT/HIE CAPABILITIES AND SUSTAINABILITY

FOCUS AREA	ROADMAP INITIATIVE TYPE
SUSTAINABILITY	FOUNDATIONAL

References

"State HIE Consent Policies: Opt-In or Opt-Out," Clinovations. September 2016.
https://www.healthit.gov/sites/default/files/Individual%20State%20HIE%20Organizations%20Consent%20Policy_20160930_FINAL.PDF

"Electronic Health Information: State and Local Approaches to Data Sharing," Public Health Law Series Webinar. October 2016.

https://www.networkforphl.org/_asset/2f2sx3/Electronic-Health-Information---State-and-Local-Approaches-to-Data-sharing.pdf

Anticipated Outcomes

- State agency oversight and support of health IT/HIE capabilities and sustainability include coordinated governance, exchange and trust communities, standards and certification for interoperability, and clear drivers and regulatory policies to ensure care provider and consumer use of technology.

- Creation of a formal Office of Health IT and Health IT coordinator to unify and provide direction for health IT/HIE goals.

- Certification processes for HIEs assure stakeholders that health IT is interoperable. Stakeholders that purchase and use health IT must have a reasonable assurance that what they are purchasing is interoperable with other systems.

- Certification bodies operating at the state level provide a governance structure, contractual agreement arrangements, rules of engagement, best practices, and assure compliance.

- Reviewing and making adjustments, as needed, to the consent model options for Louisiana eases provider and patient confusion. A single, defined consent model for health data exchange in Louisiana is agreed to, documented, and the details are distributed to health care stakeholders.

Timeframe

Immediate-term: Begin within 120 days. Execution and completion of initiative activities may take 12 to 24 months to fully realize.

Potential Funding Source(s)

CMS SMD Letters #11-004 and 16-003.

5.2. Louisiana Health IT Roadmap Timeline

Figure 18: Roadmap Timeline
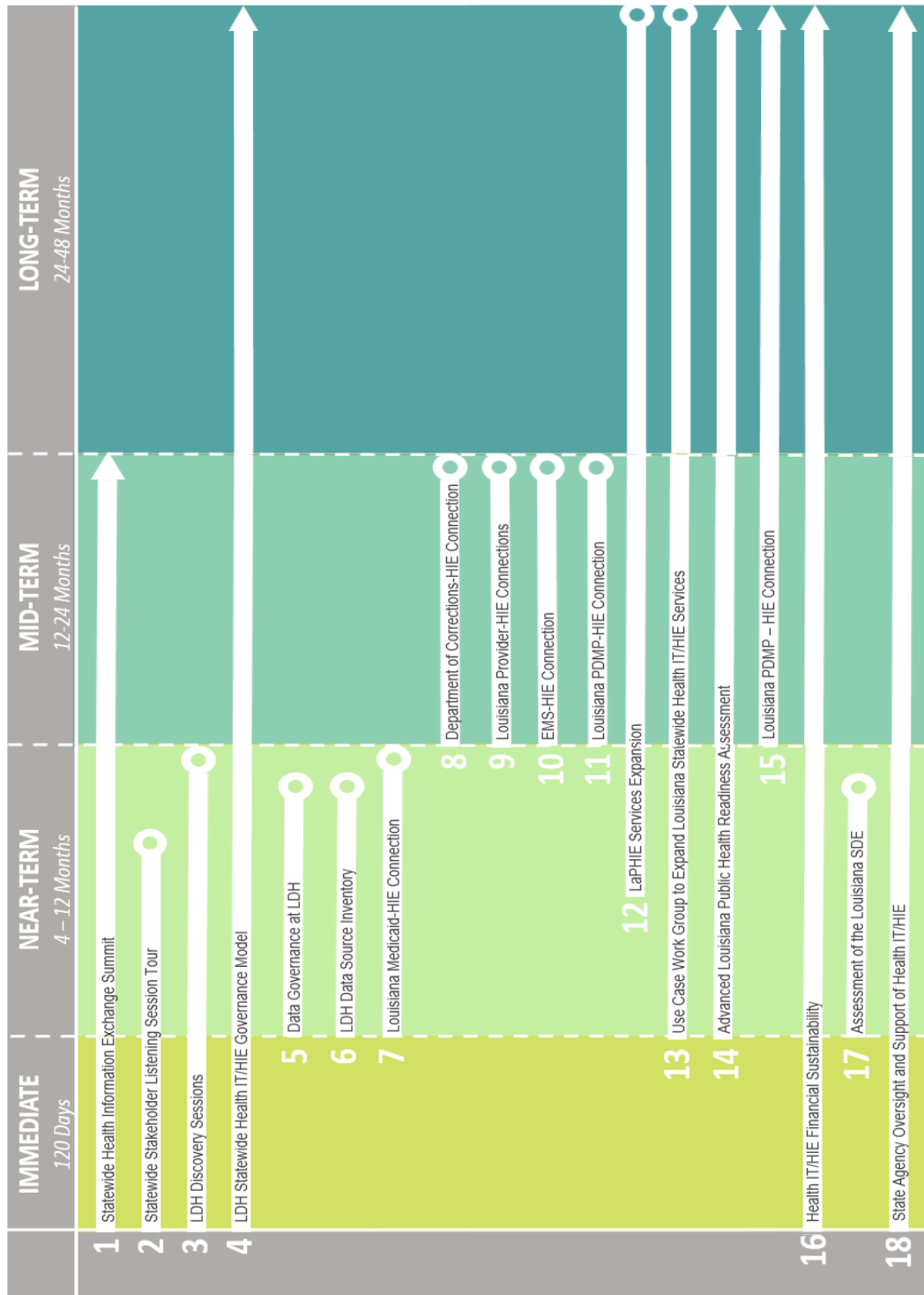
Appendix A: Acronyms

