

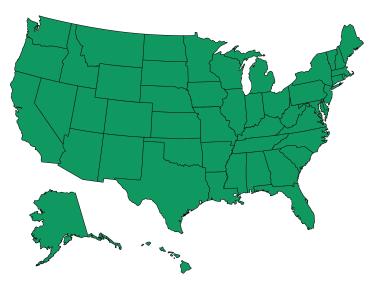
Local Examples: Innovations in Electronic Health Records

By Jacqueline Garry Lampert

After more than a decade of efforts, no one in the country has a complete and comprehensive electronic health record (EHR). Instead, individual health information is stored in various places, and as records become increasingly digitized, they are seldom integrated. This lack of interoperability means that one EHR system cannot readily exchange data with another system and interpret shared data. A health information exchange can improve interoperability, but such exchanges do not have a record of success. These issues have caused frustration among patients and providers, as well as duplicative exams and procedures and adverse events.

Despite the many challenges, the basic task of exchanging health information is succeeding in several places throughout the country. Every state has begun work to facilitate the electronic exchange of health information. Such efforts can supply the data to build a <u>lifetime electronic health</u> <u>record for every American</u>.

Nationally, the <u>eHealth Exchange</u> is a network of exchange partners located in all 50 states, created by the Office of the National Coordinator for Health Information



Technology. Participants in the eHealth Exchange include 10,000 medical groups, 30% of U.S. hospitals, more than 900 dialysis center, 8,200 pharmacies, and four federal agencies—supporting the health information of more than 100 million patients. The keys to the eHealth Exchange are common standards, legal agreements, and governance, which avoid the expense of customization and individual legal agreements. Annual participation fees are on a sliding scale based on revenue and additional testing fees apply to participants joining the network for the first time.

Alabama

• Alabama uses a cloud-based health information exchange, <u>One Health Record</u>, to facilitate the sharing of health information across the state. The exchange is currently used by clinics, hospitals, and individual users throughout the state and provides services including direct secure messaging, look-up of patient health information, and a physician portal. As of November 2014, <u>17 clinics and 8 hospitals</u> used the searchable system, which allows providers to search for and discover accessible clinical information about a patient, no matter which provider in the exchange the patient typically sees. Thirty-six facilities and 255 individual providers use the exchange's direct secure messaging service to share patient information with other providers. The exchange is developing additional services including public health reporting (immunizations, lab results, and disease surveillance) and alerts to primary physicians regarding a patient's admission, discharge, or transfer, and aims to eventually provide consumers access to their own health information.

Alaska

Since 20015, the <u>Alaska eHealth Network</u> has worked to develop standardized health information exchange policies and plans to connect health care providers across Alaska. As of August 2013, 12 hospitals, more than 900 providers, and more than 4,000 patients participated in at least one of the networks services, with more participants joining regularly. In addition to <u>direct secure messaging</u>, which offers secure exchange of personal health information between health care providers for referrals, lab results, care coordination, and more, providers may also opt for exchange information to be pushed to their own electronic health record. Plans for a patient portal are in the works, and patients have the ability to opt out of participation in Alaska eHealth Network.

Arizona

• <u>Arizona Health-e Connection</u> is a public-private partnership dedicated to advancing health information exchange in the state. The <u>Health Information Network of Arizona</u> is a program of the Arizona Health-e Connection that provides secure access to and exchange of patient health information among participating organizations and providers. <u>Participating providers</u> <u>and organizations</u> may use a web-based virtual health record to view one patient's record at a time or may automatically send patient information to the network and then search for a specific patient's information on the network. In addition, health plans may receive patient information from the network for care coordination and care management.

Arkansas

• The Arkansas State Health Alliance for Records Exchange (SHARE) is a state-wide health information exchange created and maintained by the Arkansas Office of Health Information Technology. All Arkansas hospitals and 60% of office-based physicians use electronic health records, but those systems are not interoperable. Using secure connections, SHARE creates an index of patient records from multiple sources and uses the index to let providers see and receive information about each of their patients for the care they receive elsewhere. It accommodates providers who have not adopted electronic health records through a virtual health record option that gives them access to their patients' information stored electronically elsewhere. SHARE also provides direct secure messaging for participating providers with or without an electronic health record. SHARE includes nearly 900,000 unique patient records, 26 participating hospitals and 244 participating practice sites covering 95 Arkansas cities.

