



**Oregon's Business Plan Framework for Health Information
Technology and Health Information Exchange (2014-2017)**
Health Information Technology Task Force Recommendations

Oregon Health Authority

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HIT Task Force Members and Staff

Task Force Members

<i>Chair</i> Greg Van Pelt, MHA	President, Oregon Health Leadership Council, Portland
Anne Alftine, MD	Project Coordinator, Jefferson Regional Health Alliance, Medford
Ashley Aitken	Intern, American Association of Retired Persons, Portland
Bill Hurst	Director, Information Services, FamilyCare Health plans, Portland
Brandon Gatke, MBA	IT Director, Cascadia Behavioral Healthcare, Portland
Chris Senz	Director and COO, Tuality Health Alliance, Hillsboro
Chuck Hofmann, MD	Physician, St. Alphonsus Medical Group, Baker City
Daniel Dean	CIO, Health Share of Oregon, Portland
Dick Gibson, MD, PhD	VP, Healthcare Intelligence, Providence Health and Services, Portland
Erick Doolen*	CIO, PacificSource, Eugene
Glenn Koehrsen, MBA	Health Share Community Advisory Council Member, Mulino
Greg Fraser, MD*	CMIO, Willamette Valley Physicians Health Authority, Salem
John Kenagy, PhD	Senior VP and CIO, Legacy Health Systems, Portland
Mark Hetz, MBA	CIO, Asante Health, Medford
Mary Dallas, MD	Medical Director Clinical Informatics, St. Charles Health System, Bend
Mohamed Alyajouri, MPH	Director of Quality Improvement and Informatics, The Corvallis Clinic, Corvallis
Patrice Korjenek, PhD	CPO, Trillium Community Health Plan, Eugene
Parhez Sattar	Sr. Director IT, Grande Ronde Hospital, La Grande
Vaughn Holbrook	Director of Government Affairs, Cambia/Regence Blue Cross Blue Shield, Salt Lake City, UT

*HITOC member

Staff to the HIT Task Force

- Susan Otter, Director of Health Information Technology, Oregon Health Authority (OHA)
- Tyler Larson, Lead Policy Analyst, Office of Health Information Technology, OHA
- Nick Kramer, Administrative Support, Office of Health Information Technology, OHA
- Patricia MacTaggart, Consultant, George Washington University
- John Hall, Consultant, Krysora
- Mindy Montgomery, Consultant, Krysora

Fighting more than cancer, a patient's voice for health information technology

When Regina Holliday learned her husband, Fred, had stage 4 kidney cancer, she had questions - and desperately needed answers. What happens next? Has it spread? What tests does he need?



Regina Holliday, patient rights advocate

Without access to his health record, Regina and Fred found themselves battling more than cancer. He became a number within a bureaucracy where his treatments were often late or overlooked.

Electronic health records and the secure exchange of information between doctors and patients are among the strategies in Oregon's drive for better health, better care and lower costs. With health information technology efforts widely adopted, patients and practitioners could securely manage care together, scheduling appointments, filling prescriptions and coordinating all aspects of treatment.

Health records inaccessible

Fred spent 26 days hospitalized without access to his own health record. When Regina asked the hospital for a copy of his health record, she was told it would take 21 days and would cost hundreds of dollars.

After transferring to a different hospital for a second opinion, the Hollidays received an out-of-date and incomplete health record. The new staff spent six hours trying to stitch together an accurate record over the phone and by fax.

Through the duration of Fred's care, he visited two emergency rooms, received treatment at five facilities and needed emergency transportation 46 times. Not one practitioner or health care facility shared Fred's health record or disclosed his treatments, recent tests, medications or blood transfusions, creating an administrative nightmare for a family in crisis.

Tragedy inspires action

Sadly, Fred died in 2009, just months after his diagnosis. Regina has since become a national voice advocating for better communication between patients and doctors — as well as between practitioners — through the switch to paperless health records and electronic information exchange. *Regina Holliday has [created a series of painted murals](#) depicting the need for clarity and transparency in medical records.*

"In the end, we are all patients," Regina said. "We all want access to quality health care and timely answers to our questions. Having access to our own electronic records, and allowing doctors to securely share records electronically, we can achieve better care and better health."

Executive Summary and Roadmap

Oregon is on an extraordinary path to transform the delivery of health care to improve health outcomes, quality of care, and reduce costs. This “health system transformation” effort is premised on a model of coordinated care that includes new methods for care coordination, accountability for performance, and new models of payment based on outcomes and health. To succeed, the coordinated care model relies on new systems for capturing, analyzing, and sharing information about patient care and outcomes, quality of care, and new modes of sharing care information amongst all members of care teams.

In 2012, the Oregon Health Authority (OHA) focused first on its Medicaid population, implementing the coordinated care model through new Coordinated Care Organizations (CCOs). These regional care networks bring all types of health care providers (physical health, behavioral health and dental) together to deliver coordinated care, while being held accountable for outcomes. CCOs now operate in every county in Oregon, and cover more than 90 percent of Oregonians on Medicaid. Moving forward, Oregon is working to accelerate and spread the coordinated care model beyond the Medicaid population to public employees, Medicare, and private payers.

Health information technology (HIT) refers to a wide range of products and services—including software, hardware and infrastructure—designed to collect, store and exchange patient data to support patient-centered care.

Health information exchange (HIE) is the electronic movement of health information among organizations following national standards. HIE facilitates sharing of health information across technological and organizational boundaries to enable better care.

Because HIT/HIE services are necessary to support health system transformation, OHA has worked closely with a wide range of stakeholders to identify HIT/HIE needs, and specifically identify how the State, and statewide services could address some of those needs. In fall of 2013, OHA convened an HIT Task Force to synthesize stakeholder input and develop this HIT/HIE Business Plan Framework to chart a path for statewide efforts over the next several years.

This stakeholder process led to a vision for Oregon of a transformed health system where HIT/HIE efforts ensure that the care Oregonians receive is optimized by HIT. “HIT-optimized” health care is more than the replacement of paper with electronic or mobile technology. It includes changes in workflow to assure providers fully benefit from timely access to clinical and other data that will allow them to provide individual/family centric care.

In an HIT-optimized health care system:

- Providers have access to meaningful, timely, relevant and actionable patient information to coordinate and deliver “whole person” care.
- Systems (health systems, CCOs, health plans) effectively and efficiently collect and use aggregated clinical data for quality improvement, population management and incentivizing health and prevention. In turn, policymakers use aggregated data and metrics to provide transparency into the health and quality of care in the state, and to inform policy development.
- Individuals and their families access their clinical information and use it as a tool to improve their health and engage with their providers.

In order to achieve the goals outlined above, the State will need to fill several roles (see the diagram on the following page):

The State will coordinate and support community and organizational HIT/HIE efforts.

- Recognizing that HIT/HIE efforts must be in place locally to achieve a vision of HIT-optimized health care, the State can support, facilitate, inform, convene and offer guidance to providers, communities and organizations engaged in HIT/HIE.

The State will align requirements and establish standards for participation in statewide HIT/HIE services.

- To ensure that health information can be seamlessly shared, aggregated, and used, the State is in a unique position to establish standards and align requirements around interoperability and privacy and security, relying on already established national standards where they exist.

The State will provide a set of HIT/HIE technology and services.

- New and existing state-level services connect and support community and organizational HIT/HIE efforts where they exist, fill gaps where these efforts do not exist, and ensure all providers on a care team have a means to participate in basic sharing of information needed to coordinate care.

Technology: The State’s overall technology approach to statewide HIT/HIE coverage relies on five elements, largely dependent on local investments made by providers, hospitals, health systems, plans, CCOs and communities in electronic health records (EHRs) and other technology, and supported by statewide services:

1. Community/organizational HIEs and health systems provide HIT services and HIE coverage to some providers. Providers and hospitals adopt and use EHRs and HIT/HIE services in meaningful ways to coordinate care and treat patients.
2. Statewide Direct secure messaging provides a foundation for sharing information across organizations and differing technologies, particularly as EHRs upgrade to meet new federal certification and “Meaningful Use” requirements that include Direct secure messaging capabilities.
3. Oregon’s current state HIE, CareAccord®, provides basic HIE services, including Direct secure messaging, with a focus on providers without access to community and organizational HIEs and health systems’ HIT services.
4. New statewide HIT/HIE services (“enabling infrastructure”) tie together local efforts and fill gaps, enabling exchange and HIT functions (such as identifying providers or locating patient records) across community and organizational HIEs, health systems and providers.
5. State aggregation of core clinical metrics data supports Medicaid purposes. These data are used to improve care and reduce costs.

At the December 2013 CCO Summit, several CCO executives reflected on the impact of an “HIT-optimized” health care system in Oregon

“We have one provider who is both a physical and behavioral health provider, who never ‘til now was able to get data from both sides of her practice into one tool for a patient.”

- Janet Meyer, Health Share of Oregon

“Investing in Jefferson HIE is important. The number one frustration of our case managers is the wasted duplication of services and tests.”

- Bill Guest, Cascade Health Alliance

“Having an integrated shared care plan will transform care coordination.”

- Terry Coplin, Trillium Community Health Plan

“We are moving toward using technology as a foundation to make decisions about care.”

- Phil Greenhill, Western Oregon Advanced Health

STATE SUPPORT OF COMMUNITY & ORGANIZATIONAL HIT/HIE EFFORTS

SUPPORT

The State will support community & organizational efforts by:

- Promoting EHR adoption & Meaningful Use
- Leveraging national standards & federal EHR incentives
- Promoting statewide Direct secure messaging
- Providing guidance, information & technical assistance
- Assessing changing environments and convening stakeholders

STANDARDIZE & ALIGN

The State will work with stakeholders to:

- Adopt standards for safety, privacy, security & interoperability
- Establish a Compatibility Program for statewide enabling infrastructure
 - Align metrics & reporting

PROVIDE

The State will provide:

- Statewide enabling infrastructure
- CareAccord to ensure access to HIT/HIE
- Clinical metrics data for Medicaid

COMMUNITY & ORGANIZATIONAL HIT/HIE EFFORTS:

Community HIEs

- Jefferson HIE
- Central Oregon HIE
- Gorge Health Connect
- Bay Area Community Informatics Agency

Organizational HIT/HIE efforts of

- CCOs
- Health Systems
- Health Plans
- Providers
- Hospitals
- Hosted EHRs
- Data Aggregators & Intermediaries

Governance, Operations, and Policy: Establishing the right governance, operations and policy roles is needed to ensure that statewide HIT/HIE efforts support HIT-optimized health care. The State will continue its current efforts to provide oversight, transparency, policy and guidance, and accountability for statewide HIT/HIE services. Over time, the operation of statewide services will transfer from OHA and its contractors to an external organization. This “HIT designated entity” would be responsible for managing contractors, implementing new services and operating existing statewide services.

The State will also develop policies and standards encompassed in a compatibility program for users of statewide HIT/HIE services. This program will lay out minimum standards that health care entities would need to meet to participate in statewide HIT/HIE services; standards would focus on interoperability and privacy and security, leveraging national standards where they exist, and anticipating new standards as they evolve.

Financing: Ongoing funding for statewide HIT/HIE services is critical to ensure sustainability. Initial funding for Oregon’s statewide HIT/HIE services has come from federal grants, and Oregon will seek additional implementation funding from the Centers for Medicare & Medicaid Services (CMS) to support Medicaid-related costs. While federal grant funding can play a large role in implementing new services, the State’s goal is to bring on board private partners who see value and invest in private use of these services to create long-term financial sustainability for essential HIT/HIE services.

Roadmap to Statewide HIT/HIE: Oregon’s HIT/HIE services are being developed in phases:

- The first phase of development (2010-2013) saw the advent of a statewide strategic plan and the launch of CareAccord®, Oregon’s state HIE.
- The next phase is upon us (2014-2015): OHA is currently working with CCOs and stakeholders to develop and implement statewide HIT/HIE priority elements that are necessary to support health system transformation.
- This Business Plan Framework envisions a following phase (2016 and beyond) that expands statewide services and anticipates new public/private partnership structures to implement and operate statewide HIT/HIE efforts.

See the Roadmap chart on the following page for an outline of these phases.

The broad interest and agreement from stakeholders in OHA’s work provides an excellent foundation for the work ahead. This Business Plan Framework outlines that work, establishes principles, describes challenges, and sets a path forward for developing the right state-level services and technology to support HIT-optimized health care.

Oregon's HIT/HIE Roadmap to Support Health System Transformation

2010-2013
Phase 1

2014-2015
Phase 1.5

2016 Forward
Phase 2.0

Governance, Operations and Policy

Oregon Health Authority (OHA) with HIT Oversight Council (HITOC) and HIT Task Force

- Strategic planning, oversight, transparency, policy, accountability

OHA

- Implementation, operations

OHA with HITOC

- Strategic planning, transparency, policy
- ### Steering Committee/CCO TAG
- Phase 1.5 oversight, accountability
 - Planning for HIT Designated Entity
 - Develop compatibility program

OHA

- Implementation, operations

OHA with HITOC and Steering Committee

- Strategic planning, oversight, transparency, policy, accountability
- Compatibility program

HIT Designated Entity

- Implementation, operations

Technology and Services

CareAccord

- CareAccord Direct secure messaging (launched May 2012)
- Trust/interstate efforts (National Association for Trusted Exchange, Direct Trust)

CareAccord

- Direct secure messaging; access to enabling infrastructure. Trust/interstate efforts.

Enabling infrastructure

- Provider directory/information services
- Patient/provider attribution
- Statewide hospital notifications

Services for Medicaid

- Clinical Quality Metrics Registry
- Technical assistance to eligible providers

CareAccord

- Direct secure messaging; access to enabling infrastructure. Trust/interstate efforts.

Enabling infrastructure and Medicaid services

- Enhanced statewide enabling services and record location
- Supporting query and data analytics

Finance

Office of the National Coordinator for HIT (ONC)

- ONC Cooperative Agreement (2010 - February 2014)

CMS/State Match/Investors

- Planning broad-based financing model
- CMS funding for Medicaid share for implementation
- Seeking non-Medicaid investors
- State/CMS contribute ongoing funding for services that support state Medicaid operations

Public/private partnership

- Broad-based financing model provides financial stability
- State/CMS contribute ongoing funding for services that support state Medicaid operations

I. Objective, Methodology, and Scope

Objective: Support health system transformation with the right level of HIT/HIE in Oregon

In 2011, the Oregon legislature passed landmark legislation to transform the way services are delivered through the Oregon Health Plan (Medicaid) to achieve the triple aim of better health, better care and lower costs. In 2012, the Oregon Health Authority (OHA) implemented Coordinated Care Organizations (CCOs). These regional care networks bring all types of health care providers (physical health, behavioral health and dental) together to deliver coordinated services, with an emphasis on health and prevention. Required by contract to achieve certain health system transformation goals, 16 CCOs are now serving more than 90% of Oregon’s Medicaid population. With time, Oregon plans to spread the coordinated care model beyond Medicaid populations, to public employees, Medicare, and private plans.

With the advent of CCOs, OHA recognized the necessity of re-assessing Health Information Technology (HIT) and Health Information Exchange (HIE) needs across the state. Successful implementation of the CCO model relies on certain HIT/HIE services that allow accessible and secure sharing of patient information.¹

Because HIT/HIE services are necessary to support health system transformation and ensure the triple aim of better health, better care and lower costs, OHA worked closely with stakeholders to identify needs and priorities, culminating in an HIT Task Force to establish this State HIT/HIE Business Plan Framework. The chapters reflect key recommendations that will inform Oregon’s long-term HIT/HIE landscape:

- Chapter II: Vision, Goals, Principles, and Challenges
- Chapter III: Role of the State and Statewide Efforts Recommendations
- Chapter IV: Technology Recommendations
- Chapter V: Governance, Policy, and Operations Recommendations
- Chapter VI: Financing Recommendations

Methodology and Scope

HITOC: In 2009, Oregon’s Health Information Technology Oversight Council (HITOC) was legislatively created to provide oversight of HIT development in the state. The council engaged in an intensive strategic planning effort, involving more than 100 Oregonians who volunteered to be on HITOC and its eight workgroups, subcommittees, and ad hoc groups, to develop Oregon’s Strategic and Operational Plans for HIE in 2010. The council members anticipated a changing EHR and HIT environment, and endorsed a “monitor and adapt” approach that envisioned revisiting the strategic plans over time. HITOC’s work was a strong foundation for discussions with new stakeholders as OHA assessed Oregon’s new HIT/HIE environment in 2013.

¹ See Appendix B for further background.

Listening sessions: During the spring of 2013, OHA conducted interviews with CCOs, health plans, State leadership and representatives of statewide and regional healthcare groups.² The goal of these interviews was to assess existing HIT/HIE services and determine which services were necessary to support health system transformation.

The listening sessions helped identify:

- The scope of community and organizational HIT/HIE efforts, including gaps for providers in Oregon
- HIT/HIE elements necessary to support health system transformation
- Input on which of these critical HIT/HIE elements should be offered statewide, and how any statewide services should be governed and financed
- Input on the right role for the State, including policy, standards and guidance

HIT Task Force: Oregon Health Authority analyzed the information obtained from the listening sessions and determined that further stakeholder feedback was necessary to develop the Business Plan Framework. In the fall of 2013, OHA convened the Health Information Technology Task Force (Task Force). Comprised of a wide group of Oregon's HIT/HIE stakeholders, the 19-member Task Force met in five public meetings and a series of smaller workgroups between September and November 2013.