ACRONYM	TERM
ACA	Affordable Care Act
ACO	Accountable Care Organization
ACT	Assertive Community Treatment
ADT	Admission, Discharge, Transfer
AIDS	Acquired Immune Deficiency Syndrome
AIU	Adopt, Implement, Upgrade
APM	Alternative Payment Model
ARRA	American Recovery and Reinvestment Act
ASSURE	Alabama Secure Sharing Utility for Recidivism Elimination
CAH	Critical Access Hospital
CAHPS	Consumer Assessment of Health Care Providers and Systems
CARA	Comprehensive Addiction and Recovery Act
CCANO	Catholic Charities Archdiocese of New Orleans
CCBC	Crescent City Beacon Community
CCD	Continuity of Care Document
CCDA	Consolidated Clinical Document Architecture
CCR	Continuity of Care Record
CDC	Centers for Disease Control and Prevention
CEA	Cooperative Endeavor Agreement
CEHRT	Certified Electronic Health Record Technology
CFR	Code of Federal Regulations
CIO	Chief Information Officer
CM	Case Manager
CMS	Centers for Medicare & Medicaid Services
CPHI	Center for Public Health Informatics
CRISP	Chesapeake Regional Information System for Our Patients
DCFS	Department of Children and Family Services
DDI	Design, Development and Implementation

ACRONYM	TERM
DEA	Drug Enforcement Agency
DGO	Data Governance Organization
DHIN	Delaware Health Information Network
DHH	Department of Health and Hospitals
DO	Doctor of Osteopathy
DOC	Department of Corrections
DOD	Department of Defense
DPS&C	Department of Public Safety and Corrections
DSM	Direct Secure Messaging
eCQM	Electronic Clinical Quality Measure
ED	Emergency Department
ED	Emergency Department
EDG	Enterprise Data Governance
EH	Eligible Hospital
EHR	Electronic Health Record
ELR	Electronic Laboratory Reporting
EMS	Emergency Medical Services
ENS	Event Notification Service
EP	Eligible Provider
ePCR	Electronic Patient Care Reporting
ERHIT	Electronic Rural Health Information Technology
eRX	Electronic Prescribing
FCC	Federal Communications Commission
FFP	Federal Financial Participation
FFY	Federal Fiscal Year
FSSA	Family and Social Services Administration
FQHC	Federally Qualified Health Center
GNOHIE	Greater New Orleans Health Information Exchange
HB	House Bill
HCCN	Health Center Controlled Network
HCR	House Concurrent Resolution