California

The <u>California Integrated Data Exchange</u>, or Cal INDEX, is an independent, nonprofit
organization created by a partnership between two competing insurers, Anthem Inc. and Blue
Shield of California, in an effort to offer California providers one place to obtain patient
information. Initially, Cal INDEX will include patient records of 9 million Anthem and Blue
Shield policyholders, nearly 25% of the state's population and among the largest health
information exchanges in the United States. The organization urges other health plans and
providers to provide data as well, with the aim of becoming a statewide source of patient
information. Eventually, Cal INDEX will offer patients the ability to review their own health
records via a web portal and provide researchers with de-identified data.

Colorado

 The <u>Colorado Regional Health Information Organization</u>, or CORHIO, is a nonprofit publicprivate partnership designated by the state of Colorado to facilitate health information exchange. The CORHIO platform houses a master patient index database and demographic data, providing a secure way for participating entities to share health information. More than 2,400 office-based providers and 48 hospitals are connected to CORHIO, following three consecutive years of <u>triple-digit growth rates</u> for participating health care users and available data. By the end of 2015, CORHIO aims to have health information exchange in every community and ensure that 85% of providers in the state are meaningful users of electronic health records. CORHIO offers providers a number of different <u>information exchange</u> <u>services</u>, including direct messaging, a searchable, consolidated, longitudinal patient health record, public health reporting, and more.

Connecticut

 Despite an investment of \$4.3 million, the <u>Health Information Technology Exchange of</u> <u>Connecticut</u> closed in July 2014 with the passage of legislation repealing the organization's statutory authority as a quasi-public entity. However, the state remains committed to health information exchange and the Department of Social Services <u>contracted</u> with eHealthConnecticut on a pilot program. A workgroup is now developing privacy and security policies and working to educate patients about health information exchange. <u>eHealthConnecticut</u> developed a central health information exchange, allowing electronic health records systems to interoperate either directly or via local health information exchanges.

Delaware

• In 1997, the Delaware General Assembly created the <u>Delaware Health Information Network</u> as a public-private partnership organization to advance a statewide health information network. The network was launched in 2007 and claims to be the first operational statewide health information exchange in the United States. Today, all of the state's acute care hospitals and long-term care and skilled nursing facilities and nearly all of its medical providers participate in the network, which is funded through a combination of federal, state, and private funds. The network delivers patient information and test results from hospitals, labs and other facilities directly to providers at the point of care.

District of Columbia

The <u>District of Columbia Health Information Exchange</u> creates the infrastructure necessary to facilitate the secure exchange of patient information by health care providers and stakeholders. The Exchange offers <u>direct secure messaging</u> and electronic reporting of public health information to the Department of Health is also available through the Exchange. Finally, through an affiliation with the <u>Chesapeake Regional Information System for our</u> <u>Patients</u> (CRISP), Maryland's health information exchange, providers can receive encounter notification alerts when patients are admitted to, discharged from, or transferred to/from acute care hospitals in D.C. and Maryland and utilize CRISP's provider portal to look up patient information.

Florida

The <u>Florida Health Information Exchange</u> was established in March 2010 and provides three services, funded with user fees. <u>Patient Look-Up</u> allows participating health care organizations to search the medical records of other participants for individual patient data. <u>Event Notification Service</u> notifies health plans about members' hospital encounters to facilitate plan engagement and care coordination, with more than <u>150 hospitals</u>, representing about 82% of hospital beds in the state, currently participating. Finally, <u>Direct Messaging</u> allows participating organizations to securely send electronic health information via HIPAA-compliant, encrypted transmission and currently has about 250 users.

Georgia

• The <u>Georgia Health Information Network</u> connects health systems and providers, regional health information exchanges, and state agencies to securely exchange patient health information at the point of care. Providers connect to the network through a regional health information exchange, rather than directly. Services include Georgia Direct, a secure email service available at no charge to credentialed providers to assist with sharing information about referrals, transitions of care, and hospital discharges, and Georgia ConnectedCare, which allows participating providers access to patient health information stored in the electronic records of other participating providers. ConnectedCare also provides participating organizations with alerts regarding acute care events to facilitate greater care coordination.

Hawaii

• The <u>Hawaii Health Information Exchange</u> is a nonprofit organization designated by the state to build and support statewide health information exchange. <u>Health eNet</u> is the state's secure, electronic network used to exchange patient health information through secure messaging and through searchable access to information stored in the electronic health records of participating providers. Thirteen organizations currently share data using the exchange and, in 2014, the state's largest health insurer, the Hawaii Medical Service Association, became the first health plan to participate in the health information exchange, using the technology to transfer patient lab results to providers using the network.