Listening sessions found consistent messages that HIT/HIE are needed to support:

- Care coordination across all members of a care team, and
- Data aggregation and analytics incorporating clinical data.

Listening sessions also uncovered variations:

- Varying levels of technical capacity across Oregon's health care communities, and
- Differing opinions on the best role of the State and statewide services.

During these meetings, OHA staff presented the Task Force with proposed recommendations informed by HITOC's prior work and the listening session results. The Task Force deliberated on issues of the State's role in HIT/HIE services, technology, governance and finance and provided the final input for this report.

Scope of this document: As noted through this document, statewide HIT/HIE infrastructure is expected to be developed in phases. Current efforts (Phase 1) include CareAccord® Direct secure messaging web-portal based services. For 2013-2015, OHA has secured State funding to leverage federal grants. These funds are being used to develop six elements (Phase 1.5) described in the Chapter IV Technology Recommendations. The HIT Task Force reviewed the Phase 1.5 elements and validated the overall approach to statewide HIT/HIE efforts that would rely on Phase 1.5 elements. They then considered the additional efforts needed to meet the goals and solve the problems identified for Oregon, with particular focus on 2016 and beyond (Phase 2.0). This document describes the complete picture of statewide Oregon's statewide HIT/HIE development for 2014-2017.

² See Appendix A for a complete list of organizations and outcomes from the listening sessions.

Primer on Health Information Exchange and Federal Role in Facilitating HIT/HIE

Health Information Exchange (HIE) allows providers, patients, and other participants to appropriately access and securely share a patient's health information electronically. Efficient HIE relies on interoperability and standards across technologies. Once standardized, the information shared can integrate into the recipients' Electronic Health Records (EHRs), further enhancing the usability of patient data and improving patient care.

There are currently three key forms of HIE:

- [Directed exchange](#) allows providers to easily and securely send patient information—such as laboratory orders and results, patient referrals, or discharge summaries—directly to other health care professionals. This information is sent over the Internet in an encrypted, secure, and reliable way among health care professionals who trust each other. Directed exchange is commonly compared to sending a secured email.
- [Query-based Exchange](#) allows providers to find and/or request information on a patient from other providers. It is often used for unplanned care.
- [Consumer-mediated exchange](#) provides patients with access to their health information, allowing them to manage their health care online in a similar fashion to how they might manage their finances through online banking. When in control of their own health information, patients can actively participate in their care coordination.

Storing Patient Data: HIE architecture determines where patient data is stored and how it is accessed by HIE participants.

- The centralized model has a clinical data repository that is maintained by the HIE. Users access and update the system directly. Hospitals and larger health systems may use this model to ensure interoperability and ease of access.
- In the federated model, patient data remains in the individual EHRs or clinical data repositories of health systems, hospitals or providers. The HIE provides the connectivity, interoperability and record location services necessary to exchange data, but is not responsible for data storage.
- A hybrid model incorporates a centralized data repository for some information, while providing connection to federated EHRs or clinical data repositories for other patient information.

See Chapter IV. Technology for more information on the technology model proposed in for Oregon, as well as further information on CareAccord®, Oregon's state HIE.

Federal role in facilitating HIE: HITECH Act of 2009

The 2009 Health Information Technology for Economic and Clinical Health (HITECH) Act seeks to improve American health care delivery and patient care through an unprecedented investment in HIT. The Act funds a complementary set of programs such as:

- Incentives to eligible Medicaid and Medicare providers for adopting and meaningfully using certified EHRs. ***See EHR Incentives/Meaningful Use Primer on page 16.***
- State HIE Cooperative Agreements to fund state HIE efforts, administered by the Office of the National Coordinator for HIT (ONC). These funds ended in early 2014.
- Technical assistance for providers through funding of Regional Extension Centers
- Workforce training, including curriculum development

See Appendix B for further background on some of the HITECH-funded programs in Oregon

II. Vision, Goals, Principles, Challenges

Vision and Goals

The HIT Task Force helped OHA establish a vision for Oregon of a transformed health system where HIT/HIE efforts ensure that the care Oregonians receive is optimized by HIT. “HIT-optimized” health care is more than the replacement of paper with electronic or mobile technology. It includes changes in workflow to assure providers fully benefit from timely access to clinical and other data that will allow them to provide individual/family centric care.

In an “HIT-optimized” health care system:

- Providers have access to meaningful, timely, relevant and actionable patient information to coordinate and deliver “whole person” care.
- Systems (health systems, CCOs, health plans) effectively and efficiently collect and use aggregated clinical data for quality improvement, population management and incentivizing health and prevention. In turn, policymakers use aggregated data and metrics to provide transparency into the health and quality of care in the state, and to inform policy development.
- Individuals and their families access their clinical information and use it as a tool to improve their health and engage with their providers.

ONC Vision for HIE

“All patients, their families, and providers should expect consistent and timely access to standardized health information that can be securely shared between primary care providers, specialists, hospitals, behavioral health, Long Term Post-Acute Care, home and community-based services, other support and enabling services providers, care and case managers and coordinators, and other authorized individuals and institutions.”

[Strategy and Principles to Accelerate HIE, Office of the National Coordinator for HIT \(ONC\), Aug. 2013](#)

The State will pursue the above goals to ensure that HIT supports the triple aim of better health outcomes, better quality of care and lower costs.

Principles for Statewide HIT/HIE Efforts

The HIT Task Force established principles for moving forward with statewide HIT/HIE efforts.

Leverage existing resources and national standards, while anticipating changes:

- Consider investments and resources already in place.
- Leverage Meaningful Use and national standards; anticipate standards as they evolve.
- Monitor and adapt to changing federal, state and local environments.

Demonstrate incremental progress, cultivate support and establish credibility:

- Advance through relentless incrementalism: define a manageable scope, deliver, and then expand.
- Communicate frequently with measureable progress. Demonstrate optimal value for patients and providers toward the triple aim of better health, better care and lower costs.
- Provide public transparency into development and operations of statewide resources.
- Be a good steward of limited public resources.
- Establish long-term financial, leadership, and political sustainability. These are interdependent.

- Seek broad stakeholder involvement and support. Statewide resources cannot be developed alone.

Create services with value:

- Maximize benefits to Oregonians while considering costs. Do not disenfranchise (“do no harm”), and be inclusive of providers that face barriers to participation.
- Support provider participation in HIT-optimized health care; meet providers where they are. Recognize the challenges especially for smaller, independent providers and providers who are not eligible for federally-funded EHR incentives.
- Prioritize efforts to achieve a common good and that local entities could not do on their own.
- Cultivate and communicate about value at the individual, provider, system and state levels. Champions and personal stories can be very effective.
- Support new models of “HIT-optimized” health care that result in better quality, whole person care and improved health outcomes and lower costs for all.

Protect the health information of Oregonians:

- Ensure information sharing is private and secure and complies with HIPAA and other protections.

Challenges

The Task Force identified a number of important factors for consideration when proceeding with HIT/HIE efforts:

HIPAA Privacy Rule

The HIPAA Privacy Rule protects personal health information while still allowing the flow of health information for treatment, payment, or operations. Providers and other entities that access health information can only share information as outlined in the rule, or with the written permission of the person.

Providers face very real technology burdens, which may impede new HIT/HIE efforts: Practices face many large HIT changes in the near term, including ICD-10³, EHR upgrades required in 2014 for all providers seeking EHR incentive payments, and practice changes for providers seeking to meet Meaningful Use Stage 2 requirements. Multiple metrics and reporting requirements demanded by different payers and programs also create a significant administrative burden for many providers. Adding new HIT/HIE expectations on providers is likely to be very challenging in this environment. Providers want to see value and benefits from their considerable investments in EHRs and HIT/HIE, and many are frustrated that their EHRs do not give them back useful information at a patient panel level.

HIT/HIE efforts must be inclusive: Behavioral health, dental and long term care must be included in HIT/HIE efforts to achieve health care transformation, but most of these providers lack the economic incentives available to eligible providers in the Medicare and Medicaid EHR Incentive Programs.

³ The 10th revision of the International Statistical Classification of Disease and Related Health Problems (ICD), a medical classification list by the World Health Organization. ICD codes are used worldwide for morbidity and mortality statistics, reimbursement systems, and automated decision support in health care. Congress recently delayed the deadline for ICD-10 adoption by at least one year, so requirements for all HIPAA-covered entities (e.g., health care providers) to adopt ICD-10 will take effect no earlier than October 2015.

Providers must adopt and use EHRs and HIT/HIE services to see the benefits: Providers will need support and technical assistance to integrate information technology into their workflow.

Providers face challenges navigating the EHR vendor arena: Small providers are constrained by the “out-of-the-box” capabilities provided in their EHRs, and have limited financial ability to customize their EHRs to produce metrics and reporting. Their ability to meet changing demands is limited.

Incentives are misaligned: New payment models which incentivize health and prevention are evolving, but providers are still largely paid on a fee for service basis. Without new payment models in place, providers may not see the value of HIT/HIE investments. For example, better sharing of health information can prevent hospital admissions and duplicative laboratory tests. For hospitals and laboratories paid by the admission or test, better sharing of health information can reduce revenue until new payment models are in place.

Sustainability is challenging: Although the benefits of HIT/HIE infrastructure are of interest to many stakeholders, many are reluctant to invest without clear demonstration of value and return on investment. At the same time, for many services, participation by a critical mass of providers is needed to realize the return on investment.

Beware unintended consequences: The addition of new HIT/HIE services, however well-intentioned, could inadvertently contribute to information overload. For example, alerts designed to call attention to important information about a patient are useful only if the provider can act on the information. “Alert fatigue” can occur when a provider is overwhelmed by the volume of messages and begins to ignore them.

Workforce training is needed: Health system transformation not only increases demand for primary care providers but also increases demand for knowledgeable staff who can adapt to new technology and implement new workflows which maximize the benefits of HIT/HIE services. Training and retention of staff is an additional cost and concern for providers.

Primer on EHR Incentives and Meaningful Use

The Medicaid and Medicare EHR Incentive Programs provide incentive payments to eligible professionals and hospitals as they implement and demonstrate that they meet “Meaningful Use” requirements for using certified EHR technology. Eligible professionals can receive up to \$44,000 through the Medicare EHR Incentive Program over 5 years or up to \$63,750 through the Medicaid EHR Incentive Program over 6 years. Eligible hospitals may be eligible for significant incentives from both programs. To receive incentive payments, eligible professionals and hospitals must meet several criteria, including:

- Meet eligibility requirements related to provider type (MDs, NPs, DOs, and others) and either Medicaid patient volume or Medicare Part B claims.
- Use certified EHR technology that meets requirements established by the Office of the National Coordinator for Health Information Technology (ONC) as secure and interoperable.
- Meet Meaningful Use requirements for actual use of the EHR (see below). For Medicaid EHR incentives, providers can receive their first year’s payment by adopting, implementing or upgrading (AIU) to certified EHR technology.

Meaningful Use: To receive an incentive payment, both eligible professionals and hospitals have to show that they are “meaningfully using” their EHRs by meeting thresholds for a number of objectives established by CMS. The incentive programs are staged in three steps with increasing requirements for participation.

- **Stage 1** sets the baseline for electronic data capture and information sharing. All providers begin participating by meeting the Stage 1 requirements for a 90-day period in their first year of Meaningful Use and a full year in their second year of Meaningful Use.
- **Stage 2** focuses on data exchange. After meeting the Stage 1 requirements, providers will then have to meet Stage 2 requirements for two full years.
- **Stage 3** (expected to be implemented in 2017 through future rule making) will focus on advanced clinical process and improved outcomes.

NEW for 2014: All providers seeking incentives must use EHRs that meet new certification standards that apply in 2014.

- 2014 standards include capabilities for Direct secure messaging and automated quality reporting capabilities of clinical quality metrics, among other things.
- For 2014 only, all providers, regardless of their stage of Meaningful Use, are required to demonstrate Meaningful Use for only a 90-day reporting period.

Resources:

- EHR incentives for Oregon providers: <http://www.medicadehrincentives.oregon.gov/>.
- A complete up-to-date list of certified EHR systems: [ONC Certified HIT Product List \(CHPL\)](#).
- [Click here](#) to view Stage 1 objectives and measures from the CMS website. Click [here](#) for a Stage 2 Guide for Eligible Professionals published by CMS.

III. The Role of the State in Achieving HIT-Optimized Health Care

To determine the State's role, the Task Force started by discussing the critical HIT/HIE elements needed to support health system transformation. Then within those needs, the Task Force identified which elements should be uniquely provided at the State level and which could be provided locally, considering the variability of expertise, technology and knowledge of communities, health plans, CCOs, health systems and providers.

The Task Force focused on three goals which lead to an HIT-optimized health care system:

- Providers have access to meaningful, timely, relevant and actionable patient information to coordinate and deliver “whole person” care.
- Systems (health systems, CCOs, health plans) effectively and efficiently collect and use aggregated clinical data for quality improvement, population management and incentivizing health and prevention. In turn, policymakers use aggregated data and metrics to provide transparency into the health and quality of care in the state, and to inform policy development.
- Individuals and their families access their clinical information and use it as a tool to improve their health and engage with their providers.

To identify the right role for State efforts, the Task Force approached each goal from three potential categories of State involvement:

The State will coordinate and support community and organizational HIT/HIE efforts.

- Recognizing that HIT/HIE efforts must be in place locally to achieve a vision of HIT-optimized health care, the State can support, facilitate, inform, convene and offer guidance to providers, communities and organizations engaged in HIT/HIE.

The State will align requirements and establish standards for participation in statewide HIT/HIE services.

- To ensure that health information can be seamlessly shared, aggregated, and used, the State is in a unique position to establish standards and align requirements around interoperability and privacy and security, relying on already established national standards where they exist. These standards can ensure that local and statewide policies and operations result in the needed and anticipated statewide infrastructure to support health system transformation.

The State will provide a set of HIT/HIE technology and services.

- As described more fully in Chapter IV: Technology Recommendations, new and existing state-level services connect and support community and organizational HIT/HIE efforts where they exist, fill gaps where these efforts do not exist, and ensure all providers on a care team have a means to participate in basic sharing of information needed to coordinate care.

STATE SUPPORT OF COMMUNITY & ORGANIZATIONAL HIT/HIE EFFORTS

SUPPORT

The State will support community & organizational efforts by:

- Promoting EHR adoption & Meaningful Use
- Leveraging national standards & federal EHR incentives
- Promoting statewide Direct secure messaging
- Providing guidance, information & technical assistance
- Assessing changing environments and convening stakeholders

STANDARDIZE & ALIGN

The State will work with stakeholders to:

- Adopt standards for safety, privacy, security & interoperability
- Establish a Compatibility Program for statewide enabling infrastructure
 - Align metrics & reporting

PROVIDE

The State will provide:

- Statewide enabling infrastructure
- CareAccord to ensure access to HIT/HIE
- Clinical metrics data for Medicaid

COMMUNITY & ORGANIZATIONAL HIT/HIE EFFORTS:

Community HIEs

- Jefferson HIE
- Central Oregon HIE
- Gorge Health Connect
- Bay Area Community Informatics Agency

Organizational HIT/HIE efforts of

- CCOs
- Health Systems
- Health Plans
- Providers
- Hospitals
- Hosted EHRs
- Data Aggregators & Intermediaries

GOAL 1: Providers have access to meaningful, timely, relevant and actionable patient information to coordinate and deliver “whole person” care.

Many patients receive care from multiple providers. Currently, when a patient’s providers are not all within the same health system or network, the providers may have difficulty accessing each other’s information about the patient. This problem is even greater for providers not eligible for Medicaid and Medicare EHR incentive payments, such as most behavioral health and long-term care providers. Without EHRs or other technology systems incorporating HIT standards, these providers are less likely to exchange information electronically.

As a result, not all providers caring for a patient have access to needed information at the point of care. The current state of health information exchange creates several issues:

- Fragmented, uncoordinated care undermines the quality of care and patient outcomes. High-cost and high-risk populations lack “whole person” coordinated care that includes sharing information across physical, behavioral, dental and other care settings. Critical pieces of the care management puzzle, including information from long term care, social services, education, and other sectors, are not currently connected.
- Poor communication across transitions of care leads to wasteful spending and poor patient experiences and outcomes.
- Providers often rely on a patient’s memory to inform their care.
- Inefficiencies and redundancies result from the gaps in information in the current system.

Challenges for behavioral health patients and providers

- Providers often rely on the patient to inform them about current medications. If this information is inaccurate or incomplete, providers can prescribe drugs that will result in medication reactions or complications.
- Behavioral health care providers are often not notified when their patients are admitted to the hospital or booked into a jail facility. This creates a delay in treatment, and can exacerbate the behavior that led to the hospitalization or arrest.

To address the problems outlined above, sharing patient information is critical:

Access to the right patient information at the point of care, including relevant information from across the care spectrum. This requires the sharing of information between unaffiliated providers across organizational and technological boundaries. This also requires the ability to produce and ingest information in formats that are structured to be integrated and automated within EHRs and workflows.

Provider capacity, interest and demand to use the information requires providers having the right technology (EHRs or other standards-based technology), as well as providers valuing and expecting electronic access to shared information.