ACRONYM	TERM
HEDIS	Healthcare Effectiveness Data and Information Set
HIE	Health Information Exchange
HIMSS	Health Information Management Systems Society
HIPAA	Health Insurance Portability and Accountability Act of 1996
HISPC	Health Information Security and Privacy Collaboration Grant
HIT	Health Information Technology
HITAC	Health Information Technology Advisory Committee
HITECH	Health Information Technology for Economic and Clinical Health Act
HIV	Human Immunodeficiency Virus
HL7	Health Level 7
HRSA	Health Resources and Services Administration
IAPD	Implementation Advanced Planning Document
ICD-10	International Statistical Classification of Diseases and Related Health Problems, 10th Revision
ID	Identification
IDN	Integrated Delivery Network
IM	Incident Management
INC	Incorporated
IT	Information Technology
JPHSA	Jefferson Parish Human Services Authority
KHS	KaMMCO Health Solutions
KaMMCO	Kansas Medical Mutual Insurance Company
LDH	Louisiana Department of Health
LaEDIE	Louisiana Emergency Department Information Exchange
LaHIDD	Louisiana Hospital Inpatient Discharge Data
LaHIE	Louisiana Health Information Exchange
LaPHIE	Louisiana Public Health Information Exchange
LAPS PSO	Louisiana Alliance for Patient Safety- Patient Safety Organization
LaPOST	Louisiana Physician Orders for Scope of Treatment
LaRHIX	Louisiana Rural Health Information Exchange
LaSHIP	Louisiana State Health Improvement Plan

ACRONYM	TERM
LDH	Louisiana Department of Health
LEEDS	Louisiana Early Event Detection System
LEERS	Louisiana Electronic Event Registration System
LERN	Louisiana Emergency Response Network
LHA	Louisiana Hospital Association
LHIN	Louisiana Health Information Network
LHCQF	Louisiana Health Care Quality Forum
LINKS	Louisiana Immunization Network for Kids System
LLC	Limited Liability Cooperation
LOINC	Logical Observation Identifiers Names and Codes
LPCA	Louisiana Primary Care Association
LPHI	Louisiana Public Health Institute
LSU	Louisiana State University
LSUHN	Louisiana State University Healthcare Network
LSUHSC-S	Louisiana State University Health Sciences Center – Shreveport
LTC	Long Term Care
LTSS	Long Term Support Services
MACRA	Medicare Access and CHIP Reauthorization Act
MCO	Managed Care Organization
MD	Medical Doctor
MDH	Minnesota Department of Health
MHSD	Metropolitan Human Services District
MIE	Medical Imaging Exchange
MITA	Medicaid Information Technology Architecture
MLLP	Minimal Lower Layer Protocol
MMIS	Medicaid Management Information System
MPD	Master Provider Directory
MPI	Master Patient Index
MTMS	Minnesota Medication Therapy Management System
MU	Meaningful Use
NEHRS	National Electronic Health Records Survey

