

Health Information Exchange Environmental Scan: Key Findings

Prepared for:

Oklahoma State Department of Health
Center for Health Innovation and Effectiveness

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Caveats

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Scope and Approach

- State Innovation Model (SIM) Grant
 - The SIM grant was awarded to Oklahoma in December 2014 to provide a state-based solution to Oklahoma's healthcare challenges. The grant is administered by the Oklahoma State Department of Health (OSDH) with oversight by the Oklahoma State Innovation Model (OSIM) group
 - OSIM's goal is to improve health, provide better care, and reduce health expenditures for more than 1.2 million Oklahomans
- As part of the SIM grant, OSDH engaged Milliman to perform a statewide environmental scan of existing HIEs and develop a proposal to implement a statewide interoperable health information network

Scope and Approach

- Milliman conducted in-person and telephonic interviews with more than twenty representatives of Oklahoma's existing health information exchanges, health delivery systems, payers, state agencies, and other key constituencies
 - The goal of these interviews was to document capabilities for health information exchanges, focused on sharing clinical data, operations, and capabilities within the state
 - Interviewees were also asked how they exchange and apply clinical information in electronic health record systems (EHRs) and their perspectives on possible approaches for future Oklahoma health information exchange efforts
- This report presents key findings identified during the interviews and from review of HIE initiatives in Oklahoma and other states

Stakeholder Interviews

Organization	Name	Role
Health Information Exchanges		
MyHealth Access Network	David Kendrick, M.D.	Chief Executive Officer
Coordinated Care Oklahoma	Brian Yeaman, M.D.	Chief Executive Officer
	Joanna Walkingstick	Project Manager
	Jason Kirby	Sales Consultant
	Rodolfo Alvarez Del Castillo, M.D.	Chief Medical Officer
	Jonathan Kolarik	Chief Clinical Informatics Officer
Healthcare Delivery Systems		
St. Anthony's	Kevin Olson	Chief Information Officer
St. Johns Health System	Ann Paul	Vice President
	Bat Shunatona, M.D.	Medical Director
	Troy Cupps	ACO Operations Director
Payers		
Blue Cross Blue Shield of Oklahoma	Joseph Cunningham, M.D.	Chief Medical Officer
Oklahoma Health Care Authority	Adolph Maren	Director, Electronic Health Operations
	Lisa Gifford	Chief of Business Enterprise Services
Other Stakeholders		
Oklahoma DMHSAS	Tracy Leeper	Decision Support Policy Analyst
Oklahoma State Department of Health	Isaac Lutz	Health Innovation Planning Manager
	C. Alex Miley	OSIM Project Director
	Becky Moore	Director of Informatics
Choctaw Nation (CNHSA)	David Wharton	Chief Risk Officer, Health Informaticist
Oklahoma Foundation for Medical Quality	Ashley Rude	HIT Practice Advisor
	Ashley Wells	HIT Practice Specialist
	Lindsey Wiley	HIT Manager

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Key Terms Defined

- **Health Information Exchange:** Is broadly defined as a system designed to pass health information from one party to another. Functionality such as portals, reporting, and analytics may be added to increase the utility of the software
- **ONC Certification:** Certification indicates that a system conforms to standards for health information technology (HIT) security and functionality as defined by the Office of the National Coordinator for Health Information Technology (ONC). The ONC has not yet published HIE certification standards

Key Terms Defined

- **Interoperability:** A software system capability to send and receive information to other disparate systems
- **eHealth Exchange:** eHealth Exchange (also referred to as The Sequoia Project and HealthEWay) is an expanding group of participants sharing health information under a common framework and set of rules. Participants include federal agencies, states, beacon communities, and health systems. eHealth Exchange provides information through secure, trusted, and interoperable health information exchange

Key Terms Defined

- **Centralized Data Model:** A database system design in which disparate data sets are merged and stored in a shared location. This model is generally thought to be a technical precondition for population health analytics
- **Federated Data Model:** A system design in which separate databases allow partial and controlled sharing of their data upon request. This model typically trades increased patient and provider privacy for effective aggregate reporting and analytics

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Current Data Sharing Environment