Idaho

• The <u>Idaho Health Data Exchange</u> serves as the statewide health information exchange in Idaho. Initially funded with state legislature appropriations and funds from the American Recovery and Reinvestment Act, the exchange is now sustained by funding from its

participants. As of March 2014, almost 2,500 authorized users share or view information via the exchange, nearly twice as many as in 2013. Services include the availability of lab reports, radiology images, and transcription reports and image exchange. Participants may either connect their own electronic health record system to the exchange or participate in the virtual health record, using a web portal to view patient information available through the exchange. In addition, the Idaho Health Data Exchange is connected to the Department of Veterans Affairs (VA) Virtual Lifetime Electronic Record, facilitating care coordination for veterans who receive a portion of their care outside the VA system.

Illinois

The <u>Illinois Health Information Exchange</u> (ILHIE) is a statewide network for the sharing of health information among providers in the state. Its primary service, ILHIE <u>Connect</u>, provides a secure, aggregated patient health record available to participating providers upon request. Thirty-four entities, including hospitals and health services, currently participate in this service. <u>ILHIE Direct</u> is a HIPAA-compliant, secure direct messaging service, allowing health care providers to share patient information both with and without an electronic health record and currently has 268 users. The direct messaging service may also be integrated to a provider's electronic health record, a service used by 23 subscribers. Finally, the exchange supports public health reporting, which certain hospitals and providers in the state are required to do through the ILHIE. Data sharing agreements are now in place with two regional health information exchanges. The Illinois Health Information Exchange is funded with ongoing subscription fees and onboarding fees.

Indiana

The Indiana Health Information Exchange is among the largest health information exchanges in the United States, connecting more than 90 hospitals, long-term care facilities, rehabilitation centers, community health clinics, and other providers. The exchange's DOCS4DOCS service provides secure electronic delivery of lab results, radiology reports, transcriptions, pathology and hospital admission reports, and discharge and transfer reports to and from participating providers via either a web portal or directly into an electronic medical record system. The Indiana Network for Patient Care connects hospitals and other providers to create a virtual patient record, including information covering more than 90% of care provided at hospitals in Indianapolis.

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 <u>Iowa eHealth</u>, a multi-stakeholder collaboration, manages the <u>Iowa Health Information</u> <u>Network</u>, which acts as a hub to connect electronic medical records systems throughout the state. The network currently offers direct secure messaging to all participants and the ability to request patient information located in other electronic medical record systems is available to certain authorized provider types. The Iowa Health Information Network is currently connected to health information networks in Missouri, Illinois, and Kansas and is developing connections with networks in Minnesota, South Dakota, and Wisconsin. The network was initially funded by grants, but now uses subscription fees.

Kansas

• The <u>Kansas Health Information Network</u>, established in 2010 by the Kansas Medical Society and the Kansas Hospital Association, has more than <u>1,200 members</u>, with nearly 600 members actively contributing data. More than 10,000 Kansas patients and 38 KHIN members use <u>MyKSHealth eRecords</u>, a personal health record for patients, as their primary patient portal. The service features direct messaging, automated delivery and storage of health information, and the ability for patients to enter data.

Kentucky

The Kentucky Health Information Exchange (KHIE) is a state-administered entity to facilitate the exchange of health information across the state. KHIE maintains two separate networks: a health information exchange for the submission of public health data and the exchange of clinical information; and a health information service provider for the exchange of secure, direct messages between providers. The exchange also offers the KHIE Community Record, a virtual health record that gathers patient information from the electronic medical record systems of participating providers and displays it to authorized users via a secure internet browser. As of February 2015, KHIE signed 729 participation agreements, representing 2,778 locations, with 1,033 provider locations submitting live data and exchanging information. Ninety percent of acute care hospitals in the state participate with KHIE.

Louisiana

• The Louisiana Health Care Quality Forum received the initial funding to create and maintain the Louisiana Health Information Exchange (LaHIE). Using core services such as a master patient index, a provider registry, and record locator services, features provided include clinician and patient portals, public health reporting, direct messaging, continuity of care

document repository, and longitudinal patient history. More than 200 <u>health care providers</u>, including hospitals, school-based health centers, home health providers, and more, now participate, and the exchange includes more than <u>725,000 unique patient records</u> and generates more than 32 million transactions each month.