ACRONYM	TERM
NEMSIS	National EMS Information System
NHIN	Nationwide Health Information Network
NTIA	National Telecommunications and Information Administration
OAAS	Office of Adult and Aging Services
OMB	Office of Management and Budget
ONC	Office of the National Coordinator
OPH	Office of Public Health
ORU	Observation and Results
OTS	Office of Technology Services
PA	Physician's Assistant
PACS	Picture Archiving and Communication Systems
PATH	Partnership for Achieving Total Health
PCORI	Patient Centered Outcomes Research Institute
PCMH	Patient Centered Medical Home
PDMP	Prescription Drug Monitoring Program
PHC	Participating Health Centers
PHI	Protected Health Information
PHIN	Public Health Information Network
PHIZ	Public Health Immunization Data Exchange
PPR	Patient Problem Message
PRO	Patient Reported Outcome
PSES	Patient Safety Evaluation System
PY	Program Year
QPP	Quality Payment Program
REACHnet	Research Action for Health Network
REC	Regional Extension Center
RHC	Rural Health Clinic
RS	Revised Statute
RWJF	Robert Wood Johnson Foundation
SAFR	Search, Alert, File and Reconcile
SAMHSA	Substance Abuse and Mental Health Services Administration

ACRONYM	TERM
SCR	Senate Concurrent Resolution
SDE	State Designated Entity
SFTP	Secure File Transfer Protocol
SHA	State Health Assessment
SHI	Sensitive Health Information
SHIP	State Health Improvement Plan
SK&A	Specialized Knowledge and Applications
SLR	State Level Repository
SMHP	State Medicaid HIT Plan
SOC	Service Organization Controls
SPNS	Special Project of National Significance
SR	Senate Resolution
SSA	Social Security Administration
SSAE	Statements of Standards of Attestation Engagements
SUD	Substance Use Disorder
TAFT	Telehealth Access Task Force
ULL	University of Louisiana-Lafayette
USDA	United States Department of Agriculture
VA	Veteran's Administration
VBP	Value Based Payment
VPN	Virtual Private Network

Appendix B: Documents Reviewed

Myers and Stauffer conducted a review of health IT and HIE development of business, policy, and technology services in the state. Below is a list of state historical documentation that was reviewed by Myers and Stauffer.

- Louisiana Department of Health Five-Year Strategic Plan (2017 – 2022).
- Connecting Health and Care for the Nation: A Shared Nationwide Interoperability Roadmap Version 1.0 (Interoperability Roadmap).
- Cooperate Endeavor Agreement with Louisiana Health Care Quality Forum.
- Cooperate Endeavor Agreement with Louisiana Public Health Institute.
- Data Governance and Data Sharing Agreements for Community-wide Health Information Exchange: Lessons from the Beacon Communities, Allen et al., (2014).
- GNOHIE ONC site visit presentation (March 14, 2016).
- GNOHIE participant list.
- GNOHIE policies and procedures:
    - Breach notification.
    - Data use retention and disclosure.
    - Grievances.
    - Patient complaint form.
    - Sensitive data.
    - User access control.
- GNOHIE solution overview and infrastructure diagrams.
- Health Care Journal of Baton Rouge (September – October 2017).
- Health Care Journal of New Orleans (September – October 2017).
- HITAC meeting minutes, membership, and charter (2017).
- HRSA SPNS Update: Health IT Initiatives (2014).
- LaHIE Clinical Data Sharing: Improving Population Health and Supporting Payment Reform (2017).
- LaHIE financial statements (2013, 2014).
- LaHIE IAPD projects review presentation (September 19, 2017).
- LaHIE ONC site visit presentation (March 14, 2016).
- LaHIE Participation Agreement List.
- LaHIE Policies and Procedures:
    - Access in accordance with HIPAA Privacy Rule.
    - Accountability principle in the privacy and security framework.
    - Authorized users information and types.
    - Compliance with privacy and security laws and protocol.
    - Confidentiality and security of protected health information.
    - Correction policy.
    - Data breach notification and investigation.
    - Enterprise master patient/person index maintenance.
    - HIE external evaluation.
    - Individual access to PHI.