Better information means better, more affordable care

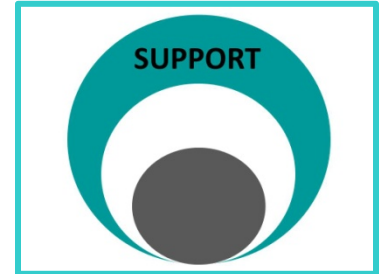
Giving providers access to meaningful, timely, relevant and actionable information allows providers to provide the most informed care and can: reduce costly redundancy, ensure accuracy, and increase the likelihood of better outcomes. This means more efficient and effective care, better workflows and better outcomes, all of which can reduce costs.

Care team process and workflow to use the information and organize around “whole person” care. This could include practice changes to participate in “virtual care teams” around complex patients, and it may be facilitated by technology tools such as virtual care team tools and shared care plans.

Goal 1: Recommendations

The State will support community and organizational efforts by:

Promoting EHR adoption and Meaningful Use: The State will ensure providers can access EHR incentive payments, including providing technical assistance to Medicaid providers. Strategies to promote and facilitate full use of certified EHR technology include aligning State requirements with EHR Incentive Program requirements to further incent Meaningful Use (e.g., leverage clinical quality measures that are built into certified EHRs); leveraging automated capabilities within EHRs, such as new automated (CCDA/QRDA) formats for clinical metric reporting; and monitoring and assessing rates of certified EHR adoption, Meaningful Use, and use of other technology.



In addition, the State will support participation in information sharing and meaningful care coordination by behavioral health, dental and long-term care providers, by examining barriers to participating in care teams, highlighting promising approaches, and using State Medicaid levers where applicable.

Leveraging national standards and federal EHR incentives: The State will promote and leverage the use of national HIT/HIE standards (including EHR certification and Meaningful Use standards) which enable interoperability, privacy and security, and efficiencies, as well as promote and leverage provider participation in the EHR incentive programs, which require the use of EHRs that meet these standards. Levers such as State contracts with providers, CCOs and health plans and State standards for Patient-Centered Primary Care Home (PCPCH) can also reinforce the use of national HIT/HIE standards, EHR adoption and Meaningful Use.

Promoting statewide Direct secure messaging: By supporting local efforts and connectivity between local HIEs and CareAccord®, the State will enable providers to share health information in a HIPAA-compliant manner within Oregon, as well as across organizational and state boundaries.

Providing guidance, information and technical assistance: The State will seek opportunities to provide clarity where possible on HIPAA and other legal restrictions on information sharing, particularly around behavioral health.

Assessing changing environments and convening stakeholders: The State will convene stakeholders to share best practices and discuss the impact of federal and statewide initiatives and implications for community and organizational HIEs.

The State will work with stakeholders to:

Adopt standards for safety, privacy, security and interoperability: To protect the security and privacy of shared patient information, the State will promote policies and practices to protect patient health information and ensure any statewide services or processes follow HIPAA and other federal and State requirements. Where possible,



the State will assist community HIE efforts with standard consent processes or guidelines.

Establish a compatibility program for statewide enabling infrastructure: The State will develop policies to support interoperability, including establishing a State compatibility program that includes national standards and sets baseline expectations for community, organizational and statewide HIT/HIE efforts to ensure interoperability, privacy and security and to facilitate the sharing of information. Where relevant to Oregon’s interests, the State will advocate nationally for standards and policy. See Chapter V. Governance for more discussion of the compatibility program.

The State will provide:

Statewide enabling infrastructure: The enabling infrastructure services will connect community and organizational HIEs where they exist, and provide core baseline services to ensure all providers can share information (see Chapter IV. Technology Recommendations for more details). The State will provide enabling infrastructure services that can facilitate both “push” and “query” capabilities to facilitate the exchange of health information.



CareAccord® to ensure access to HIT/HIE: CareAccord® is available throughout Oregon, including in areas where no community HIEs exist. By offering that service, the State provides an option for any provider, with or without an EHR, to access electronic health information through Direct secure messaging.

GOAL 2: Systems (health systems, CCOs, health plans) effectively and efficiently collect and use aggregated clinical data for quality improvement, population management and incentivizing health and prevention. In turn, policymakers use aggregated data and metrics to provide transparency into the health and quality of care in the state, and to inform policy development.

Currently, technology disparities affect the access that providers, health systems, health plans and CCOs have to clinical information beyond individual patient records – amassed for their population of patients or members. Historically, access to clinical data for quality improvement and oversight has been expensive and burdensome to collect (e.g., through manual chart audits). As electronic access to information becomes more available, medical chart audit reviews for accreditation and regulatory requirements will no longer be needed. Time gaps between collection, review and the ability to act will decrease, making the information more valuable to providers, health systems, CCOs, health plans and the State.

The use of Clinical Quality Measures (CQMs) facilitates the aggregation of clinical information. CQMs are process and outcomes measures used to measure the current quality of patient care and identify opportunities for improvement. Health plans, CCOs, health systems and providers all need CQMs to achieve the triple aim of better health, better care and lower costs. Unfortunately, not all of these groups have the ability to effectively and efficiently collect and use aggregated CQMs and other clinical data.

A new standard for CQM reporting

Clinical Quality Measures are utilized for quality program reporting, including reporting required for Meaningful Use under the EHR Incentive Program. Starting in 2014, EHRs certified for Meaningful Use must be able to generate CQM data in a standardized format, called Quality Reporting Data Architecture (QRDA). This format facilitates electronic reporting, without placing an extra burden on providers, and is valuable functionality provided by 2014 certified EHRs.

Aggregated clinical data have several different uses:

Provider-level uses: Actionable CQMs, alerts and other patient-level information are needed by point-of-care providers and the care team to look across their patient panels and identify care needs. These tools allow providers to identify patients who have gaps in care (e.g., missing recommended screenings), are at risk for poor outcomes (e.g., missing follow-up visits after hospitalization or being outliers within their chronic care cohorts) or have other signs of needing additional, proactive care. Clinical quality measures can provide insight into areas of success and areas for improvement. To be most useful for providers, these data and metrics should include the ability to “drill-down” to the patient level, so patient follow-up and practice changes can occur.

Management-level uses: Health plans, CCOs, health systems and providers need CQMs and data to:

- Ensure quality: Identify, monitor and improve quality of care.
- Manage populations: Identify and manage their patients/populations effectively.
- Pay differently: Transform care delivery via new payment models that are based on paying for value and health outcomes rather than visits.

To be most useful for management-level users, these data and metrics should be collected frequently enough to demonstrate the impact of new delivery care models and help identify where resources and course corrections could yield better outcomes.

Policy-level uses: The State monitors population health, and seeks to ensure value in the health care delivery system. Data that is particularly relevant at the policy level may include provider or management-level metrics, but may also include less frequently collected indicators, such as patient satisfaction surveys.

The HIT Task Force described several challenges to ensuring that aggregated clinical data and metrics are available to support the above uses:

Myriad unaligned metrics and reporting requirements create difficulties: Providers and health systems face a daunting number of reporting requirements across health plans, Medicare, Medicaid and pay-for-performance programs. Reporting metrics and other data often requires reporting many similar, but not identical, pieces of information. This lack of alignment increases administrative burdens and reduces comparability of data.

Collecting and reporting metrics and other clinical data can be burdensome for providers: This challenge is particularly great given major HIT changes hitting providers in 2014 and 2015 (including ICD-10, requirements for Meaningful Use Stage 2, and 2014 EHR upgrades needed to be eligible for EHR incentives).

Certified EHRs vary in terms of ability to generate and report CQMs: For example, although ONC has established 64 electronic CQMs, EHR certification standards require only nine CQMs to be pre-programmed into the EHR for automated reporting capabilities. While EHR vendors may “switch on”

additional metrics for a cost, this is a financial burden that smaller providers may not be able to absorb.

The credibility of metrics depends on provider workflow: Even for the Meaningful Use CQMs that are pre-programmed into EHRs, the ability to produce high-quality, accurate data for each metric relies on the workflow and processes that ensure providers are entering appropriate data into the relevant fields of their EHR.

Aggregating and analyzing clinical data can be challenging for some CCOs, health plans and health systems: Aggregating clinical data across different EHRs is a specialized technical skill set. While some CCOs, health plans and health systems have the capabilities or obtain them through community HIEs and other “data intermediaries,” access to these services is not statewide. Access to these capabilities is limited, especially for smaller providers.

Individual-level data may be necessary to drive positive change: While some health plans and CCOs may be able to access provider- or clinic-level metrics, it may still be challenging to access individual-level clinical data. Individual-level clinical data allows the greatest flexibility in analytics, including the ability to drill down to identify patients in greatest need of follow-up. One HIT Task Force member noted that showing providers their performance results can elicit reactions of denial, unless the providers can see the specific list of patients where they are not meeting the performance target.

Translating data into action: Providers are ready for information that allows them to better understand and manage their patient panels. However, the ability to translate metrics into practice improvements and/or to target patients needing care varies among providers and can depend on the utility of the reported data. Having excellent analysis of performance data, trends and benchmarking are of little use if providers are not able to take action or change practices to realize improvements. Health systems, CCOs and health plans also vary in their ability to work with practices and target their resources.

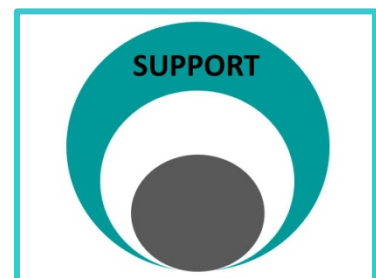
Governance and ownership of data: Much of the patient data used for quality improvement, population management and incentives for health and prevention is covered under HIPAA provisions for health plan or provider treatment, payment, or operations purposes. The intersection of HIPAA with other privacy protections, such as 42 CFR Part 2, can create uncertainty about what information can be shared and how. Questions may arise regarding who owns the data and who can access the data. Protecting patient privacy and assuring security are paramount when working with patient information.

Goal 2: Recommendations

The State will support community and organizational efforts by:

Promoting EHR adoption and Meaningful Use: To help communities realize the benefits of EHRs, the State can support providers’ efforts to adopt certified EHRs and meet Meaningful Use requirements, including raising awareness of new formats and functionality included in EHRs for electronic reporting of clinical quality measures.

Leveraging national standards and federal EHR incentives: The State will use available levers to promote participation in the EHR



incentive programs and certified EHR adoption, as Meaningful Use Stage 2 requirements provide better access to automated clinical quality measures, leveraging the new automated formats available in 2014-certified EHRs. Where relevant to Oregon’s interests, the State will advocate nationally for standards and policy that further the ability of providers to seamlessly report clinical quality metrics from their EHRs.

Assessing changing environments and convening stakeholders: The State will monitor and report on how EHR vendors adapt to new 2014 certification standards and how new EHRs meet clinical quality metrics/reporting needs.

The State will work with stakeholders to:

Adopt standards for safety, privacy, security and interoperability:

Where possible, State standards will be aligned to national standards, such as HIPAA privacy provisions. See Chapter V. Governance for more discussion of standards and the compatibility program.

Align metrics and reporting: The State will use available levers to align metrics and reporting requirements across Oregon. In particular, the State will seek opportunities to align all clinical metric specifications and reporting requirements with those already required for national programs and standards, such as Meaningful Use and National Committee for Quality Assurance (NCQA) standards. In addition, the State will facilitate a “report once” model, where providers can report to one source and have the data count for multiple pay for performance programs. The State will advocate for all pay for performance programs to be aligned around a common set of metrics.



The State will provide:

Statewide enabling infrastructure: The enabling infrastructure services will provide core baseline services such as a provider directory and patient/provider attribution service to support analytics and use of aggregated clinical data (see Chapter IV. Technology Recommendations for more details).

Clinical metrics data for Medicaid: The State will develop a clinical quality metrics registry with the ability to aggregate key clinical quality data for the Medicaid program, develop benchmarks and other quality improvement reporting and calculate clinical quality metrics for paying quality incentives to CCOs and Medicaid EHR incentives to providers.

To provide transparency into statewide, regional and local performance, the State will use the registry data and other state data sources to produce information on utilization, cost, and performance on clinical quality metrics. Development of the clinical quality metrics registry will start small and is expected to expand beyond the three initial quality measures and potentially beyond Medicaid.

As the State-level clinical quality metrics registry evolves, it will likely have value for non-Medicaid pay-for-performance programs and the potential for reducing burden on providers by collecting Meaningful Use clinical quality measures for multiple programs. Leveraging data that is already being collected individually will provide economies of scale, reduce reporting burdens and, as more



populations and providers contribute data, increase the value of benchmarking and comparative data produced from the registry.

Technical Assistance to Medicaid providers: The State will contract for technical assistance to Medicaid providers to support EHR adoption and Meaningful Use. Technical assistance can improve credibility of EHR data underlying clinical quality measures, bolstering provider confidence in metrics.

GOAL 3: Individuals and their families access their clinical information and use it as a tool to improve their health and engage with their providers.

Individuals and their families or caregivers can partner with their providers when they are educated and engaged. Unfortunately, many individuals do not have access to and ownership of their complete health records, including treatments and goals. Further, individuals often have concerns about the privacy and security of their personal health information.

Individuals can also be empowered to provide some of their own clinical data using remote monitoring devices and new applications that allow them to engage with their health care teams remotely. For example, new chronic pain management applications for smart phones or tablets have patients estimate their pain levels on a regular basis, sending the patient-entered information to the care team for monitoring and immediate intervention when needed.

To reduce gaps in patient access to their health information:

- Individuals should have access to their complete health record, including treatments and goals in order to improve their understanding and engagement in their health care and outcomes.
- Individuals should have ways to provide important information into their health records, including clinical data and their preferences related to their care, such as end of life care and POLST forms.
- Individuals should have the capacity to facilitate care management by sharing data with their providers.
- Sufficient safeguards should be in place and be clearly communicated to patients so individuals have confidence in the privacy and security of their electronic health information.

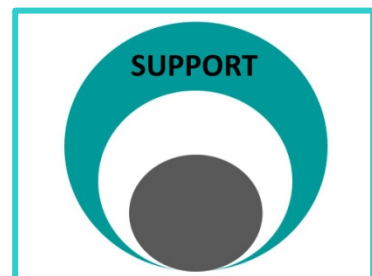
Personal Health Records improve patient engagement

Individuals with access to their personal health information are more empowered to engage in their care and well-being. This can mean better outcomes and lower costs.

Goal 3: Recommendations

The State will support community and organizational efforts by:

Promoting EHR adoption and Meaningful Use: The State will use levers, such as promoting the EHR Incentive Program, to encourage providers to make protected health information available to patients. Meaningful Use Stage 2 requires eligible providers to give patients secure, electronic access to their health information.



Leveraging national standards and federal EHR incentives: To inform and support stakeholders, the State will monitor national efforts and standards, the evolving personal health record market and direct-to-consumer health care.

Promoting statewide direct secure messaging: The State will engage in national discussions around extending Direct secure messaging to patients.

Providing guidance, information and technical assistance: The State will support efforts to make patient information available electronically by informing stakeholders, supporting initiatives, and seeking to advance Meaningful Use requirements for making information available to patients.

Assessing changing environments and convening stakeholders: The State will identify and disseminate best practices, and seek opportunities to explore promising approaches. As part of that effort, the State will engage individuals to identify opportunities, preferences and barriers around engaging in their health care via electronic interaction with their health information.

Creating Oregon's HIT-Optimized Health Care System

All Oregonians have a stake in achieving HIT-optimized health care, and making the vision a reality will require participation, investment and support from all of Oregon's health care partners. The Task Force made recommendations for what health plans, CCOs, community and organizational HIEs, health systems, providers and individuals can do to ensure that all health care delivered in Oregon is optimized by HIT.

To ensure providers have access to meaningful, timely, relevant and actionable patient information to coordinate and deliver "whole person" care:

- Health plans and CCOs support and encourage Meaningful Use of certified EHRs and participation in HIE. Health plans and CCOs align reporting requirements with Meaningful Use clinical quality measures and State efforts and further incentivize Meaningful Use.
- Providers and health systems have the technology capabilities and workflows to participate in care coordination, including:
 - Pursuing Meaningful Use of EHR technology (particularly for providers eligible for EHR incentive payments), and incorporating the use of technology into workflows.
 - Participating in HIE across organizational and technological boundaries via Direct secure messaging and community, organizational, and statewide HIE efforts.
 - Sharing information and engaging in care coordination efforts.
 - Including all members of the care team in coordination and sharing information, including physical, behavioral health, dental, long-term care and social services partners.
- Individuals and their families or caregivers expect that providers have electronic access to their patient information, inform their providers on where patient-generated information can be accessed (such as a personal health record), and seek to engage in their care and outcomes.

To ensure systems and policy makers use aggregated clinical data and metrics for quality improvement, population management and incentivizing health and prevention; to inform policy development and to provide transparency into the health and quality of care in the state:

- Health plans and CCOs align quality reporting requirements with a core common set of clinical quality metrics relying on the EHR Incentive Program Meaningful Use metrics and specifications. They also invest in technology and processes to use aggregated clinical metrics data for effective population management, performance monitoring and creation of new payment models to reward outcomes rather than old models of paying for visits.
- Health plans, CCOs, health systems and providers work together to ensure the credibility and quality of clinical data generated from EHRs.
- Providers and health systems upgrade to meet 2014 EHR certification requirements that enable EHRs to produce clinical quality metrics, generate and report on clinical metrics data, implement workflow changes that may be needed to ensure quality of data, and make practice changes and target patients for interventions based on metrics and analysis of practice performance.