- Oklahoma healthcare data is exchanged in many ways today
 - Two existing HIEs with some key similarities and differences
 - Coordinated Care Oklahoma (CCO)
 - MyHealth Access Network (MyHealth)
 - OSDH plans to establish a database for exchanging health information between state entities
 - Electronic health record systems (EHRs) enable information sharing between providers if both use the same EHR. This capability is an ONC Stage 2 requirement
 - Efforts are underway to connect various exchanges via a “network of networks” also referred to as eHealth Exchange
- Each effort has a different intended use, partially overlapping data sets, and different business and governance models

Current HIE Features

Feature	Coordinated Care	MyHealth
Organization Structure	501(c)(3)	501(c)(3)
Major Grants Awarded	None	Beacon Grant
Membership Costs	Fee and Subscription	Fee and Subscription
Board Composition	Hospital System Investors	Community and Member Based
Patient Lives (est.)	4,500,000	4,000,000
Provider Locations (est.)	455	275
Data Model	Federated Hybrid	Centralized Hybrid
Consolidated Clinical Document Architecture	Yes	Yes
Population Management Tools	Not at this time	Yes (Pentaho)
Analytics	Not at this time	Yes (IndiGo)
Patient Participation Model	Opt-Out	Opt-Out
ONC Certifications	Advanced Directives	Patient Portal
Training Model	Train the Trainer	Train the Trainer
Demographic Data	Yes (centralized)	Yes (centralized)
Clinical Data	Yes (federated)	Yes (centralized)
Claims Data	Not at this time	Yes (selected payers)

Coordinated Care Oklahoma

- **Data Model:** Allows three types of connection
 - Centralized connection hosted by Cerner including demographic information and clinical records
 - Centralized connection hosted by Cerner for demographic information and a federated clinical record
 - Fully federated connection
- **Access:** Access is via single sign on (SSO) and the portal consolidates information from disparate sources into a shared view
- **Data Elements:** Inpatient, pharmacy, long term acute care, primary and specialty physician, ancillary, laboratory, and advanced directives

MyHealth Access Network

- **Data Model:** Allows three types of connection
 - Centralized connection that shares demographic data and clinical records
 - Centralized connection hosted by MyHealth for demographic information and a federated clinical record
 - “View only” connection that allows access to demographic data and clinical records
- **Access:** Access is via single sign on (SSO) and the portal consolidates information from disparate sources into a shared view
- **Data Elements:** Inpatient, outpatient, and specialty physician patient records, and some claims data

Oklahoma State Department of Health

- Oklahoma state agencies' numerous data systems are unable to share data
- OSDH is leading an initiative to develop a shared-service database to enable information coordination between state agencies and county health departments
 - Orion was recently selected as the vendor
 - Implementation will take approximately two years
- Capability will simplify reporting for healthcare organizations by enabling a single data submission to a central location
- Data Elements (planned): Discharge, immunization, death records, disease registries, and Medicaid data

Other Data Sharing Initiatives

- Different installations of EHRs are beginning to communicate
 - For example, two clinics using Epic can view each other's patient records
 - Consolidated patient information views are not yet available so each clinic's health record for a patient must be viewed independently
- An active initiative to connect both HIEs to a “network of networks” would allow federated data sharing across HIEs
 - EHealthExchange enables on-demand clinical information sharing
 - Providers must currently join both HIEs and incur the costs for each to access complete patient information
 - Both HIEs have reached agreement to contribute data to eHealthExchange
 - OSDH applied for an ONC grant that will fund interoperability between the HIEs

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Reasons to Share Data

- During interviews, participants expressed varied motivations for exchanging healthcare information
 - Improving continuity of care between transitions
 - Creating longitudinal patient views for
 - Point-of-care decision making
 - Reducing readmission rates
 - Preventing duplicate testing
 - Population management
 - Standardizing pay-for-performance quality programs

Data Sharing Concerns

- Relatively few concerns were raised during the interviews
 - Oklahoma acts as an opt-out model for patient permissions meaning that most organizations share data unless a patient specifically asks to have his/her information excluded
 - Technical and HIPAA security infrastructure was perceived as adequate
 - Participating organizations in the individual data sharing efforts appear to trust the organization and how data is used and shared
- Concerns regarding the cost to join an HIE and ongoing use fees were articulated by stakeholders representing smaller and/or rural provider groups
 - Costs include both fees from the HIE and from EHR vendors