- o Individual choice for sharing information in LaHIE.
  - o Information subject to special protection.
  - o LaHIE audit policy.
  - o LaHIE data quality integrity.
  - o LaHIE training policy.
  - o Notice of privacy practices.
  - o Openness and transparency policy for individually-identifiable health information.
  - o Participation requirements.
  - o Physical security of hardware, data, media, and equipment.
  - o Security breach response protocol procedures.
  - o Security break response protocol policy.
  - o User permissions policy.
- LaHIE provider survey (April 10, 2010).
- LaPHIE case study.
- LaPHIE Implementation of an Innovative, Integrated EMR and PHI Exchange for HIV/AIDS (Herwehe et al., 2011).
- LaPHIE Improving Health Outcomes HRSA Fact Sheet (2017).
- LaPHIE program description.
- LaPHIE program overview.
- Louisiana Department of Health website.
- Louisiana Environmental Scan (2010).
- Louisiana Legislation impacting health IT including:
  - o ACT 243 Health Care Reform Act (2007).
  - o ACT 537 Submission of Performance Data to LDH (2008).
  - o ACT 712 Office of Technology Services.
  - o Louisiana Legislation Chapter V: Disclosure of Confidential Information.
  - o Louisiana Telehealth Legislation Title 40 Chapter V.
  - o RS 39:100.51 State's Health Care Redesign Fund.
  - o RS 40:1004 State's Prescription Monitoring Program.
  - o RS 40:1006 PDMP reporting requirements.
  - o RS 40:1007 PDMP access and audit rules.
  - o RS 40:1165.2 Health Care Information Technology and Infrastructure Advisory Collaborative.
  - o RS 40:1167.4 EHR loan program.
  - o RS 40:1173.3 State Department of Health's Data Collection Authority.
  - o RS 40:1173.4 Health Data Panel to advise the State Department of Health.
  - o RS 44:7 Hospital Records and Confidentiality.
  - o SCR 104 HIT and Health Care Delivery (2006).
  - o SCR 35 CEA Related to Quality Initiatives (2007).
  - o SR 29 and SCR 47 IT Support Services (2014).
- Louisiana IAPD (2017 – 2018).
- Louisiana Medicaid 1115 Demonstration proposal for the use of institutions for mental disease in Medicaid managed care.
- Louisiana Medicaid Assertive Community Treatment Level of Care Guidelines.
- Louisiana Medicaid Assertive Community Treatment Evidence-Based Practices (2017).

- Louisiana Office of Public Health Strategic Plan (2014 – 2019).
- Louisiana State Health Assessment and Improvement Plan (updated 2017).
- Louisiana State Health Improvement Plan (2016) and progress report (2017).
- Louisiana State Medicaid Health IT Plan (2014).
- Materials from Louisiana's HITAC Committee.
- Medicaid Innovation Accelerator Program: State Data Use Agreement Review, Louisiana.
- Medicaid town hall survey (2017).
- National data from ONC, CMS, and CDC (e.g., NEHRS, SK&A data).
- National Governors Association Action Plan (October 26, 2016).
- National Governors Association Interoffice Memorandum Key Takeaways (2016).
- National Governors Association Interoffice Memorandum Potential Strategies (2016).
- National Governors Association summary of Louisiana in-state technical assistance meeting minutes (2016).
- ONC Crescent City participant community spotlight.
- Public Health Law Series Webinar: Electronic Health Information State and Local Approaches to Data Sharing (2016).
- Quality Forum Provider Survey (2010).
- Report on Telehealth Access in Louisiana (2017).
- Standardizing data for analytics will be a challenge for HIEs, Health IT Analytics (2018).
- State data from the Medicaid EHR Incentive Program.
- State data from the MMIS.
- USDA rural definitions and maps, Louisiana.
- Websites for Louisiana state associations.
- Websites for Louisiana state health plans.

Appendix C: Current Health IT Projects

The following are projects listed in the Louisiana FFY 2018 – 2019 IAPD. These are *not* included in the Roadmap.