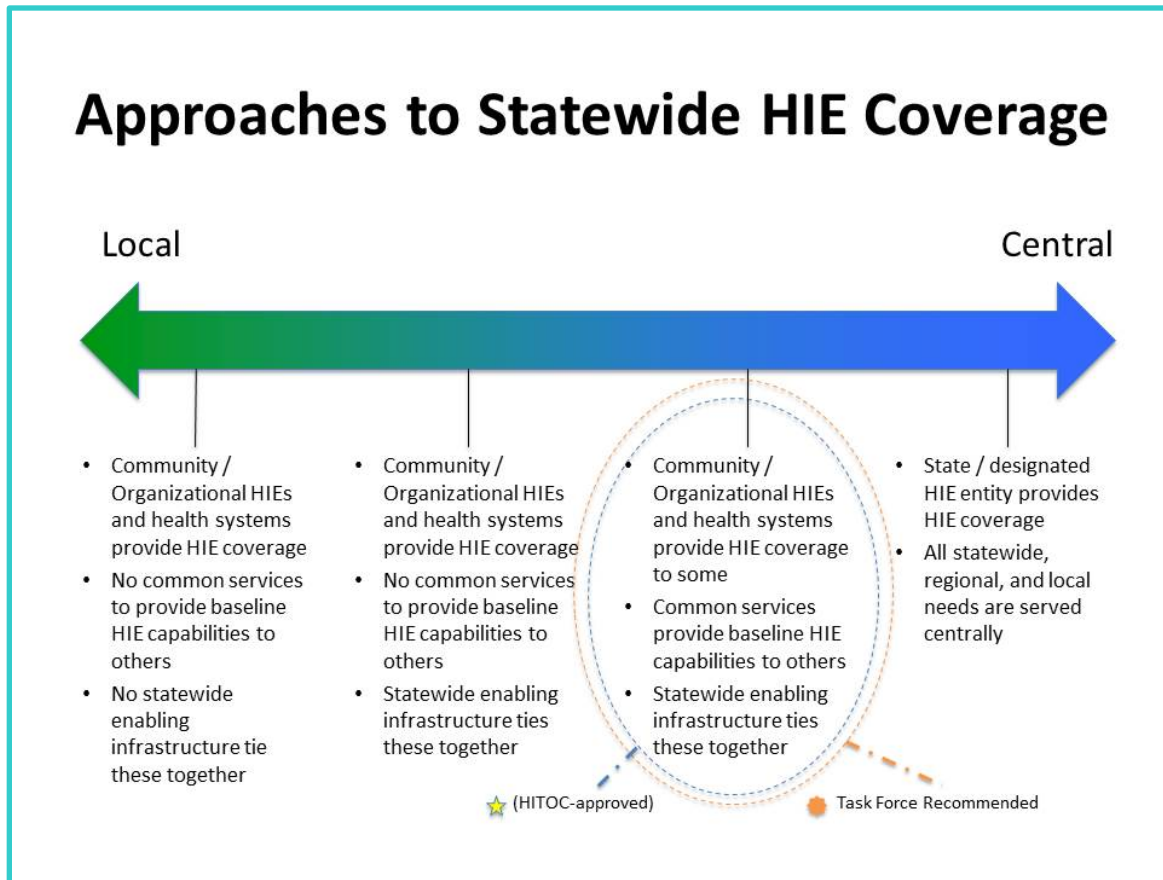
To ensure individuals and their families access their clinical information and use it as a tool to improve their health and engage with their providers:

- Health plans, CCOs, and community HIEs encourage and empower patient/provider relationships via electronic interaction with health information.
- Providers and health systems educate, engage and empower individuals through access to their health information as the providers have the primary relationship with individuals (and often their families).

IV. Technology and Services Recommendations

Overall Approach to Statewide Coverage

The Task Force considered several options for the State’s overall approach to delivering statewide HIT/HIE coverage. These options are best viewed across a spectrum, with an entirely private model with no statewide support representing one extreme, and an entirely public model where the State provides all HIT/HIE services as the other. In light of past recommendations, current developments and Oregon’s HIT/HIE environment, the Task Force decided to continue with an approach originally championed by HITOC in 2011.



This approach strikes a balance between the two extremes, and relies on the following six key elements: 1) community and organizational HIT/HIE efforts, 2) statewide Direct secure messaging, 3) CareAccord®, 4) new statewide enabling infrastructure services, 5) State aggregation of core clinical metrics data for Medicaid purposes and 6) technical assistance to providers to support EHR adoption and Meaningful Use.

1. Community and organizational HIE efforts

Various local efforts have emerged to offer HIE solutions. See Appendix B for more background on Oregon’s HIT/HIE environment. Oregon has four community health information exchange organizations (HIEs) and many larger health systems have commercial HIE capabilities. These community HIEs and organizational HIEs may use various standards to connect their members internally, ranging from

industry standards (such as Integrating the Healthcare Enterprise (IHE) standards) to proprietary vendor solutions.

In 2014, providers seeking EHR incentive payments will need to upgrade to EHRs certified to 2014 standards, including the capacity to electronically transmit information using Direct secure messaging. Direct secure messaging vendors (Health Information Service Providers (HISPs)) can offer numerous ways for their members to interact with their services, including web portals and integration into their members' EHRs.

2. Statewide Direct Secure Messaging

Many Oregon providers will soon have the ability to share key health information electronically across organizational and technological boundaries, with the increased use of Direct secure messaging. As Oregon providers increasingly work together to coordinate care for Oregonians, there is an increased need to simply send the right patient information to the right place in time to make a difference in care.

Direct secure messaging provides a HIPAA-compliant way to encrypt and send any attachment of patient information electronically, for example, shared care plans, patient histories and more sophisticated attachments such as x-rays and echocardiograms. As electronic health records (EHRs) evolve in 2014 to meet EHR incentive program requirements, Direct secure messaging will be a core service within each certified EHR and national standards will support interoperability between Direct secure messaging providers (Health Information Service Providers, or HISPs).

Other important elements of Direct secure messaging include:

- **Provider directories:** Direct secure messaging assumes that the person sending a message has the Direct address of the person they are sending to. In many cases, that is not the case. To facilitate Direct secure messaging, providers may need to look up or query to find the Direct addresses of the entities and providers they wish to send information to. Some EHRs and HISPs are adding interoperable, standards-based internal provider listings that greatly facilitate this provider look up capability.
- **HISPs and trust communities:** Although each EHR may have Direct secure messaging available in 2014, it will be critical for health systems, hospitals and providers to ensure that their HISPs meet national standards and are interoperable with other HISPs. Selecting a HISP that is a member in applicable trust communities (the two leading, national trust communities are the National Association for Trusted Exchange (NATE) and DirectTrust) will enable parties to more easily exchange with their partners and broader nationwide networks without having to negotiate distinct relationships.

3. CareAccord®: Core baseline services

The vision for the CareAccord® Program, which includes Direct secure messaging, is to provide access to statewide HIE. Providers participating in community or organizational HIEs and providers who have Direct secure messaging (HISP) services integrated within their 2014 certified EHRs can engage in statewide HIE through accessing enabling infrastructure services that connects their local HIE or HISP to others in the state.

For other providers--such as providers in regions with no community HIE, those who have not upgraded to 2014 certified EHR technology, and others who are unlikely to use 2014-certified EHRs, such as long

term care, behavioral health and social service providers and care coordinators--the CareAccord® Program offers Direct secure messaging. In addition, the CareAccord® Program will provide other core baseline services statewide. This ensures no member of a care team is disenfranchised and unable to participate in electronic care coordination and exchange.

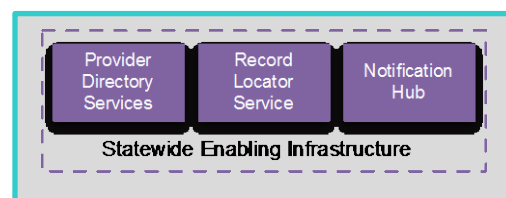
CareAccord® core baseline services include:

- Currently CareAccord® provides Direct secure messaging (HISP) via a web portal. Additional services for CareAccord® subscribers without EHRs or other technology will include:
 - Fillable forms or data entry templates to support common use cases (e.g., transition of care records from long term care facilities). These templates or forms can facilitate the ability of providers receiving the information to ingest the data into the patient record in the provider's EHR.
 - Translation for computer-generated attachments to make them human-readable.
- For Phase 1.5, the Task Force recommended that integration of Direct secure messaging into EHRs and provider workflows would be essential to achieving the value of sharing health information. The Task Force also recommended consideration for integration of Direct secure messaging into other systems in use by providers (such as social services case management systems).
- Access to CareAccord® statewide enabling infrastructure services to facilitate exchange within and outside of CareAccord®.
- Potential query capabilities in Phase 2.0, depending on the EHR incentive program Meaningful Use Stage 3 requirements and evolving national standards.

In terms of trust communities, CareAccord® is the first state health information exchange in the nation to receive Direct Trusted Agent Accreditation. The Direct Trusted Agent Accreditation Program measures privacy, security, confidentiality and best practices with Direct protocol, and enables CareAccord® subscribers to securely send Direct secure messages to any subscriber in the DirectTrust trust community. CareAccord® is also a member of NATE (National Association of Trusted Exchange), which currently enables exchange between CareAccord® subscribers and providers in California and Alaska.

4. Statewide enabling infrastructure services

Statewide enabling infrastructure services provide core services that facilitate efficient use of HIT and information exchange across organizational boundaries. Ensuring appropriate funding, governance and participation in the statewide enabling infrastructure services will be critical for the success of these efforts. Practices, providers, hospitals, health systems, health plans, and others may directly participate in the State HIE without going through community or organizational HIEs or HISPs if they have the right technology. Following are the HIT Task Force recommended enabling infrastructure services.



Provider directory services: Provider directory services are critical for several uses: health information exchange, analytics, State program operations, health plan and health system operations, statewide common credentialing efforts underway at OHA, public health program operations, and others. Oregon's provider directory will be developed in phases, starting with key use cases (health information exchange, common credentialing, etc.) and expanding over time to serve other use cases. The provider

directory will include all types of providers and organizations that participate in these use cases, not just physical health providers and hospitals.

The provider directory services, which will be introduced in Phase 1.5 and enhanced in Phase 2.0 as needed to support emerging query standards and the evolution of provider directory standards, will:

- Enable lookup of parties (e.g., organizations and individuals) and their associated information (e.g., name, postal address, phone number, electronic service address for HIE purposes) using identifying characteristics. The provider directory would identify key affiliations, such as individual provider affiliation to their practices, health systems, health plans, etc.
- Act as a “router,” and a single lookup point, distributing lookup requests to provider directories at community and organizational HIEs and health systems and returning aggregated responses.
- May include core provider data in a central database (e.g., static data such as name, demographics, etc.).

Common credentialing: OHA is mandated to establish a common credentialing database and program by January 2016, which will provide credentialing organizations (hospitals, health systems, health plans, etc.) access to commonly held information necessary to credential all health care practitioners in the state. Common credentialing and provider directory efforts have many opportunities for synergies, and staff are working to ensure the two efforts align where possible. For example, common credentialing may leverage some of the statewide provider directory’s technology infrastructure, and common credentialing efforts can provide an excellent data source for the provider directory.

Additional considerations from the HIT Task Force: Provider directory services are integral to many functions beyond HIE. Keeping the provider information up to date is both important and challenging. Strategies that align providers’ self-interest to keep the information updated would be ideal, such as leveraging common credentialing processes.

Patient attribution, record locator service and query: Like provider directory services, a patient attribution service that includes provider affiliation services is critical for several uses: health information exchange, analytics, State program operations, health plan and health system operations, and others. Oregon’s patient/provider attribution services would be developed in phases, starting with key use cases (e.g., hospital notifications) and expanding over time to serve other use cases.

Patient/provider attribution provides base level data that can be used for record location when matching patient records from different data sources. Record location services would not include the development of a universal patient identifier, but rely on the state-of-the-art matching algorithms to match patient records from different data sources based on key demographic information.

Patient/provider attribution, record locator and query enabling services, which will be offered in Phase 1.5 and expanded in Phase 2.0, will offer the following:

- When given demographics and information related to a patient, potential sources of information for that patient, along with each source’s relationship to that patient (if known), are returned.
- Phase 1.5’s notification hub will have the (internal) ability to attribute patients to providers via information supplied by notification subscribers. This source data provides an incrementally developed patient/provider attribution service, which can be leveraged for health information exchange and analytics purposes.

- For Phase 2.0, facilitating statewide query capabilities will be important. Before investing in more robust statewide infrastructure, it will be critical to account for evolving national standards around query, including requirements for the Meaningful Use Stage 3.
- Contingent upon the evolving federal standards, Oregon’s enabling infrastructure services may include a record locator service in Phase 2.0. This service would build on and decouple the patient/provider attribution function from the notification hub while also providing data location capabilities to facilitate push and query-based exchange.

Additional considerations from the HIT Task Force: Although patient matching algorithms have come a long way, often a human decision is needed to make a sufficient match. This work can be complex and will likely evolve over time. OHA should explore leveraging other potential sources of patient/provider affiliation data.

Notification hub: The notification hub, which will be initially developed in Phase 1.5 and incrementally enhanced in Phase 2.0 as needed to support emerging notification standards and statewide alerting needs, will include the following:

- The hub will accept notifications and alerts and relay them to applicable parties statewide. For example, the hub receives daily information feeds from a hospital and sends notifications to the clinic or health plan affiliated with each individual seen in the hospital.
- Beyond those related to hospital admission/discharge, potential notifications and alerts to be considered for Phase 2.0 include:
 - Notifications to care teams when individuals transition into/between long term care settings. Nursing facilities could notify hospital discharge staff when beds become available, and hospital discharge staff could notify nursing facilities when a bed is needed.
 - Alerts to pediatricians and/or early education services providers when developmental screenings have occurred.
 - Notifications to health plans, CCOs, or care teams when individuals are released from jail.

Emergency Department Information Exchange (EDIE): OHA is participating in a public/private collaboration to bring the Emergency Department Information Exchange (EDIE) technology to all hospitals in Oregon in 2014. All 59 hospitals in Oregon have agreed to implement EDIE by November 1, 2014. The EDIE project will provide emergency departments with key care summaries for patients who have high utilization of emergency department services, with the goal of reducing unnecessary hospital services and improving outcomes. Statewide hospital notifications augment the work under EDIE, by notifying providers, health plans, and care coordinators when their members or patients are seen in any hospital in the State.

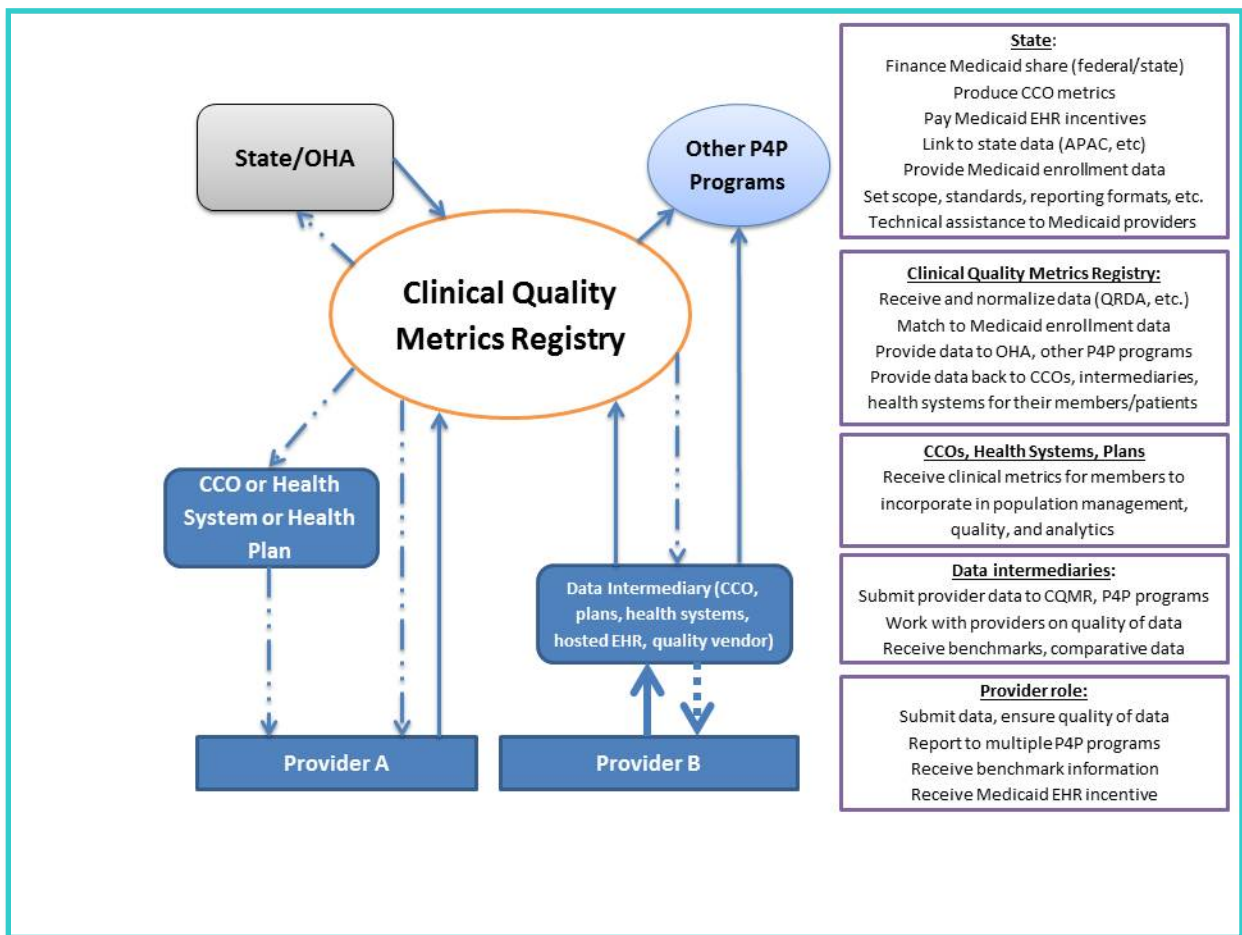
Additional considerations from HIT Task Force:

- Careful planning is needed around how statewide notifications services would interact with community or organizational notification efforts currently underway, with a focus on supporting those notifications by adding new data sources (e.g., hospital notifications from other regions).
- Close attention must also be paid to the provider/user’s experience and to avoiding “alert fatigue” and redundant alerts.
- Consideration must be given to how best to leverage the work underway with the EDIE project, as EDIE will be implemented in nearly all hospitals in the state. For example, EDIE may be

extensible to link to or provide further notifications services, which could minimize burden on hospitals in reworking interfaces for inpatient notifications. Also, it will be important to ensure that EDIE interfaces with CareAccord® and the statewide enabling infrastructure services.