Maine

 <u>HealthInfoNet</u> is a nonprofit organization operating Maine's health information exchange. The exchange links health information from participating providers to create a single electronic health record for each patient, which authorized users are permitted to see. HealthInfoNet includes records for nearly 1.5 million patients, nearly all of Maine's 1.3 million residents, and is connected to the majority of health care facilities in the state. Connection to Maine's Veterans Affairs health care providers is also in the works. HealthInfoNet recently partnered with a Silicon Valley firm to use predictive analytics to identify patients likely to use the ER or be admitted to the hospital in the future, so that providers can intervene. Use of the health information exchange continues to increase, with clinical portal accesses up 66% in 2014 versus 2013.

Maryland

• The <u>Maryland Health Care Commission</u> designated the <u>Chesapeake Regional Information</u> <u>System for our Patients</u> (CRISP) as the official statewide health information exchange. The <u>CRISP Portal</u> provides view-only access to real-time clinical information provided by CRISP participants, including all 46 acute care hospitals in Maryland, six acute care hospitals in the District of Columbia, all major lab and radiology centers in the state, and a number of longterm care facilities. The CRISP Portal is free to physician practices and does not require an electronic health record to use. The <u>CRISP Encounter Notification System</u> provides physicians with real-time alerts when a patient is admitted to or discharged from the hospital, or visits the ER. <u>Direct messaging</u> and a <u>prescription drug monitoring program</u> are also available.

Massachusetts

• The <u>Massachusetts Health Information Highway</u> provides health care providers and organizations the means to securely share electronic health information. Services include direct messaging, a patient search function to obtain records from other participating providers, and public health reporting. As of January 2015, 356 organizations were members of the Massachusetts Health Information Highway, with 126 members connected and exchanging data, including more than 600,000 direct messages each month. Massachusetts

state law requires that patients opt in before their information may be shared using the Highway.

Michigan

• The Michigan Health Information Network facilitates the secure exchange of health information between qualified data sharing organizations in the state, which can be thought of like regional, or sub-state, health information exchanges. Providers connect with a regional exchange, which then facilitates state-wide data sharing through the Michigan Health Information Network. The Network is also working to exchange information with several federal agencies and the eHealth Exchange. The Network currently facilitates electronic sharing of information such as lab results, hospital discharge summaries, referrals, care summaries, transitions of care documents, public health reporting, and more, and includes a statewide health provider directory and direct messaging capabilities.

Minnesota

• The Minnesota Department of Health <u>facilitates</u> the development of shared services to facilitate connections between health care providers and certifies health information exchange service providers operating in the state. These <u>service providers</u> may be either health information organizations, which provide the electronic capabilities for the transmission of data necessary to meet "meaningful use" standards, or health data intermediaries, which provide the infrastructure to connect information systems to facilitate data transmission. There are currently 10 certified health data intermediaries and one certified health information organization. Community Health Information Collaborative, the only state-certified health information organization, operates <u>HIE-Bridge</u>, a health information exchange that allows participating providers to view patient health information shared by other providers using the system. HIE-Bridge also provides direct messaging services, referral capabilities, and connects to the eHealth Exchange to facilitate information sharing with regard to Social Security disability determination claims and to Veterans Administration hospitals to facilitate data sharing.

Mississippi

• The <u>Mississippi Health Information Network</u> is a state organization dedicated to the secure sharing of electronic health information among providers. <u>Hospitals and clinics</u> throughout the state participate in the Network. Services include <u>MS-HIN Direct</u>, which provides secure messaging between providers, <u>health information exchange</u>, which allows providers to search for patient health information available from other providers using the network, and

electronic reporting of <u>public health information</u>. Patients whose health care providers participate in the Network have the ability to opt out of having their health information shared.

Missouri

The <u>Missouri Health Connection</u> is a state-designated nonprofit organization operating a statewide health information network. Services provided by the Connection include: <u>MHC</u> <u>CareMail</u>, a web-based secure messaging system to securely transfer patient health information between providers; <u>MHC CareNet</u>, a connection of participating providers' electronic health records systems, which provides an aggregated record of patient care from all participating providers, fully integrated into a provider's system; <u>MHC CareView</u>, which permits participants to view patient information available from other providers but does not allow the user to contribute information; and <u>reporting of public health information</u> to state agencies. At this time, more than 7,000 physicians, 62 hospitals, and 350 clinics <u>participate</u> in the Network, which processes more than 250,000 electronic transactions each day.