Public Health – LINKS Immunizations Integration

In support of LDH's efforts to improve immunization rates, LPHI will work to integrate solutions to the state's LINKS immunization system with EHRs. This will facilitate the workflow and process for providers to electronically connect with the state immunization registry. It will also provide an automated data entry interface to give providers the ability to update their patients' immunization status and/or potential public health epidemic status within the EHR. This will ultimately facilitate better understanding and care to patients, as well as address population and public health needs. Benchmark milestones include:

1) Design of interface and work plan to integrate LINKS and EHRs.

2) Education and outreach to drive utilization.

The initiative will aid Medicaid providers in meeting MU Stage 2, Objective 2 and Objective 10.

Public Health – Immunization Information Systems Modernization

Louisiana Medicaid, in partnership with OPH, is in the process of requesting financial assistance for implementation of a systems modernization of LINKS. The funding request will support DDI, technical upgrades, and training assistance, with outreach and onboarding activities to the LINKS registry. Upgrades to the system will assist providers in complying with the CDC Advisory Committee on Immunization Practices immunization schedule, as well as the Louisiana 2017 HCR 51 that requires all providers enter every vaccination into LINKS.

Proposed upgrades will accommodate the increased number of users and events recorded in the registry, facilitate the transition to a cloud-based system, and assist in provider outreach, training, and onboarding. Additionally, interfaces to the OPH vital records database, Louisiana Electronic Event Registration System (LEERS), and the Public Health Immunization Data Exchange (PHIZ) Project will be developed and implemented. As a secure centralized database, LINKS benefits individuals, schools, Louisiana Medicaid, and vaccinating health care providers. With additional staffing resources and system enhancements, OPH will have more accurate and detailed information to inform the public on immunization rates, and could more effectively allocate resources to improve coverage rates.

System and software activities include:

- LINKS transition to cloud.
- System testing.
- Development of data quality assessment tools.
- Development of online LINKS training modules.
- LINKS interface with LEERS.
- LINKS interface with PHIZ hub.

Project activities to be funded through the Initiative:

- DDI.
- Technical upgrades.
- Stakeholder outreach.
- Onboarding of providers and hospitals.

- Establishment of bidirectional exchange with EHR vendors and providers.

- Build and implement reporting capabilities for Stage 3 MU.

- Integrate Immunization Information System into program operations.

- Collaborate on future plans for developing and aligning with statewide HIEs.

This Initiative will assist both EPs and EHs in meeting MU Stage 3 for public reporting through bidirectional data exchange with LINKS and the two statewide HIEs.

Public Health Surveillance

Syndromic surveillance capabilities are important for both resource allocation during high prevalence outbreaks, and case detection during low prevalence outbreaks. With the GNOHIE's repository of clinical outpatient data searchable by both key terms from encounter notes and diagnosis codes, the LPHI will provide weekly surveillance reports to LDH including, but not limited to, influenza-like illnesses. The reports will break down the information by clinical delivery site across three age ranges for each condition of interest. Benchmark milestones include DDI to provide surveillance reports based on data from one of the state HIEs.

Statewide promotion of new surveillance reports will drive providers' active engagement with a public health agency, thus supporting qualification of Stage 2 MU Objective 10. Currently, the syndromic surveillance registry receives messages from EDs and urgent care facilities only; however, advancements to Stage 3 MU include adjustments such as expansion of certification testing, additional facility and patient demographic data, and to receiving capabilities from 2015 Edition CEHRT. The State may consider additional funding requests to ensure Stage 3 declaration of readiness capabilities.