5. State aggregation of clinical quality metrics for Medicaid purposes

OHA is planning to develop the ability to aggregate key clinical quality data for the Medicaid program, develop benchmarks and other quality improvement reporting, and calculate clinical quality metrics for paying quality incentives to CCOs and Medicaid EHR incentive payments to providers. Particular focus is on the three clinical CCO incentive metrics that are also EHR incentive program metrics: diabetes poor A1c control, hypertension, and depression screening. CCOs can leverage State infrastructure to meet reporting requirements to OHA and receive collected clinical data for their members for analytics/quality improvement. The registry could receive data either directly from providers (see Provider A example below) or from a data intermediary such as a CCO, health plan, system, quality vendor, or the like (see Provider B example below). Once developed for Medicaid, the registry could be expanded to other uses, as described on pages 24 of this document, under “Clinical metrics data for Medicaid”.



6. Technical assistance to Medicaid providers

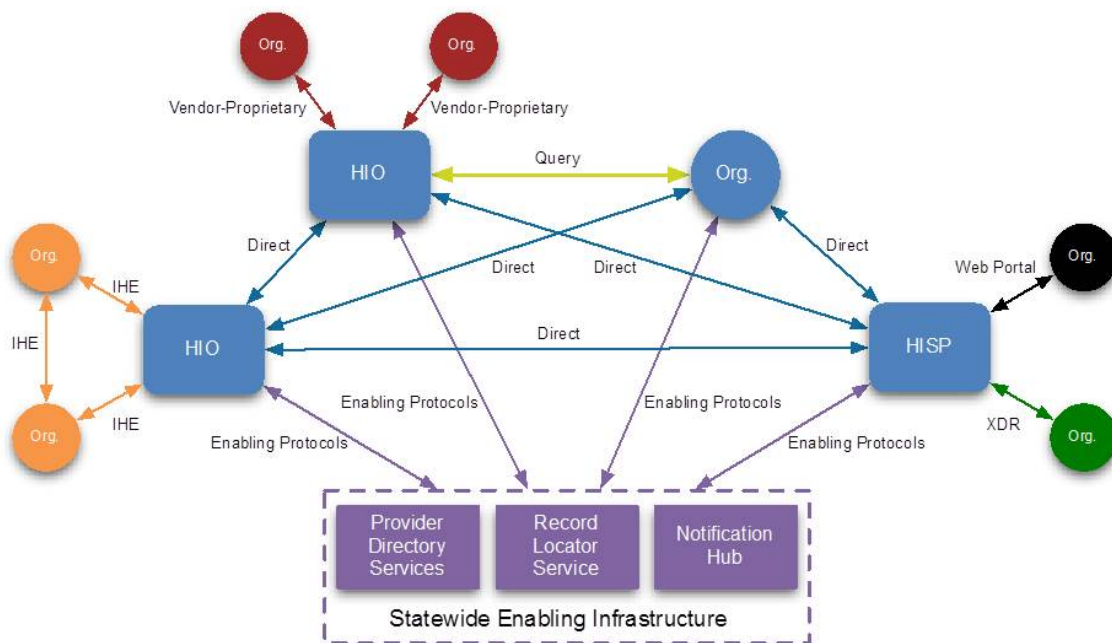
OHA has obtained Medicaid funding to provide technical assistance to Medicaid providers to support them in the Meaningful Use of their EHRs. Technical assistance will help providers to effectively use their EHR technology and realize the benefits of their investments in EHRs. By helping providers use workflows that support accurate entry of information into their EHRs, technical assistance increases the reliability of clinical data extracted from EHRs. Improving the credibility of EHR data, in turn, bolsters provider confidence in clinical quality metrics. Technical assistance also supports the aim of promoting EHR adoption and Meaningful Use, and will help Medicaid providers meet requirements to qualify for EHR incentive payments. In particular, this assistance can help further goals of achieving statewide Direct secure messaging by assisting providers seeking to meet Meaningful Use Stage 2 requirements related to using Direct secure messaging. Technical assistance contracts are anticipated to be in place in 2014, contingent upon CMS approval.

Oregon's Long-Term HIT/HIE Landscape: Putting the elements together

The diagram below attempts to illustrate the conceptual HIT/HIE landscape, incorporating four of the elements described above:

- Community and organizational HIEs and health systems provide HIT and HIE services to some providers.
- Statewide Direct secure messaging provides a foundation for sharing information across organizations and differing technologies. This is accomplished by a combination of efforts by providers, community and organizational HIEs, and State-level efforts. HISP participation in common trust communities is key to this interoperability, and is not reflected in the diagram below.
- State-sponsored CareAccord® provides common services as baseline HIE capabilities to those without access to community or organizational HIEs (in the diagram below, CareAccord® is represented as a HISP). Subscribers receive Direct secure messaging and access to statewide enabling infrastructure services through CareAccord®.
- Statewide enabling infrastructure ties together local efforts where they exist and provides enabling HIE and HIT functions (such as identifying providers or locating patient records) across community and organizational HIEs, health systems, providers and other entities. Enabling infrastructure also includes statewide notifications of hospital events. (Note: "Enabling Protocols" is a convenient way to refer to the set of mechanisms supported by each piece of enabling infrastructure services for interactions.)

Oregon's Long-Term HIT/HIE Landscape



Technology implementation considerations and principles:

The Task Force offered several principles to guide the State as it continues to implement HIT/HIE technology and services:

- HIT/HIE infrastructure and services must be interoperable. Interoperability will be reached through leveraging national standards and initiatives, including anticipating where national standards are evolving to be prepared for the future.
- Don't let "perfect" be the enemy of "good."
- Behavioral health, dental, long-term care and social services professionals must be included in the HIT/HIE environment.
- State communication and outreach must help providers understand the vision of HIT-optimized health care and participate in HIT/HIE services in meaningful ways.
- State-level services must have sufficient technical support to effectively implement and support delivery of services.
- The integration of the HIT/HIE enabling infrastructure services into existing technology and workflows directly correlates to the use and value of those services, and can greatly impact the business case for funding these services.

Phasing: Near-Term Development (Phase 1.5) and Longer Term (Phase 2.0)

As noted in the sections above, statewide HIT/HIE infrastructure is expected to be developed in phases. Current efforts (Phase 1) include CareAccord® Direct secure messaging web-portal based services. For 2014-2015, Oregon has State funding in place to leverage federal funding and develop six elements (“Phase 1.5”) described below. In 2015 and beyond, Oregon will seek additional funding for expansion of Phase 1.5 elements and potential addition of a record locator service (“Phase 2.0”).

In collaboration with and support of all 16 CCOS, OHA is accelerating development of core baseline services and enabling infrastructure services in 2014-2015 (“Phase 1.5”). The near-term statewide HIT/HIE priority elements were identified through the stakeholder process, including the listening sessions, conversations with the HITOC, and discussions with CCOs, health plans, providers and interested parties. The HIT Task Force incorporated Phase 1.5 efforts into its technology recommendations.

Oregon’s HIT/HIE Roadmap to Support Health System Transformation



V. Governance, Policy and Operations Recommendations

Background: HIT/HIE Governance

In approaching the issue of governance for statewide HIT/HIE services, the Task Force considered the common models of HIT/HIE governance, HITOC's 2010 governance recommendations, Oregon's current HIT/HIE environment, and themes from other state HIT/HIE governance models.

HIT/HIE Governance Models

There are three primary models for the governance of statewide HIT/HIE services:⁴

- Government-led: The government is directly responsible for the provision of HIT/HIE infrastructure as well as overseeing its use.
- Public Utility with Government Oversight: The private sector provides HIT/HIE infrastructure while the government provides regulatory oversight.
- Private Sector-led with Government Participation: The government collaborates and advises as a stakeholder in the private-sector provision of HIT/HIE infrastructure.

2010 HITOC Governance Recommendations

In 2010, a strategy work group convened by HITOC determined that Oregon's governance model should take a phased approach to developing a public utility with government oversight. In the first phase, the State would support existing community and organizational HIT/HIE efforts by providing HIE policies, requirements, standards and agreements. The work group anticipated that a financial sustainability plan and necessary legislation would allow for a second phase in which a state-designated entity would be created. The designated entity could serve as the central contracting point for community and organizational HIT/HIE efforts and act as the accrediting body by implementing the policies developed in the first phase.

Oregon's Current HIT/HIE Environment

Since 2010, Oregon's HIT/HIE environment has changed. Some local HIT/HIE efforts have come and gone, and the State has begun to provide HIT/HIE services to support health care transformation. Currently the State is responsible to:

- Provide public accountability and transparency into State efforts, including the CareAccord® program and the Medicaid EHR Incentive Program.
- Operate the CareAccord® program working with a contracted vendor. OHA chose this approach to fully utilize Oregon's federal HIE funding (from the American Recovery and Reinvestment Act (ARRA), Health Information Technology for Economic and Clinical Health (HITECH) Act State HIE Cooperative Agreement) through the Office of the National Coordinator for HIT (ONC). This approach also maximized the potential of Medicaid funding because the State retained

⁴ National Governors Association Center for Best Practices, "Health Information Technology (HIT) Governance & Coordination." <http://www.nga.org/cms/home/nga-center-for-best-practices/center-divisions/center-issues/page-health-issues/col2-content/main-content-list/health-information-technology-hi.html>.

operational authority and enhanced coordination between the HIE efforts and the Medicaid EHR incentive program.

- Convene the CCO HIT Advisory Group (HITAG) to guide the use of State funds in the implementation of Phase 1.5 services (started in October 2013).
- Establish, document and operationalize State policies related to HIT/HIE within legal parameters, including HIPAA and other federal regulatory requirements, such as 42 CFR Part 2.
- Manage the relationship with federal partners, including ONC for the ONC State HIE Cooperative Agreement and CMS for Medicaid HITECH Act funding and programs including the Medicaid EHR incentive program. The State also is responsible to ensure compliance with federal program requirements.

Other HIT/HIE Governance Considerations

In deliberating about Oregon’s HIT/HIE governance model, the Task Force considered common themes across governance models from other states and the 2010 HITOC recommendations. These themes informed the Task Force’s recommendations.

- In any governance model selected, the State will have some role in the oversight structure. At a minimum, the State will have an ongoing role in:
 - HIT/HIE strategy development
 - Contract/fiduciary oversight
 - Board/advisory council membership – in some states, government participation is in an ex-officio capacity
- The selection of a governance model affects the options for financing. To achieve stability, most governance models enable access to several sources of funding:
 - Initial funding via ONC State HIE Cooperative Agreement
 - Moving to subscription/membership fees,
 - Leveraging state allocations, and/or federal Medicaid funding paired with private funding.

Recommendations for Governance of HIT/HIE services

Principles and Characteristics

The HIT Task Force considered the following common principles and characteristics that HIT/HIE governance structures should incorporate regardless of organizational structure. These principles are described by the Markle Foundation as part of the “Markle Connecting for Health Common Framework for Private and Secure Health Information Exchange.”⁵

- **“Participation:** Regular and intentional public outreach and deliberations are an important aspect of legitimate decision-making and governance processes. Policies and procedures developed through a collaborative process that seeks early input, promotes broad participation, and provides public comment periods have a greater likelihood of being understood and supported by those they are designed to serve.”
- **“Transparency and Openness:** It is also important to provide clear explanations for the rationale behind final policies and decisions. This includes documenting the processes and decisions of any workgroups or subgroups and addressing comments received by the public. Transparency

⁵ <http://www.markle.org/health/markle-common-framework/connecting-professionals/hie-governance>

should be a goal in other administrative respects, including how operations are financially supported and sustained.”

- **“Representation:** Meaningful engagement and balanced representation of a wide variety of participants, including patients and consumers, is critical to the success of health information sharing efforts. Because the goal of safe, secure and appropriate health information sharing depends on the buy-in and participation of a wide variety of health care system participants, that same range of engagement and input is required for governance to succeed.”
- **“Effectiveness:** A successful governance model will create the structure and processes needed to support effective and efficient decision-making. To operate effectively, governance efforts need adequate resources and staff who are knowledgeable, dedicated and able to execute the policies and procedures. No single governance model works for all information sharing efforts, but rather an array of tools and processes that can be used by different entities and/or participants.”
- **“Flexibility:** Policies and procedures need to be flexible. Governance models should keep members informed and enable them to react quickly to a changing environment. ... Governance models should also accommodate constant and rapid innovations in technology. Flexibility will allow an entity to incorporate and maximize use of these technological innovations, and thus governance policies should remain technology-neutral.”
- **“Well-defined and bounded mission:** A plainly articulated vision that clearly sets forth the value case for information sharing, as well as a well-defined scope of authority, will help ensure that the governance processes are timely, relevant and appropriate. The scope should be limited to the necessary policies and procedures that must be commonly defined and agreed upon to achieve these two high-level objectives. Clearly articulating a high level mission is critical for prioritizing strategic objectives and addressing the issues appropriately as they emerge over time.”
- **“Accountability:** Accountability is a vital element of any governance process and should include procedures for the submission and handling of complaints related to policy violations. In addition, a clear and public dispute resolution process should be developed. ... Health information sharing efforts have a range of accountability and enforcement mechanisms to choose from to best fit their particular objectives and circumstances, but the existence of each should be shared publicly.”

State and Stakeholder Roles in Governance, Policy and Operations

After careful consideration, the Task Force proposed a governance model similar to the one conceived in HITOC’s 2010 recommendations. In this proposed governance structure, the State retains the following roles:

- Statewide direction and oversight
- Accountability and transparency
- Statewide standards and policies
- Policy implementation, including compliance with federal requirements (Medicaid, HIPAA, etc.)
- Meaningful ongoing engagement with stakeholders, including convening, policy and legal guidance and technical assistance.

While the State would retain those roles, an HIT designated entity (see “HIT Designated Entity Role” below) would transition into the operations role. To ensure that the State could step in if needed, some HIT Task Force members recommended fail-safe measures, such as provisions to allow the State to reset

the board of directors and/or to allow the State to exercise a direct relationship with the HIE vendors involved in the infrastructure and support, if the HIT Designated Entity does not fulfill its role.

Stakeholders would continue to provide input and feedback on statewide direction, standards and policies, and the direction and effectiveness of HIT/HIE programs and enabling infrastructure services. The HIT designated entity would be accountable to the State to meet its contracted and designated obligations, as well as accountable to its oversight board or steering committee.

HIT Designated Entity Role

In Phase 2.0, OHA intends to create a new entity or contract with an existing entity. The HIT designated entity would be responsible to implement policies and requirements developed by the State. The entity would:

- Become the central contracting point for data use and business associate agreements with community and organizational HIEs and data providers.
- Contract with technology vendors to implement and operate statewide HIT/HIE enabling infrastructure services.
- Coordinate with and support local efforts via HIE programs.

The Task Force considered the following options for the type of HIT designated entity, but did not recommend a specific type:

- Contracted non-profit entity, under the governance of a steering committee or board of directors
- Public corporation, established in legislation, with a board of directors
- Semi-independent entity (Oregon Patient Safety Commission is an example of this kind of entity)
- Special purpose non-profit (e.g., SAIF).

Regardless of the form it takes, the Task Force determined that the HIT designated entity should be:

- Mission focused on statewide HIT/HIE objectives, without conflicting business objectives
- Trusted and objective
- Responsive, with stable leadership and financing
- Transparent and accountable to State oversight
- Experienced

State HIT/HIE Compatibility Program

Under this proposed model, the Task Force determined that the ultimate responsibility for accountability for statewide HIT/HIE resides with the State. To ensure interoperability and the security of information exchanged through statewide services and to protect privacy, the Task Force recommended that the State should establish a new HIT/HIE compatibility program. Any entities seeking to participate in State enabling infrastructure services would need to meet compatibility program expectations. Community and organizational HIE efforts that meet the criteria will have increased credibility in their communities and may be able to attract providers and health system participants.