Montana

• <u>HealthShare Montana</u>, the state-designated health information exchange, was unable to secure sustainable funding and recently closed.

Nebraska

• <u>Nebraska Health Information Initiative</u> is a public/private organization operating a statewide health information exchange that now serves more than half of Nebraska's citizens. More than 1,700 providers and 2,800 health care professionals participate in the initiative, including hospitals, insurers, pharmacies, and individuals. The initiative offers a number of services, including a virtual health record, an electronic medical record, e-prescribing, an interoperability hub to connect various electronic medical record systems, and direct messaging, and processes nearly 8,000 patient queries per month.

Nevada

• <u>HealtHIE Nevada</u> is a private, nonprofit organization working to facilitate real time health information exchange in the state. A previous health information exchange, the <u>NV-HIE</u>, was established in September 2012 but ceased operations in February 2014.

New Hampshire

• The <u>New Hampshire Health Information Organization</u> is a nonprofit organization created by the state to facilitate the sharing of patient health information by providers. Services include a searchable directory of individual and organizational heath care providers in the state, which is used to facilitate direct secure messaging between providers. Participant fees use a tiered pricing model based on operating revenue.

New Jersey

 The <u>New Jersey Health Information Network</u> operates as a network of networks, providing the technological infrastructure to facilitate health information exchange among the state's health information organizations and state health data sources. Five health information organizations now operate health information exchanges in the state: <u>Highlander Health</u> <u>Data Network</u>, <u>Camden Health Information Exchange</u>, <u>Jersey Health Connect</u>, <u>Trenton Health</u> <u>Team</u>, and NJSHINE.

New Mexico

• New Mexico Health Information Collaborative is the state's health information exchange, offering participating providers the opportunity to exchange patient information such as problems lists, diagnoses, medications, lab and radiology results, and more. Current <u>participants</u> include 18 hospitals, representing 52% of beds in the state, two large medical groups, and a statewide lab, representing data from more than 1.2 million patients.

New York

• The <u>New York eHealth Collaborative</u> coordinates the development of the <u>Statewide Health</u> <u>Information Network of New York</u> (SHIN-NY). Starting July 2015, <u>the SHIN-NY will connect</u> <u>the state's nine regional health information organizations</u>, also referred to as qualified entities, to each other to share patient information throughout the state. A provider first joins a qualified entity, which may provide services such as direct messaging, patient alerts, and patient record look-up, and which then connects to the SHIN-NY for access to patient records connected to other qualified entities (with patient consent). Together, qualified entities are connected with <u>84% of New York hospitals</u>, <u>50,000 providers</u>, and 7,000 New Yorkers have consented to share their records on the network.

North Carolina

The North Carolina Health Information Exchange connects more than 1,000 participating sites, including 35 hospitals, 740 primary care practices, 208 specialty practices, and 50 long-term care facilities. The exchange coordinates the sharing of information regarding more than one million unique patients. The exchange's Clinical Portal provides a consolidated view of patient information available from participating providers, including demographics, problems and diagnoses, allergies, procedures, medications, and lab results. The exchange also offers NC DIRECT, a secure direct messaging service to facilitate sharing of patient information, including referrals, care transition documents, public health reporting, and other information, among providers.

North Dakota

• The <u>North Dakota Health Information Network</u> offers participating providers secure, direct messaging through <u>NDHIN Direct</u>. As of October 2013, <u>100 participant agreements</u> were signed and the system was used by 463 authorized users.

Ohio

• <u>CliniSync</u>, Ohio's statewide health information exchange created by the <u>Ohio Health</u> <u>Information Partnership</u>, currently offers offers direct messaging free of charge and will soon offer a community health record. As of 2014, 141 hospital and their employed physicians, as well as 1,000 independent physicians, were connected and sharing secure messages including lab results, referrals, and other electronic information. CliniSync may also be used for public health reporting and providers may receive admission and discharge notifications from any participating hospital. CliniSync is working to implement a longitudinal patient record, called Community Health Record, which will allow participating providers to search for a patient and pull up information needed for diagnosis and treatment. Providers may be charged a monthly fee to publish information to the Community Health Record.