Long-Term Support Services (LTSS)

LDH's Office of Adult and Aging Services (OAAS) received funding for the DDI of an incident management (IM) system to report, track, and resolve adverse events involving Medicaid waiver recipients and persons living in Medicaid facilities. These critical incidents include falls, major injuries, major medication incidents, major behavioral incidents, involvement with law enforcement, victimization, and loss of home. Mediware, a certified health IT vendor, has been selected to configure OAAS' IM software to import and make available to authorized Medicaid providers critical incident reports and remediation measures. As an example, a physician would be able to see that an elderly patient has a history of falls based on information captured by the IM system and shared through HIE.

This effort targets LTSS recipients and facilities, along with Medicaid providers and facilities and will be invaluable in helping Medicaid providers meet the requirements of Modified Stage 2 MU, and in caring for the elderly.

LTSS Information System

LDH's OAAS collaborated with the University of Louisiana-Lafayette (ULL) to develop an information system to be used for all client intake, including the capture of demographic data; function assessment of client abilities and needs; and care plans for individuals applying for and receiving long-term care supports An HIE vendor will work with the LDH and ULL to develop and implement an interface to facilitate the sharing of care plans with LTSS recipients' health care teams.

Funding requests are in the process of being approved to assist with onboarding activities during the initial program phase. The project will make improved plans of care available and accessible for use for over 17,000 Medicaid participants receiving coordinated home and community-based services. The care plans will be accessible through HIE, which will improve the capability of providers to offer quality of care to LTSS participants. This capacity will be leveraged to include plans of care related to other Medicaid programs so they can be shared across the continuum of care. The onboarding activities for the LTSS system will include the onboarding of a variety of health care entities and organizations, allowing for full coordination of care. The initial phased roll out for the LTSS Information System Initiative will be targeted for Medicaid providers and recipients of LTSS and community-based services.

The interface will assist providers in meeting the requirement of Modified Stage 2 MU and Objective 5.

Patient Safety Evaluation System (PSES)

LDH, in collaboration with the Louisiana Alliance for Patient Safety – Patient Safety Organization (LAPS PSO) will develop the Patient Safety Evaluation System to collect statewide patient safety data. LPHI will assist LDH in an administrative capacity, to oversee quarterly reporting and payment adjudication and has contracted directly with Compliance Partners for execution of benchmark milestones.

This system will aggregate incident reports of events and near-misses in Louisiana health care institutions. This will expand the knowledgebase and develop resources that solve local challenges by developing the norm of routing safety event reporting, implementing standardized processes, and supporting a culture of safety based on continuous learning and process improvement. LAPS PSO would like to build upon national standards and deliver improvements to health outcomes in the state of Louisiana.

Offering custom incident reporting technology to their members allows PSOs to not only be compliant, but also allows them to:

- Organize incident-related data in a standardized transmittable template.

- Format root-case analysis to national standards and transmit findings to the PSO for analysis and process improvements for the greater PSO membership.

- Configure Patient Safety Work Product information in a ready-to-send, Agency for Healthcare Research & Quality (AHRQ)-adherent framework.

- Complete risk assessments with greater ease, identify trends, and create accompanying learning tools in a timely fashion.

The PSES will standardize workflow processes, use near-miss data to administer warnings, complete root cause analysis, and provide risk assessments which can lead to improvements in patient safety culture, quality measures, and patient health outcomes.

Funds will be utilized to build the PSES, and to provide onboarding and training for each acute care hospital member based on tools customized for their EHR system. The system will exchange data, enroll providers into a PSES and provide extensive training to providers on AHRQ Common Formats. AHRQ Common Formats allow aggregation of comparable data at local, PSO, regional, and national levels. These formats also allow users to collect information about events in real time, when facts are fresh and greatly available. The PSES will be HIPAA-compliant and incorporate Health Information Trust Alliance that contains Common Security Framework features.

Louisiana Physician Orders for Scope of Treatment Repository

Louisiana Medicaid received approval for implementation of LaPOST and assistance with onboarding activities to the electronic LaPOST registry; however, no funds were expended due to implementation delays. The electronic registry is a repository of advance care planning documents, including advanced directives and LaPOST forms, which are indexed to patients. Providers (as appropriate) can access the electronic registry through LaHIE. Ease of access to advance care planning documents improves coordination of care based on patient wishes. Additionally, access to LaPOST and/or advanced directives may lower long-term costs as the patient's alternative direction is made easily accessible to providers.