National Data Sharing Experiences

- Concerns expressed in other states implementing HIEs include
 - HIPAA compliance
 - Belief that patients should “opt-in”
 - Lack of trust in partnering organizations
 - Anti-trust concerns (particularly when data is used to make contracting or purchasing decisions)
- Similar questions may emerge in Oklahoma as a statewide data sharing effort becomes more visible to Oklahomans

Governance Considerations

- Governance refers to the process for developing the guidelines and rules for oversight and management of an organization or function
- Interviewees who are active participants in one of the HIEs considered governance and stance on information privacy and safeguards as much as the HIE's technical capabilities
- National experience suggests that agreeing upon or legislating what information is shared and when and to whom it is accessible are key determinants for the utility of an exchange or network of exchanges

Provider Environment

- Oklahoma City and Tulsa have established, mature healthcare delivery systems that invest in HIT
 - Some providers are also investing in internal analytic capabilities for population management
- Many providers and critical access hospitals in rural Oklahoma are affiliating with/being acquired by larger care delivery groups
 - Aggregation can help these providers afford HIE connections which can cost thousands of dollars, plus ongoing subscription fees
- Oklahoma's Native health systems use a mix of EHRs
 - Nations operate independent health services which are not interoperable with one another
 - Indian Health Services (IHS) is building a data warehouse to enable some data sharing

Payer Environment

- Oklahoma has a relatively consolidated payer market
 - Approximately 70% of commercial lives are covered by three organizations Blue Cross and Blue Shield of Oklahoma (BCBSOK), United, or Aetna
- Payers within Oklahoma are interested in HIEs to support population health management
 - Using a “trusted 3rd party” for measurement
 - Tracking continuity of care across their network
- Payer organizations typically have internal analytics capabilities

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Environmental Summary

- Stakeholders throughout the state are aware of the benefits of healthcare data sharing and interested in participating in the process of expanding access to healthcare information
- Oklahoma has two free market-driven healthcare information exchange initiatives
- These initiatives are driven by similar goals, improving patient health, but have different visions of how to achieve that outcome
- There is some overlap in capability between HIEs
- To maximize utility from shared data, networks need to be able to communicate to pass information throughout the state

Statewide Health Information Network

- Oklahoma wishes to develop a statewide interoperable health information network
- Options to achieve this goal include

Option 1 “Network of Exchanges”

- Least robust statewide capability
- Moderate response to market needs; maximum stakeholder input
- Moderate time to market

Option 2 Select an Existing HIE

- Adoption of existing capability
- Responsive to market needs; moderate stakeholder input
- Shortest time to market

Option 3 State Sponsored HIE

- Ability to customize statewide capability
- Slow response to market needs; limited stakeholder input
- Longest time to market

Option 1: “Network of Exchanges”

- Oklahoma’s free market is moving toward a federated network of exchanges
 - A federated network would enable sharing of core clinical and demographic data for point-of-care use
 - This approach does not disrupt existing initiatives
- Considerations
 - Population health analytics would be limited to members of certain HIEs and the analytics would not include federated connections
 - Connections will be established on uncertain timeframes and are voluntary
 - Rural and independent providers may be unable to afford membership costs to multiple exchanges

Option 2: Select an Existing HIE

- Select an existing HIE as the statewide information network
 - HIEs are most valuable when the number of participants are maximized
 - Oklahoma gets the benefit of a pre-built and standard HIE experience across the state
 - No time is required to build a new solution, capability, or wait for voluntary participation to a network of exchanges
- Considerations
 - Rural and independent providers may require subsidy to afford membership costs of even a single HIE
 - Disrupts free market process for the benefits of uniformity and speed

Option 3: State Sponsored HIE

- Oklahoma may choose to invest in a state sponsored HIE
 - One option may be to broaden the scope of the existing OSDH shared services effort
 - Constructing an HIE would enable the State of Oklahoma to provide a uniform experience and functionality to the State's standards
 - Oklahoma gets the benefit of a pre-built and standard HIE experience across the state
- Considerations
 - Creating an HIE is a long, complicated process which would delay information access across the state
 - Participants may let membership to private HIEs lapse
 - Ownership and maintenance of the HIE may be more complex