Oklahoma

 The state legislature created the <u>Oklahoma Health Information Exchange Trust</u> in 2010 to advance health information exchange within the state and to serve as a state-designated entity to receive federal grant money. As of 2014, there were <u>four private health information</u> <u>exchanges</u> operating in the state. One of them, <u>MyHealth Access Network</u>, was established in 2009 by a group of Tulsa physicians and health care organizations and received a three year Beacon Community Award from the Office of the National Coordinator for Health Information Technology. The MyHealth Access Network connects area health care providers and serves more than 3 million patients. One of the services, <u>Doc2Doc</u>, has actually been available since 2007 and now connects 2,100 physicians, regional care providers, and service providers via secure electronic messaging to improve care transition management.

Oregon

• Oregon's health information exchange, called <u>CareAccord</u>, is administered by the <u>Oregon</u> <u>Health Authority</u>, a state entity focused on health reform. At this time, CareAccord provides <u>direct secure messaging services</u> to health care providers and entities to facilitate care coordination. The direct secure messaging service is available via a web browser and a provider directory facilitates the lookup of other participating providers. Additional services are planned.

Pennsylvania

• The <u>Pennsylvania eHealth Partnership Authority</u> was created by the state legislature in 2012 to facilitate health information exchange in the state. The Authority, in turn, created the Pennsylvania Patient & Provider Network (P3N), a statewide health information exchange, also described as a public-private hub. Health care providers of all types, patients, and payers connect to one of the six state-certified health information organizations or five health information service providers, which then connect to the P3N. The P3N offers <u>direct secure messaging</u> for the sharing of health information by providers, and as of March 2015, more than 10,600 providers are enrolled as DIRECT users through health information service providers. The P3N is working to implement a public health gateway, which will allow health information organizations to electronically report information to various public health registries.

Rhode Island

 CurrentCare is Rhode Island's health information exchange, developed through a publicprivate partnership between the Rhode Island Department of Health and the Rhode Island Quality Institute, using initial funding from the Agency for Healthcare Research and Quality. CurrentCare offers alerts to providers when a patient is admitted to or discharged from a hospital or emergency room, a web-based portal providing clinical information from more than 60 data-sharing partners, including test results, x-ray and radiology reports, clinical summaries, medical history, and more, used by more than 1,000 providers across the state, and telehealth alerts, which monitor patients' health and home and alert the provider when an intervention may be necessary. More services are under development. Nearly half of all Rhode Islanders are enrolled in CurrentCare, with more than 32 million transactions posted to their patient records. Ninety percent of all prescription data from retail pharmacies and 90% of all laboratory data are included in the system, and all Rhode Island acute care hospitals (excluding the VA) submit admission, discharge, and transfer data.

South Carolina

• The <u>South Carolina Health Information Exchange</u>, or SCHIEx, is a network that connects health care providers across the state to share patient health information. SCHIEx EXCHANGE facilitates information sharing among participants who use electronic health records for treatment as well as public health and quality reporting purposes. Participants may use this service for mandatory immunization reporting and to connect with the national eHealthExchange. SHIEx Direct offers secure direct messaging between participants to share patient health information. Electronic health records are not required, but the service may be embedded in an electronic health record. Finally, SCHIEx Clinical Viewer is a webbased portal that connects providers, typically those who do not use an electronic health record, to SCHIEx EXCHANGE to view patient information available there. SCHIEx is funded through participant fees and, as of September 2014, included more than 200 connected sites and 680,000 individual patient records. In late 2014, SCHIEx and the Georgia Health Information Network announced a connection creating one of the first state-to-state health information exchanges.

South Dakota

 <u>South Dakota Health Link</u> connects health care providers in the state to facilitate patient health information sharing to improve care. <u>Services</u> include the Point of Care Exchange is available to providers who use an electronic health record and makes available to participants any patient information included in other participant's electronic health records. The DIRECT service provides secure messaging between providers to facilitate sharing of referrals, reports, and other documentation and can be incorporated into each provider's electronic health record. Finally, South Dakota Health Link facilitates electronic lab and immunization reporting to assist providers in meeting meaningful use requirements. The Link is funded through participant <u>fees</u>.

Tennessee

• After <u>cancelling</u> the contract with an organization building a statewide health information exchange, Tennessee is engaged in a two-pronged strategy to facilitate health information exchange. First, the state supports the development of public and private exchanges, which

may eventually connect with each other to form a statewide network. Regional exchanges operating in the state include the <u>East Tennessee Health Information Network</u>, which connects providers in 19 counties and offers full integration into a participant's electronic health record the information available via the exchange from other providers, as well as direct messaging, lab and immunization reporting, electronic image delivery, and more. Second, the state supports <u>DIRECT technology</u>, which allows for the exchange of secure messages between providers to share patient information.