Benchmark milestones include:

- Design on configuration.

- Promoting adoption.

- Increase functionality to other provider types and documents acceptance.

The Initiative helps providers complete MU Objective 2 to improve performance on high-priority health outcomes.

LaEDIE Quality Improvement

Pursuant to the Louisiana 2014 Senate Resolution 29 and Senate Concurrent Resolution 47 by Senator David Heitmeier, LDH issued a report recommending strategies to decrease primary care utilization in hospital EDs across Louisiana. This included establishment of an electronic ED Visit Registry to provide timely notice of ED use by Medicaid members to Medicaid MCOs. The report anticipated a reduction in ED utilization and corresponding increase in primary care utilization as a result of the notifications and consequent MCO interventions.

The Quality Forum will: 1) assess the impact of LaEDIE to date, including but not limited to, hospital participation and MCO use of the ED registry data; and 2) lead an applied quality improvement project to increase MU of LaEDIE by Medicaid MCOs, hospitals, and physicians. The applied quality improvement project may include the use of ED data analytics to support care coordination, demonstrating the value of technical enhancements to LaEDIE in decreasing inappropriate ED use.

The Quality Forum will also continue to leverage LaHIE technology to provide HIPAA-compliant data collection, reporting, and notification services for ED utilization. Services include the design and development of improvements, and streamlining operations and enhancements of the ED registry. Activities to be provided include 24-hour reporting of ED utilization onboarding of EDs, execution of provider participation agreements and user training, and serving on an ED advisory committee.

EHR for the Louisiana DOC

Louisiana Medicaid is in the process of requesting funding for a collaborative effort with the Louisiana DOC in providing technical support and assistance in implementing CEHRT within DOC facilities. The Quality Forum will provide technical support and assistance from CEHRT adoption through MU for state and parish prisons.

The use of health IT within DOC facilities will provide for more streamlined coordination of care with providers outside of DOC facilities. Health IT will also facilitate information sharing when offenders are released, thereby decreasing the likelihood of re-incarceration through greater access to appropriate primary, behavioral health, and substance abuse care.

Benchmark milestones include:

- Project Management: Oversight, facilitation, and monitoring of the project to ensure the availability of appropriate technical resources and support.

- EHR Vendor Selection and Contracting: Consultation and technical assistance services to include expertise, facilitation, and oversight of the vendor selection process.

- EHR Integration: Consultation, coordination, technical assistance, and tracking of the implementation and integration of the selected CEHRT.

- EHR Interfaces: Consultation and technical assistance in the implementation of EHR technology to meet designated goals and objectives.

- EHR Training: Coordination, facilitation, and development of EHR training to include the development of training for select, designated staff to ensure consistency and availability of long-term staff education.

- EHR Go-live: Consultation, technical assistance, and tracking to ensure successful go-live at individual correctional facilities.

Louisiana PCMH Transformation Initiative

Louisiana Medicaid recognizes the value of the PCMH model in improving patient care and furthering providers' adoption and use of certified EHR technology. Louisiana Medicaid will partner with the Quality Forum to advance PCMH in Louisiana.

As a current project listed in the Louisiana FFY 2018 – 2019 IAPD, the Quality Forum will identify Medicaid practices with at least three providers and offer subsidized coaching and technical assistance to assess the practices for PCMH readiness. Based on the assessment, the Quality Forum will assign a health coach who will develop a customized implementation plan for the practice that emphasizes EHR use in alignment with MU, HIE participation, and implementation of a team-based model inherent to PCMH. As the practice progresses along the maturity curve of health IT adoption, coaches will incorporate key elements of quality improvement to empower practices.