The purpose of an HIT/HIE compatibility program is to build public trust, accountability and transparency in statewide services, by:

- Ensuring interoperability to improve the use and value of information exchanged, while enabling seamless use of State services that rely on data and technology residing in multiple organizations.
- Ensuring privacy and security practices are in place.
- Providing quality assurance and recourse.

Key features of a State HIT/HIE compatibility program include:

- Core criteria and standards must be met as a condition of participation in statewide services. Entities could operate HIE services in Oregon without meeting the criteria, but would not be able to participate in statewide services. Thus, the criteria are not a mandate across the state, but a condition of voluntary participation. These criteria may be required through participation agreements, although the State may choose to use other more formal mechanisms to specify criteria (law, regulation).
- Any entity that participates directly in statewide services would need to meet compatibility criteria. Entities could include community HIEs, organizational HIEs, hosted EHRs, CCOs, health plans, HISPs, CareAccord®, etc. Entities that participate in statewide services indirectly would need to meet the participation criteria of the community or organizational HIE, but not necessarily the State-level criteria.
- The compatibility program could be carried out in a number of different ways. For example, the program could require documentation and site visits to “accredit” entities, or entities could attest to meeting standards and the State could reserve the right to validate the accuracy of the information attested. Also, the State could delegate the program to an external neutral entity or could retain the program in-house.
- In addition, the State may use other accountability levers to drive toward compliance. For example, using State contracts with providers, CCOs or health plans, the State may encourage or require participation in statewide services.
- The compatibility criteria and program will be developed during Phase 1.5 so they are in place when initial enabling infrastructure services are implemented.
- The compatibility program would reflect federal standards for interoperability, privacy and security of personal health information.

Phasing of Governance/Operations/Policy



VI. Finance Recommendations

Background: Current Financing for State HIT/HIE Services and Federal Funding for Medicaid Services

Statewide HIT/HIE infrastructure is essential for supporting health care transformation efforts, and requires significant financial investment and ongoing financial sustainability. Knowing this, the Task Force reviewed the State's current financing model and available federal funding for Medicaid services when considering the appropriate future financing model for statewide HIT/HIE services.

Federal Funding for Medicaid Services

One potential funding source for Phase 1.5 and 2.0 proposed HIT/HIE infrastructure relates to the Medicaid program. For HIT/HIE infrastructure that serves Medicaid purposes, the State can request 90% federal Medicaid funds to match 10% State funds to cover the "Medicaid share" of implementation costs. (The 90% federal funds combined with 10% State funds often are referred to as "90-10" funds.) For example, the clinical quality metrics registry is needed to collect electronic clinical quality measures for the Medicaid EHR Incentive Program and thus eligible for Medicaid funding. If, over time, the registry is used for purposes beyond Medicaid, private dollars would need to be used to cover costs attributable to private use.

The source for the 10% State matching funds must also meet specified federal Medicaid requirements. In addition, implementation efforts must comply with federal Medicaid procurement requirements and the Centers for Medicare and Medicaid Services (CMS) "Seven Conditions and Standards" for Medicaid funding.⁶ In formulating funding requests, OHA works closely with CMS to ensure compliance with all applicable requirements.

There are two potentially applicable funding streams through Medicaid. Each provides different opportunities and limitations for federal match funding.

- **Medicaid Management Information System (MMIS) Funding:** Most often thought about in terms of the funding for the State's Medicaid claims processing system, MMIS funds can also provide 90-10 funds for the initial build of IT infrastructure necessary for the administration of the Medicaid program and 75-25 funds for ongoing operations. MMIS-funded projects must be built for State Medicaid purposes, meaning the services will be used for the ongoing operations of Oregon's Medicaid program and be under the control of the State. When the project provides structural support for other State programs and private entities beyond Medicaid, then costs must be allocated between Medicaid and non-Medicaid users.
- **Medicaid HIT/HIE (ARRA-HITECH) Funding:** Enacted as part of the American Recovery and Reinvestment Act (ARRA) of 2009, the Health Information Technology for Economic and Clinical Health (HITECH) Act provides Medicaid 90-10 funds for technology, people and processes for the initial build of certain Medicaid HIT/HIE projects not eligible for MMIS funding. There is no Medicaid HIT/HIE federal funding for ongoing operations. Funding for design, development and

⁶ More information on the Seven Conditions and Standards is available from CMS <http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Data-and-Systems/Downloads/EFR-Seven-Conditions-and-Standards.pdf>

implementation funding ends in 2021. These HIT/HIE services are focused on the EHR/HIE promotion initiatives, including technology, people and processes that are necessary to encourage the adoption and Meaningful Use of certified EHR technology. CMS will not contribute Medicaid HIT/HIE funding for projects that could be funded by MMIS funds instead, and non-Medicaid users must pay their “fair share” for use of the services. Medicaid HIT/HIE funding is potentially available for statewide HIT/HIE services.

Financing for Phase 1.5 Development and EDIE Implementation

Financing for State HIE ongoing operations of CareAccord® and near-term development of Phase 1.5 services comes primarily from federal Medicaid matching dollars and State general fund investment. The State has had initial success collaborating with private investors to implement EDIE. Moving forward, continuing to identify the value for private investors and further developing these kinds of partnerships will be essential to create a consistent, long-term financing model.

- CareAccord® statewide Direct secure messaging: CareAccord® services were financed through February 2014 using federal funding from the Office of the National Coordinator for HIT (ONC) through Oregon’s State HIE Cooperative Agreement. A combination of federal Medicaid and State general funding has been secured for ongoing operations. At present, no private funds are used or fees charged for CareAccord®; the State would need legislative authority to set and collect fees.
- Phase 1.5 core baselines and enabling infrastructure services: Initial investment will come from federal Medicaid MMIS or Medicaid HIT/HIE funds (90-10 funding), with the State match coming from a \$3 million State general fund allocation. The State is currently seeking other partners to participate in fair share financing to extend services beyond Medicaid.
- Emergency Department Information Exchange (EDIE): The State partnered with the Oregon Health Leadership Council (OHLC), the Oregon Association of Hospitals and Health Systems (OAHHS), the Oregon Chapter of the American College of Emergency Room Physicians and others to implement the privately-led EDIE initiative. The State contributed a one-time, non-Medicaid investment (using Centers for Medicaid & Medicaid Innovation, State Innovation Model grant funds) to subsidize about half of the first year’s costs for implementing EDIE with the condition that the vast majority of hospitals participate. Ultimately, all of Oregon’s 59 hospitals agreed to implement EDIE by November 2014, and will receive the first year of the subscription service subsidized by OHA, OHLC and OHLC’s member plans. As of April 2014, the EDIE governing body and OHLC is considering a shared “utility” model to continue funding for the second and ongoing years of this service. This shared funding model would share costs between health plans, CCOs, and hospitals based on an entity’s relative size, such as membership share or revenue.

Challenges

The Task Force identified challenges the State faces in creating sustainable financing for statewide HIT/HIE services:

- The value of HIT/HIE services does not always accrue immediately. To gather investors, HIT/HIE services must either deliver value to stakeholders directly or there must be a promise of value later.
- HIE efforts in other states have failed due to unsustainable financing, especially when federal funding ended. In some cases, private financing partners, such as health plans, have not seen

much return on their investments in statewide HIT/HIE solutions. Financial commitments and support are paramount for the success of statewide HIT/HIE efforts, as well as leadership and political sustainability.

- Recurring income sources must be sufficient to sustain ongoing operations, which require revenue projections to align closely with demand and sufficient users to generate adequate operating income.
- Community HIEs face long-term financial uncertainty. Potential customers for community HIEs may be reluctant to invest for the reasons stated above. As statewide HIT/HIE services are implemented, consideration should be given to the impacts on sustainability for community HIEs.

Recommendations for Financing of Statewide HIT/HIE Services

Principles

The Task Force reviewed financing models from several states and past HITOC work, and compiled the following principles to inform Oregon's financing model for Phase 2.0 and forward.

- Ongoing sustainable financing for statewide services is dependent on broad-based support.
- Those who benefit from the statewide services should participate in funding.
- Services that support interoperability and provide key infrastructure should receive priority.
- Fee models should encourage use and maximize user value.
- Avoid complexity and unnecessary costs. Costs for HIT/HIE services are overhead to providing direct care to patients.
- Medicaid funding should be appropriately utilized (e.g., considering HITECH Act funds available for planning and implementation costs but cannot cover ongoing operations).
- Build small initially and demonstrate results to build support for financial partnerships. Keep technology scope small and incremental, focusing on high-value, foundational elements. Developing financing partners will be easier when costs are low and value is high. The ultimate financing model may depend largely on the size of the costs (i.e., partners may be willing to risk investment when costs are low).

Approach: Public/Private Partnership

The Task Force recommended that the most likely path to a sustainable financing model is a public/private partnership. The Task Force recommended the following approach to funding:

- Public/private financing models should evolve as stakeholders are engaged and see value. Oregon should remain open to potential financing partnerships and strategies. Financing models where those who benefit participate financially should be considered, such as:
 - A proportional funding model where some or all of the costs are split between stakeholders, including health plans, CCOs, community and organizational HIEs, health systems and the State, and where individual providers have minimal or no costs.
 - A subscription-based financing model where entities who participate in statewide services pay a subscription fee. Based on the statewide enabling infrastructure services technology model (see the Technology chapter), the entities participating directly in statewide services are community and organizational HIEs, health systems, hospitals, health plans, HISPs, providers not connecting through a community or organizational HIE, and other entities. Individual providers that are connected to a community or

organizational HIE or health care system would not directly pay into the statewide services. Subscription fees in other states are often proportional to the size of the organization (e.g., PMPM for health plans, number of beds for hospitals, etc.).

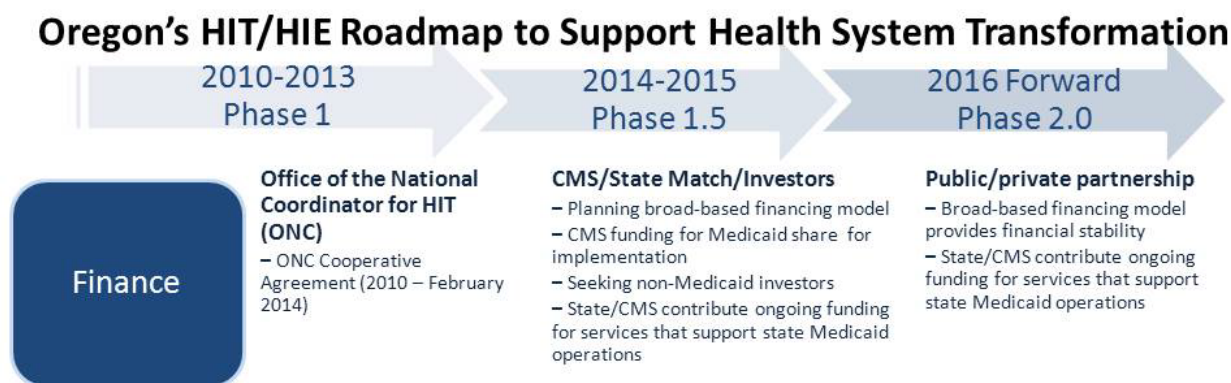
- State agencies using enabling infrastructure services should participate in funding their share of the costs.
- Transaction or per-use fees are ineffective for statewide enabling infrastructure services. Transaction and per-use fees could discourage utilization of State HIT/HIE resources and reduce user value.

Recommendations for Next Steps

The Task Force identified steps the State should take to pursue a public/private partnership to support sustainable financing:

- Seek CMS approval for the Medicaid share of implementation costs and Medicaid financing for ongoing operations for components used for Medicaid operations purposes.
- Seek non-Medicaid partners, including non-Medicaid state agencies and private entities who would benefit from HIT/HIE services, and reach out to communities and organizations engaging in HIT/HIE efforts. Build off successful partnerships such as EDIE and common credentialing.
- Work closely with CCOs to ensure they see the value of investments in statewide Phase 1.5 services.
- Define and seek legislative authority to set and charge fees for statewide enabling infrastructure services.

Phasing for Financing



VII. Conclusion

The work of creating HIT-optimized health care is not easy. As the many stakeholders who have contributed to this report have observed, challenges exist – from the burdens on providers struggling to meet multiple HIT changes in a short time, to the misaligned incentives still embedded in fee-for-service models, to the danger of unintended consequences such as “alert fatigue” resulting from an overwhelming volume of incoming information.

The benefits of achieving HIT-optimized health care, however, will be great. In some areas, these benefits already are beginning to be seen, as improved information sharing supports better care coordination and reduced costs. As the right HIT/HIE services become more ubiquitous and coordinated across Oregon, more Oregonians will experience the advantages of health care that is supported by timely access to patient information. Providers will find it easier to deliver whole person care. Systems will have the clinical outcomes data to enable quality improvement, population management and incentives for health promotion. Policymakers will be able to use clinical data for transparency and policy development. Oregonians and their families will access and use their own health information to be informed and engaged in their own health care.

Providers, systems and individuals all have a stake in making this vision a reality. This report outlines steps for the State, health plans, CCOs, community and organizational HIEs, health systems, providers and individuals. With all stakeholders working together, Oregon can achieve a transformed health care system that is optimized by HIT.

Appendix A: 2013 Stakeholder Listening Sessions and HIT Task Force

Listening Sessions

In Spring/Summer of 2013, OHA staff met with CCOs and other key stakeholders to identify HIT/HIE needs to support health system transformation efforts. These listening sessions included input on the appropriate role for the State and for statewide services in meeting the HIT/HIE needs.⁷

Health Plans	Hospitals/Health systems/Providers
<ul style="list-style-type: none"> • CareOregon • Kaiser Permanente • MODA (ODS) 	<ul style="list-style-type: none"> • PacificSource • Providence • Regence
	<ul style="list-style-type: none"> • Asante Health System • Health Futures CIO Council (Independent Hospitals) • Independent Providers • OHSU • Providence • Tuality • Salem Health
Medicaid Coordinated Care Organizations	Local/Community Health Information Exchanges:
<ul style="list-style-type: none"> • AllCare • Columbia Pacific CCO • Eastern Oregon CCO • FamilyCare • Health Share of Oregon • Intercommunity Health Network CCO • Jackson Care Connect • PacificSource Community Solutions CCO, Central Oregon Region 	<ul style="list-style-type: none"> • PacificSource Community Solutions CCO, Columbia Gorge Region • Primary Health of Josephine County • Trillium Community Health Plan • Umpqua Health Alliance • Western Oregon Advanced Health • Willamette Valley Community Health • Yamhill County Care Organization
	<ul style="list-style-type: none"> • Bay Area Community Informatics Agency (BACIA) • Central Oregon HIE • Gorge Health Connect • Jefferson HIE
	Other Key Partners
	<ul style="list-style-type: none"> • Cover Oregon • OCHIN • Oregon Health Leadership Council (OHLC) • Oregon Public Employees Benefit Board (PEBB) • Oregon's HIT Oversight Council (HITOC) • Oregon Health Care Quality Corporation
	Associations
	<ul style="list-style-type: none"> • Association of Oregon Community Mental Health Programs • Oregon Association of Hospitals and Health Systems • Oregon Medical Association • Oregon Primary Care Association

Health Information Technology Task Force

In July and August of 2013, the Oregon Health Authority (OHA) sought nominations for the Health Information Technology Task Force. OHA sought a diversity of stakeholders, including, but not limited to, health plans/payers, health systems, hospitals, providers, local HIE efforts, public sector, advocates/consumers and HITOC members. The Task Force met five times between September and November 2013, with some members participating in additional ad hoc meetings to inform staff work.

⁷ The full listening session report is available at http://healthit.oregon.gov/Initiatives/Documents/Stakeholder_ListeningSession_Summary_2013-08-25.pdf

Appendix B: Background

Oregon's Health System Transformation and Coordinated Care Organizations (CCOs)

Oregon is a national leader and undergoing a multi-dimensional effort to bring the triple aim of better health, better care and lower costs to Oregonians. In particular, Oregon has implemented new coordinated care organizations (CCOs) under an unprecedented Medicaid 1115 waiver and significant federal financial support, including a \$1.9 billion Centers for Medicare & Medicaid Services (CMS) investment over five years and a CMS Center for Medicare and Medicaid Innovation (CMMI) State Innovation Model (SIM) grant. In particular, through the SIM grant, Oregon is working to accelerate and spread the coordinated care model beyond the Medicaid population to public employees, Medicare, and private payers.

The coordinated care model encompasses the following principles and attributes. Many of these principles rely on access to the right patient information at the right time, which can be supported by HIT/HIE infrastructure and efforts.