Texas

<u>HIETexas</u> was established by the Texas Health Services authority to facilitate the connection
of health information exchanges across the state of Texas to each other, to state agencies
and data sources, and to the national eHealth Exchange. The Texas health insurance
exchange <u>accreditation program</u> ensures that exchanges operating within the state adhere
to uniform standards regarding the handling of protected health information. <u>Ten</u> accredited
health information exchanges operate in various parts of the state, HIETexas facilitates
clinical document exchange, manages patient consent, and establishes a secure, technical
framework for the sharing of information between exchanges. HIETexas is funded with
participant <u>fees</u> on a sliding scale based on each provider's operating budget.

Utah

• The <u>Clinical Health Information Exchange</u> is an initiative of the <u>Utah Health Information</u> <u>Network</u> to improve care quality by allowing authorized providers to share and view patient information at the point of care and by providing payers with information to support care management activities. The exchange facilitates sharing of patient information, such as hospital discharge summaries, lab results, medication history, allergies, imaging reports, and more, from and by many different types of providers and payers. Secure direct messaging is also available

Vermont

• The <u>Vermont Health Information Exchange</u> is operated by <u>Vermont Information Technology</u> <u>Leaders, Inc.</u>, (VITL) a nonprofit working to advance health reform through information technology since 2005. The exchange facilitates provider access to patient information stored outside their organization's systems. <u>VITLAccess</u>, currently being piloted at several provider facilities, assembles patient information available from multiple participating health care organizations and provides clinicians with access to it at the point of care. <u>VITLDirect</u> is a secure messaging systems providers may use to send or receive patient health information. As of the middle of 2014, 16 hospitals and 158 other health care organizations, including hospital-owned and independent practices, federally qualified health centers, state agencies, long-term care facilities, and a commercial lab, were <u>connected</u> to the Vermont Health Information Exchange.

Virginia

• <u>ConnectVirginia</u> is the state's health information exchange, connecting providers to facilitate information sharing within and beyond Virginia. <u>Services</u> include electronic reporting to the Virginia Department of Health of lab reports, immunizations, and syndromic surveillance. As of August 2014, <u>20 health systems</u> representing about 70 facilities were using ConnectVirginia to submit public health information. ConnectVirginia also facilitates the process of connecting Virginia providers directly to eHealth Exchange, the national health information exchange.

Washington

• <u>OneHealthPort</u> operates the state's <u>health information exchange</u>, which is overseen by a Community Oversight Organization, the <u>Foundation for Health Care Quality</u>. The exchange is funded by participant <u>fees</u> on a sliding scale based on organization revenue. The exchange offers secure direct messaging to share patient health information between providers as well as hospital admission and discharge notifications.

West Virginia

 West Virginia Health Information Network connects providers and patients across the state. The Network's health information exchange provides participants with access to patient information stored in the electronic health record systems of other participating providers and to public health and immunization registries. Fourteen hospitals are now connected to the exchange. WVDirect offers secure messaging to securely share patient information among health care providers and can be integrated with a provider's existing email client.
 Finally, the Network provides access to the WV e-Directive Registry, described as the most comprehensive online registry of advance directives and medical orders in the country. Hosted by the West Virginia Center for End-of-Life Care, the registry includes more than 35,000 forms and is accessed by nearly 100 health care institutions in the state.

Wisconsin

• The <u>Wisconsin Statewide Health Information Network</u> (WISHIN) is the state-designated

entity for statewide health information exchange development and governance. The Network was founded by the Wisconsin Hospital Association, the Wisconsin Medical Society, the Wisconsin Collaborative for Healthcare Quality, and the Wisconsin Health Information Organization. <u>WISHIN Pulse</u> connects information located in participating provider's electronic health records, providing a summary of information from all of a patient's providers. WISHIN Pulse connects the disparate medical records of nearly 2.4 million patients and includes more than 1,000 unique users. <u>WISHIN Direct+</u> provides direct secure messaging between providers to share patient health information, including referrals and care coordination documents.

Wyoming

• The Wyoming e-Health Partnership, Inc., is the state-designated entity to carry out <u>strategic</u> and <u>operating</u> plans for health information exchange developed by a task force assembled after the state received federal funding for health information exchange. The initiative receives support from the state <u>Office of Enterprise Architecture</u>.