Utilization of best practices to manage and coordinate care:

- Creating a single point of accountability
- Providing patient and family-centered care
- Using team-based care across appropriate disciplines
- Managing the care for the 20 percent of the population driving 80 percent of the costs
- Addressing prevention and wellness, including disparities among populations served
- Broad adoption and use of electronic health records (EHRs)

6 Principles of Health Systems Transformation

- Use of best practices to manage and coordinate care
- Shared responsibility for health
- Measured performance
- Payment based on outcomes and health
- Information provided
- Sustainable rate of growth

Shared responsibility for health:

- Shared decision-making for care among patients and providers
- Consumer / patient education and accountability strategies
- Consumer / patient responsibility for personal health behaviors

Measured performance:

- Demonstrated understanding of population served
- Quality, cost and access metrics
- Strategies for targets and improvement

Payment based on outcomes and health:

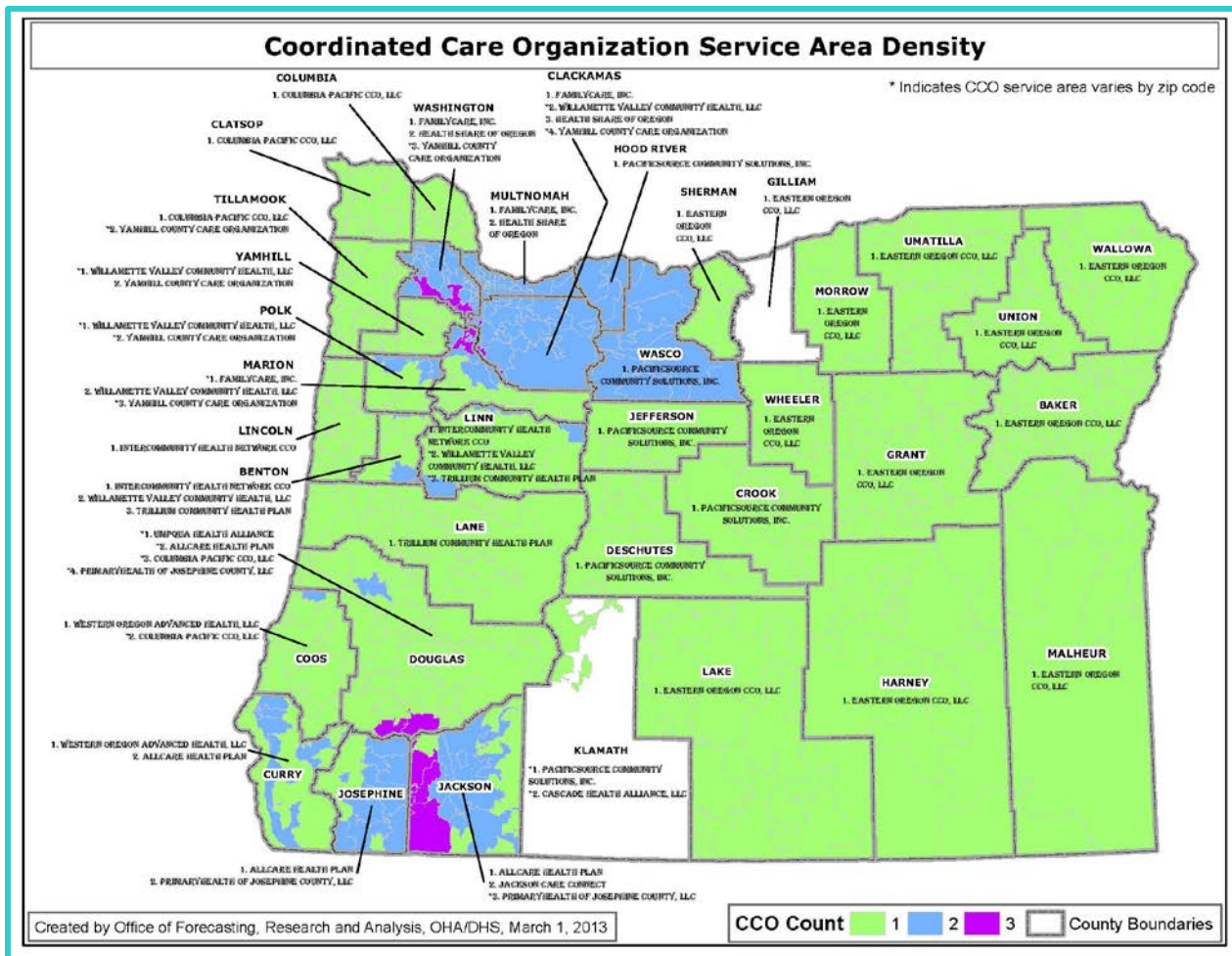
- Payments aligned to outcomes, not volume
- Incentives for prevention and improved care of chronic illness

Information provided:

- Readily available, accurate, reliable and understandable cost and quality data
- Price and value for payers, providers and patients

Sustainable rate of growth:

- Focused on preventing cost shift to employers, individuals and families
- Reduced utilization and cost trend



Over 90 percent of Oregon’s Medicaid population is now enrolled in 16 community-based CCOs, which cover all regions of the State. While there are similarities between CCOs and Medicare Accountable Care Organizations (ACOs), Oregon’s CCOs are:

- Full risk-bearing entities operating within a global budget designed to move to payment based on outcomes.
- Responsible for physical, behavioral and oral health care for CCO members.
- The single point of accountability for health quality and outcomes in the population they serve and emphasize a community responding to its unique health needs.
- Rewarded for performance, via quality incentive payments based on performance on 17 key metrics, including three clinical quality measures found in certified electronic health records (EHRs).

- Provided the flexibility, within model parameters, to institute their own payment and delivery reforms that achieve the best possible outcomes for their membership.

Oregon is working to expand the coordinated care model beyond Medicaid to public employees covered through the Public Employees Benefit Board (PEBB), Medicare for individuals who are dually eligible for Medicaid and Medicare, and commercial payers purchasing plans in Cover Oregon, the State health insurance exchange.

Oregon State Innovation Model (SIM) Grant

In 2013, Oregon was one of six states to be awarded a SIM grant from the CMS Center for Medicare and Medicaid Innovation (CMMI) for up to \$45 million for three and a half years. The SIM grant, which provides funding for testing innovative approaches to improving health and lowering costs across the health care system, including Medicaid, Medicare, and the private sector, supports ongoing health system transformation and provides opportunities for Oregon to share what it learns with other states.

The SIM grant funds a number of efforts, including a new Transformation Center within OHA, which:

- Provides resources and technical assistance to Oregon's CCOs.
- Facilitates learning collaborative, rapid improvement cycles.
- Promotes health equity across sectors and payers.
- Evaluates methods of integration and coordination between primary, specialty, behavioral health and oral health.
- Improves community health through promotion and prevention activities.
- Supports CCOs' collaborations with long-term care, community health and social services.
- Tests new payment models.

ONC Cooperative Agreement for HIE and Oregon's Health Information Technology Oversight Committee (HITOC)

In 2009, Oregon's Health Information Technology Oversight Council (HITOC) was legislatively created to set goals, monitor progress in achieving those goals and provide oversight of HIT development and operations. Shortly after HITOC was established, Oregon applied for a four-year State HIE Cooperative Agreement from the Office of the National Coordinator for HIT (ONC). To meet the terms of the cooperative agreement, OHA and HITOC engaged in an intensive strategic planning effort, involving more than 100 Oregonians through eight workgroups, subcommittees, and ad hoc groups, to develop Oregon's HIE Cooperative Agreement Strategic and Operational Plans in 2010. HITOC also provides ongoing oversight and input for the Medicaid EHR Incentive Program and the CareAccord® HIE program.

Currently, the State Coordinator for HIT serves as the Director of HITOC. The State Medicaid director and a State public health representative serve as ex-officio members of HITOC. In addition, Oregon's HIE and Medicaid HIT planning teams are essentially merged under the auspices of OHA's Office of Health Information Technology (OHIT). OHIT staff collaborate with partners from programs in OHA and the Department of Human Services on such issues as physician outreach and communications, long-term care, behavioral health provider concerns and public health HIT/HIE initiatives, among others.

EHR Adoption, Medicaid/Medicare EHR Incentive Programs and Meaningful Use

The Medicare and Medicaid EHR Incentive Programs provide financial incentives for the Meaningful Use of certified EHR technology to improve patient care. To receive an EHR incentive payment, providers must show they are meeting a number of objectives. The Medicaid program provides incentives to eligible professionals and hospitals to adopt, implement or upgrade to certified EHR technology and demonstrate meaningful use. The Medicare EHR Incentive Program provides incentives only for demonstrating meaningful use. Eligible professionals can receive up to \$44,000 through the Medicare EHR Incentive Program and up to \$63,750 through the Medicaid EHR Incentive Program.⁸

Meaningful Use

Meaningful Use is the set of objectives and measures defined by the Centers for Medicare and Medicaid Services (CMS) that governs the use of electronic health records. Eligible providers and hospitals who meet Meaningful Use requirements can receive federal incentive payments. Generally, the requirements for meeting Meaningful Use increase as a provider progresses through the three stages.

Consumer engagement and health information exchange (from a provider to another provider, their patients, pharmacies, labs and public health) are a key focus in Stage 2, and 2014 EHR certification standards support those enhanced EHR functions. For example, to meet the Stage 2 Transitions of Care Objective, 2014 certified EHR technology must be able to electronically send and receive transition of care/referral summaries in accordance with the Direct standard.

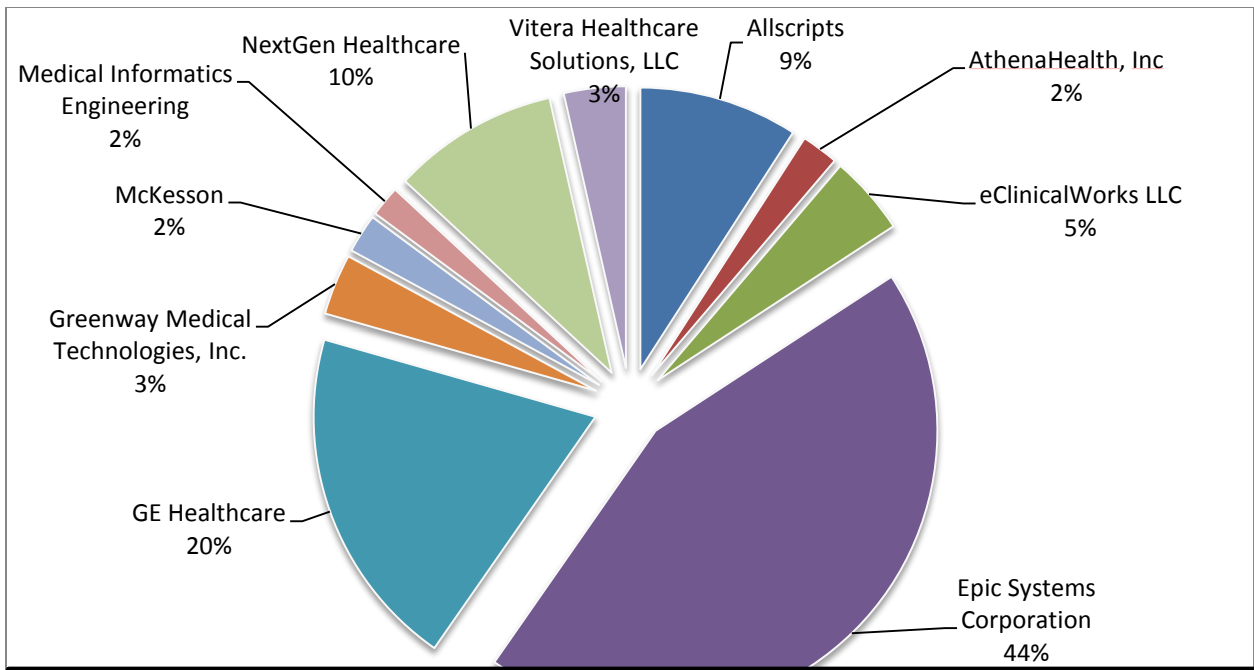
Starting in 2014, all providers must adopt or upgrade to 2014 certified EHR technology, regardless of their individual Meaningful Use stage.

Between January 2011 and September 2013, Oregon providers received \$109 million in Medicare EHR incentives. During the same period, Medicaid paid \$80.4 million to 2,145 providers for a total of \$189.4 million paid to 6,402 Oregon providers through both incentive programs.⁹

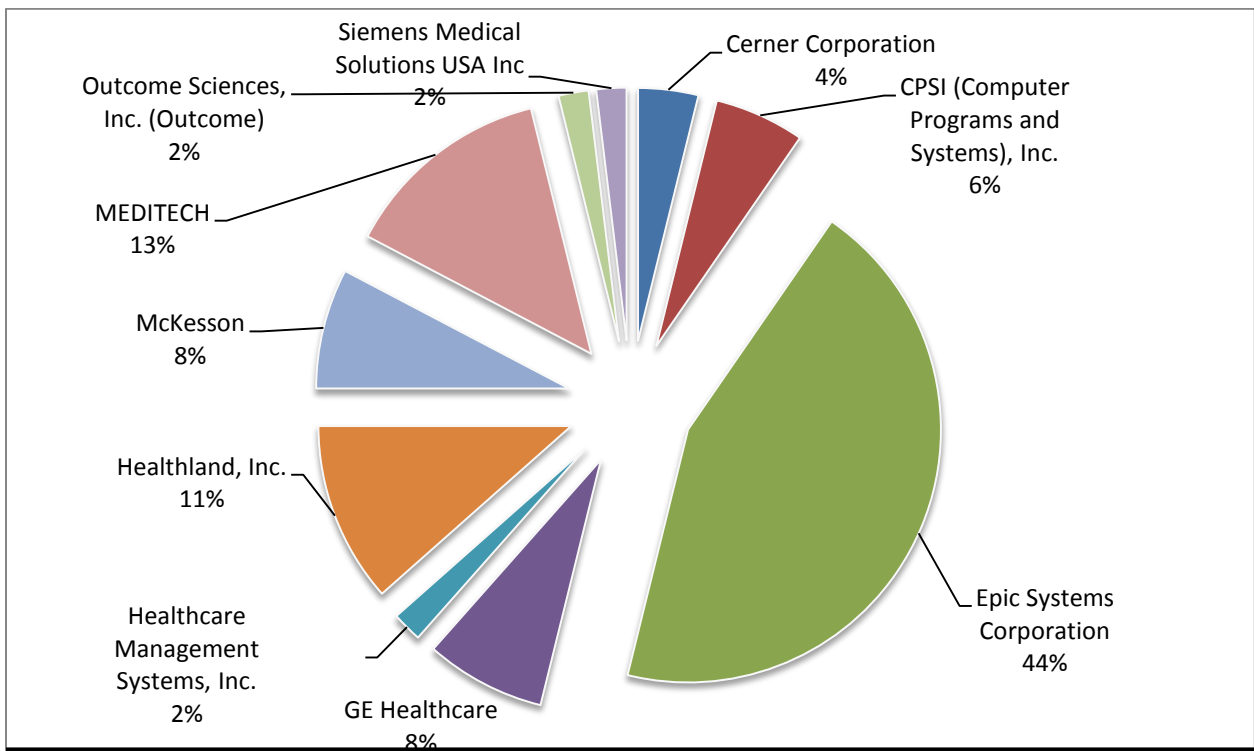
Analyzing the data on EHR incentives paid provides a view into EHR adoption rates in Oregon. Oregon is in the top tier for incentives paid at 42% of all physicians (MDs), physician assistants, and nurse practitioners. Oregon's EHR vendor landscape is varied (see below), with Epic dominating some regions and the hospital environment.

⁸ <http://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/index.html>

⁹ http://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/Downloads/September2013_PaymentsbyStatebyProgram.pdf



Top 10 EHR vendors in use by Oregon providers receiving either a Medicare or Medicaid EHR incentive payment (2011–Aug 2013). About 83% of providers used one of these 10 vendors. A total of 97 EHR vendors were represented across all providers receiving an incentive.



EHR Vendors in use by Oregon hospitals receiving EHR Incentives (2011-2013). Includes 52 out of 59 hospitals

Statewide and Local HIE Environment

In response to local connectivity needs, local HIEs have developed across the state to facilitate exchange of patient information between providers. Some are organizational centric and some are community based. Significant “white space” exists due to geographic and/or service gaps. Oregon’s current HIE environment includes the following.

CareAccord®:

- Operated by OHA, serving providers statewide.
- Participants include ambulatory providers, long term care, behavioral health, a CCO, and OHA Medicaid and public health programs. As of February 2014, CareAccord® had over 1,000 registered accounts from 117 organizations.
- Vendor: Harris (systems integrator) and MirthMail.
- Services: Direct secure messaging, connecting to other HISPs through DirectTrust accreditation and connecting to California and Alaska providers through NATE membership.

Bay Area Community Informatics Agency (BACIA):

- Based out of Coos Bay, serving the Southern Oregon coast.
- Participants include Bay Area Hospital, North Bend Medical Center, Bay Clinic, Southwest Oregon Independent Practice Association and Western Oregon Advanced Health. Soon to include other local health care entities such as South Cost Orthopedics and Waterfall Clinic.
- Vendor/Services: BACIA acts as the governance and policy-making body, while technology is delivered through the hospital and CCO as follows:
 - Bay Area hospital is implementing Mobile MD, which will offer a number of enhancements to their provider workflow, as well as a patient portal for their EHR. Mobile MD provides a full HIE component as well.
 - Western Oregon Advanced Health (WOAH) is the regional CCO and is implementing an AT&T/Covisint/Milliman solution, providing secure collaboration platform for use by WOAH providers, with predictive modeling and business intelligence tools and analytics. This solution will be based on encounter data and is anticipated to add clinical health information to include mental and behavioral health, medical laboratory, and pharmacy features.

Central Oregon Health Information Exchange:

- Based out of Bend, serving Central Oregon.
- Participants include hospitals, labs, X-ray facilities, and the majority of clinics in the Bend area.
- Vendor: Relay Health.
- Services: Community health record.

Gorge Health Connect:

- Based out of The Dalles, serving the greater Mid-Columbia River Gorge region and supplying Jefferson HIE subscribers with Direct secure messaging services and referrals.
- Participants include Mid-Columbia Medical Center and Clinics, North Central Public Health, Gorge Urology, Mid-Columbia Surgical Specialists. Gorge Health Connect currently serves 9 organizations and 32 providers.
- Vendor: Medicity.
- Services: Direct secure messaging and referrals.

Jefferson Health Information Exchange:

- Based out of Medford, serving Southern Oregon.
- Participants include investments from all four CCOs in the region, Asante Health System, Providence Medford Medical Center, Sky Lakes Medical Center, Mid Rogue IPA and PrimeCare. JHIE currently serves 336 providers in 58 clinics/practices across Southern Oregon. Twenty seven additional clinics/practices are in the enrollment process, and 139 new clinics are in the JHIE pipeline for enrollment in 2014.
- Vendor: Medicity.
- Services: JHIE went live in January 2013 with Direct secure messaging and a closed-loop referral network where users of JHIE can send and receive clinical referrals and communicate with one another about the patient in a secure environment (Phase I). In 2014, JHIE will implement “Phase II” functions to include:
 - Patient search and discrete data (clinical reports and results) retrieval.
 - EHR integration with JHIE will allow for one interface for all results and reports (including discrete data) to be delivered into the EHR from all participating data sources; EHR participants also will be able to send summary documents to JHIE as well as to other HIE participants via their EHR.
 - Alerts will become available through JHIE from hospitals and urgent care facilities (e.g., emergency admit, discharge summaries, etc.) to support care coordination among providers and CCO care management teams.

Organizational HIEs:

- A number of the larger health systems in Oregon have built organizational HIEs. These solutions are often driven by business needs to establish laboratory or other referrals with community partners.

EHR and HISPs for Direct secure messaging:

- Oregon health systems, hospitals and providers seeking to meet Meaningful Use requirements are working now and over the next year or two to establish Direct secure messaging functionality within their EHRs by procuring HISP services. For a more complete discussion on Direct secure messaging, see the Technology chapter.

Behavioral Health and Long Term Care Providers

Behavioral health and long-term care providers face special challenges regarding adoption of EHRs and use of HIT. Most of these providers are not eligible for payments under the Medicare and Medicaid EHR incentive programs.

The engagement of long term care facilities is critical as EPs and EHs seek to address transitions of care and continuity of care records. The State’s HIT/HIE efforts will include connecting long term care facilities to health care teams through Direct secure messaging, including through increasing use of CareAccord® among long term care providers. CareAccord® participants already include long term care and behavioral health providers. The CareAccord® infrastructure supports patient information sharing within the physical health care system (labs, radiology, problem lists/allergies, medication lists, referrals, etc.) and across care teams (long term care, behavioral health, social services, criminal justice, etc.).

Behavioral health:

In 2012, OHA's Addictions and Mental Health Division (AMH) launched a project called COMPASS that includes a comprehensive behavioral health electronic data system to improve care, control cost and share information. This new data system will allow AMH to meet business needs and requirements and will provide data that more readily supports the ability to track:

- Performance outcomes associated with services
- Who accesses services, what services are provided, where and when
- Improvement in the health of Oregonians through better quality and availability of healthcare, and cost effectiveness of services.

One component of COMPASS is [OWITS](#), which was implemented in July 2011. OWITS provides a web-based, 2011-certified EHR for mental health and addiction services community-based programs that allows for the exchange of patient data between community providers. OWITS is available to all publicly funded behavioral health providers or required reporters (ex: DUII, methadone or detox providers). The OWITS application also provides a secure, central location for meeting reporting requirements, so that agencies will no longer need to submit the required client data to AMH. AMH will automatically pull all required data from the system and ensure that all data requirements are included within the system. Continuing support for OWITS is funded through the end of Oregon's biennial budget cycle in June 2015.

Long Term care:

The recent Oregon report: [Study Group Report on the Integration of Long Term Care Services into the Global Budgets of Oregon's Coordinated Care Organizations](#) noted that long-term services and supports (LTSS) and medical systems have different information systems and face interoperability barriers. The Study Group expects the integration of LTSS services into CCOs to increase strategies for information sharing. In the Study Group's view, "an effective system of care coordination required better access to real-time data across providers, better access to Medicare data, and strong consumer protections against inappropriate data sharing. Data analysis in an effective system of care coordination would underscore better care coordination for high cost consumers, better preventative planning at the aggregate level, and stronger predictive modeling for improving the overall care coordination system."

[Oregon Health Information Technology Extension Center \(O-HITEC\)](#)

As Oregon's Regional Extension Center (REC), O-HITEC has worked with stakeholders throughout the state to provide education, outreach and technical assistance to help providers select, implement and meaningfully use certified EHR technology to improve the quality and value of health care and meet the federal requirements for the Medicaid and Medicare EHR Incentive Programs. O-HITEC received the federal ONC REC contract for Oregon. As of September 2013, O-HITEC had helped 2,674 eligible physicians and clinicians "go live" on certified EHRs, with 1,621 of those providers and clinicians achieving Stage 1 Meaningful Use requirements.

[Oregon Broadband through the Oregon Health Network \(OHN\)](#)

Oregon Health Network is a non-profit, membership-based organization that was created in 2007 after the organization was awarded a \$20.2 million federal subsidy through the Federal Communications Commission (FCC) Rural Health Care Pilot Program. As of October 2013, OHN had more than 229 provider participants, including 46 hospitals. OHN's federal FCC subsidy is for deploying middle and final mile connectivity to infrastructures across Oregon, focusing on rural areas.

Appendix C: Acronyms and Glossary

All Payers All Claims Reporting Program (APAC): Oregon state program administered by the Oregon Health Authority (OHA) to collect data on all paid claims from commercial health insurance carriers, licensed third party administrators, pharmacy benefits managers, Medicaid managed care organizations, Medicaid fee-for-service and Medicare parts C and D.

American Recovery and Reinvestment Act of 2009 (ARRA): Economic stimulus package which included the HITECH Act.

CareAccord®: Oregon's statewide Health Information Exchange, administered by the Oregon Health Authority (OHA). CareAccord® facilitates the secure exchange of health information between Oregon's health care organizations and providers, enabling the coordination of care for better health, better care and lower cost.

Center for Medicare and Medicaid Innovation (CMMI): Established in the Affordable Care Act, CMMI was created for the purpose of testing innovative payment and service delivery models to reduce program expenditures while preserving or enhancing the quality for individuals receiving Medicare, Medicaid or Children's Health Insurance Program (CHIP) benefits.

Centers for Medicare and Medicaid Services (CMS): A federal agency within the Department of Health and Human Services that administers the Medicare program and works in partnership with state governments to administer Medicaid.

Clinical Quality Metrics Registry (CQMR): Oregon registry used to track and report key healthcare quality measures.

Coordinated Care Organization (CCO): Local health entities that deliver health care and coverage for people eligible for the Oregon Health Plan (Medicaid), including those also covered by Medicare. CCOs are accountable for health outcomes of the population they serve. They have one budget that grows at a fixed rate for mental, physical and ultimately dental care. CCOs will bring forward new models of care that are patient-centered and team-focused. They have flexibility within the budget to deliver defined outcomes. Each CCO is governed by a partnership among health care providers, community members, and stakeholders in the health systems that have financial responsibility and risk.

Cross-enterprise Document Reliable Exchange (XDR): A secure, web services-based mechanism specified by Integrating the Healthcare Enterprise (IHE) that enables a document source to "push" documents and metadata to a specified recipient. XDR can be used as part of an IHE-based HIE and also as a standard way to connect EHR systems to Direct-enabled Health Information Service Providers (HISPs).

Direct secure messaging: A HIPAA-compliant way to safely and securely send encrypted electronic health information to specified recipients using Direct Project specifications (i.e., "Direct").

DirectTrust: DirectTrust is an independent non-profit trade association created by and for participants in the Direct community, with the goal of establishing and maintaining a national Security and Trust Framework in support of Direct exchange. DirectTrust is a trust community that provides

interoperability and security standards for exchanging Direct secure messages. To see a complete list of accredited HISPs, see: <http://www.directtrust.org/accreditation-status/>.

Electronic Health Records (EHRs): Records that contain medical and clinical data, and are designed to contain and share information from the various providers involved in a patient's care. EHR data can be created, managed and consulted by authorized providers and staff from across more than one health care organization. A single EHR can bring together information from a wide variety of sources, such as current and past doctors, emergency facilities, school and workplace clinics, pharmacies, laboratories, and medical imaging facilities. Certified EHRs meet federal standards established by the ONC. Providers seeking Medicare or Medicaid EHR incentives must use certified EHRs. A complete up-to-date list of certified EHR systems can be found on the [ONC Certified HIT Product List \(CHPL\)](#).

Emergency Department Information Exchange (EDIE): An emergency department care coordination service that enables care providers to develop and implement effective care coordination guidelines for high-utilization and special-needs patients.

Enabling infrastructure services: Technology services that facilitate or directly enable the effective use of HIT and information exchange across organizational boundaries.

Enabling protocols: A term of convenience that refers to the various mechanisms for interaction supported by enabling infrastructure services components.

Health Information Exchange (HIE):

- VERB – HIE allows providers, patients, and other participants to appropriately access and securely share a patient's health information electronically. Efficient HIE relies on interoperability and standards across technologies. Once standardized, the information shared can integrate into the recipients' Electronic Health Records (EHRs), further enhancing the usability of patient data and improving patient care. See Primer on HIE on page 12.
- NOUN – An HIE is an organization that oversees and governs the exchange of health-related information among organizations according to nationally recognized standards. See also: Health Information Organization (HIO)

Health Information Organization (HIO): An organization that oversees and governs the exchange of health-related information among organizations according to nationally recognized standards. See also Health Information Exchange (HIE).

Health Information Service Provider (HISP): A third-party that offers Direct and supporting services to members. HISPs may offer their members various ways to communicate using Direct, including web portals and EHR integration, and may or may not store data on behalf of their members.

Health Information Technology (HIT): is a broad concept that encompasses an array of technologies to store, share, and analyze health information. HIT includes electronic health records, personal health records, health information exchange systems, clinical data repositories, and many other technologies.

The Health Information Technology for Economic and Clinical Health (HITECH) Act: Part of the 2009 American Recovery and Reinvestment Act (ARRA), the HITECH Act seeks to improve American health care delivery and patient care through an unprecedented investment in health information technology. The provisions of the HITECH Act are specifically designed to work together to provide the necessary

assistance and technical support to providers, enable coordination and alignment within and among states, establish connectivity to the public health community in case of emergencies, and assure the workforce is properly trained and equipped to be meaningful users of EHRs. Combined, these programs build the foundation for every American to benefit from an electronic health record, as part of a modernized, interconnected, and vastly improved system of care delivery.

Health Information Technology Oversight Council (HITOC): As part of Oregon's 2009 state health reform law, Oregon's legislature created HITOC to coordinate Oregon's public and private statewide efforts in HIT. HITOC members, who are appointed by the Governor and confirmed by the Senate, bring a wide range of experience in health and HIT and represent the geographic diversity of Oregon. Among HITOC's goals are encouraging the adoption of electronic health records, developing a strategic plan for a statewide system for electronic health information exchange (HIE), setting technology standards, ensuring privacy and security controls and developing a sustainable business plan to support meaningful use of HIT to lower costs and improve quality of care. HITOC also provides oversight of the Medicaid EHR Incentive Program, which provides federal stimulus funds for eligible professionals and hospitals to adopt and meaningfully use certified EHR systems.

Health Insurance Portability and Accountability Act (HIPAA): The HIPAA Privacy Rule protects personal health information while still allowing the flow of health information for treatment, payment or operations. Provider and other entities that access health information can only share information as outlined in the rule, or with the written permission of the person.

Healthcare Effectiveness Data and Information Set (HEDIS): A tool set of 75 measures across 8 domains of care used by health plans to measure healthcare performance.

ICD-10: The 10th revision of the International Statistical Classification of Disease and Related Health Problems (ICD), a medical classification list by the World Health Organization. ICD codes are used worldwide for morbidity and mortality statistics, reimbursement systems, and automated decision support in health care. All HIPAA-covered entities (e.g., health care providers) must adopt ICD-10. In March 2014, Congress delayed the deadline for adoption changed from October 2014 to October 2015. Not only must new software be installed and tested, but medical practices must provide training for physicians, staff members, and administrators. They will also need to develop new practice policies and guidelines, and update paperwork and forms.

Integrating the Healthcare Enterprise (IHE): An initiative by healthcare professionals and industry to improve interoperability by promoting the use of established standards.

Interoperability: Interoperability is generally accepted to mean the ability of two or more systems or components to exchange information and *use* the information that has been exchanged. That means that there are two steps to interoperability: 1) the ability to *exchange* information; and 2) the ability to *use* the information that has been exchanged.

Meaningful Use: Meaningful Use is the set of objectives and measures defined by the Centers for Medicare and Medicaid Services (CMS) that governs the use of electronic health records. Eligible providers and hospitals who meet Meaningful Use requirements can receive federal EHR incentive payments. Generally, the requirements for meeting Meaningful Use increase as a provider progresses through the three stages. See Primer on page 16.

National Association for Trusted Exchange (NATE): Originally a project supported by the Office of the National Coordinator for Health Information Technology (ONC), NATE is a trust community that provides interoperability and security standards for exchanging Direct secure messages.

Office of Health Information Technology (OHIT): The Oregon Health Authority office responsible for HIT/HIE planning, coordination, policy and development.

Office of the National Coordinator for Health Information Technology (ONC): The principal federal entity charged with coordination of nationwide efforts to implement and use the most advanced health information technology and the electronic exchange of health information. The position of National Coordinator was created in 2004, through an Executive Order, and legislatively mandated in the HITECH Act of 2009.

Oregon Health Authority (OHA): The state agency charged with lowering and containing costs, improving quality and increasing access to health care in order to improve the lifelong health of Oregonians. Its mission is helping people and communities achieve optimum physical, mental and social well-being through partnerships, prevention and access to quality, affordable health care.

Oregon Health Information Technology Extension Center (O-HITEC): Oregon's Regional Extension Center provides education, outreach and technical assistance to help providers select, implement and meaningfully use certified EHR technology to improve the quality and value of health care and meet the federal requirements for the Medicaid and Medicare EHR incentive programs.

Oregon Health Leadership Council (OHL): A collaborative organization that brings together health plans, hospitals and physicians to identify and act on cost-saving solutions that maximize efficiency while delivering high quality patient care.

Oregon Health Network (OHN): A non-profit, membership-based organization that was created in 2007 and funded by federal funding from the Federal Communications Commission (FCC) for deploying middle and final mile connectivity to infrastructures across Oregon, focusing on rural areas.

Patient-Centered Primary Care Home (PCPCH) Program: Oregon's medical home model, the PCPCH Program is administered by the Oregon Health Authority (OHA). The program is designed to reward clinics that demonstrate certain practices associated with quality and best practices for coordinated care.

Patient/provider attribution service: In integrated care delivery models, attribution is the process of assigning members to a provider or providers. Attribution establishes provider accountability, where the organization deems one individual or a group of individuals responsible for efficiency, quality and cost, regardless of which providers actually provide the services. The attribution service is a database used to safely and securely store patient identifying information and links patients to the providers on their care team. Given a particular patient's demographics or other identifying information, the service identifies the providers on that patient's care team.

Pay for performance (P4P): Programs where providers are paid for meeting established health targets (outcomes) rather than being compensated per service.

Privacy and security: Privacy and security are protected in part by the Health Insurance Portability and Accountability Act (HIPAA) Privacy Rule. HIPAA regulates the use and disclosure of protected health information. Without patient consent, covered entities may use protected health information only to conduct treatment, payment and healthcare operations activities.

Push: A method of health information exchange whereby information is sent (“pushed”) by one party to one or more specified recipients. The Direct Project specifications (i.e., “Direct”) offers a simple, scalable and secure form of push-based exchange.

Quality Reporting Document Architecture (QRDA): A standard document format for the exchange of clinical quality measures data. QRDA reports contain data extracted from electronic health records and other information technology systems. QRDA reports are used for the exchange of clinical quality measures data between systems for a variety of quality measurement and reporting initiatives, such as the Meaningful Use Stage 2.

Query: Query or “pull” refers to a messaging pattern in which a query is initiated from one participating health information organization to another, meeting the given query parameters for a particular patient for later retrieval.

State Accident Insurance Fund (SAIF): Oregon’s not-for-profit, state-chartered workers’ compensation insurance company.

State Innovation Model (SIM) Grant: Nationally, CMMI provided \$250 million in SIM grants to support development and testing of state-based models for multi-payer payment and health care delivery system transformation. In 2013, Oregon received a SIM grant of \$45 million to support health system transformation and the acceleration and spread of the coordinated care model.