Connecting the Care Team

HIE Adoption and Closed-Loop Clinical Referrals

Introduction

The Health Information Exchange (HIE) Workgroup has been tasked by the Health Information Technology Oversight Council (HITOC) to assist them and the Oregon Health Authority (OHA) with developing a set of strategies and recommendations to accelerate, support, and improve HIE across the state.

Beginning in May 2022, the HIE Workgroup met monthly to discuss priority HIE needs and opportunities in Oregon. A primary focus of the Workgroup has been on identifying strategies to improve how HIE promotes care coordination among different provider types, including behavioral health, oral health, long-term post-acute care, rural practices, and other providers. The following concept paper summarizes the challenges and opportunities around increasing adoption of HIE across provider types in Oregon to better serve patient needs. This concept paper will be reviewed by HITOC as they update Oregon's Health IT Strategic Plan.

There is reference throughout this paper to HIE, electronic health records (EHRs), interoperability and other terms used regularly in this policy area. For definitions and other information, please review the Statewide Vision for HIE concept paper.

Digital Inequity in HIE Solutions

Problem Statement

OHA has a goal to eliminate health inequities by 2030. To accomplish this goal, it is critical that all members of a patient's care team have access to relevant health information to ensure patients have a consistent experience and receive informed, coordinated care. Inequitable access to HIE by providers is intrinsically linked to inequitable access to informed, appropriate

care for patients. For more information on how provider access to HIE can impact patient care and health equity, see the OHA report on HIE: A Tale of Two Worlds.

Digital inequities are the gaps in access, knowledge, and/or ability to use digital tools and technology, for example, between different populations or regions. Digital inequities exist for both providers and other health care workers as well as patients. While many digital inequities need to be addressed, to ensure progress toward greater HIE adoption and statewide interoperability in Oregon, the HIE Workgroup recommends focusing strategies on addressing digital inequity within the following provider populations: 1) behavioral health; 2) oral health; 3) rural community providers; and 4) post-acute care, with an important distinction of recognizing both skilled nursing facilities (SNFs) and nursing homes, but also community-based entities like adult foster homes and other models of care.

HIE Adoption in Oregon

Although digital inequities exist, Oregon has many bright spots in its effort to adopt HIE across the state. Oregon has long been a state with high EHR adoption. EHRs digitize health information, making it easier to share this information through HIE. Oregon also tracks the use of HIE solutions in the state by different categories of providers. As shown in the graphic below, HIE adoption among physical health providers is quite strong for some of the HIE solutions that are used broadly in Oregon. In comparison, adoption rates for HIE (and also, notably, EHRs) by behavioral health and oral health providers are significantly lower. Figure 1 below shows how key provider types are participating in the primary HIE solutions in Oregon today (for more detailed information about HIE participation in Oregon today, review OHA's 2022 Health IT Report to Oregon's HITOC here).
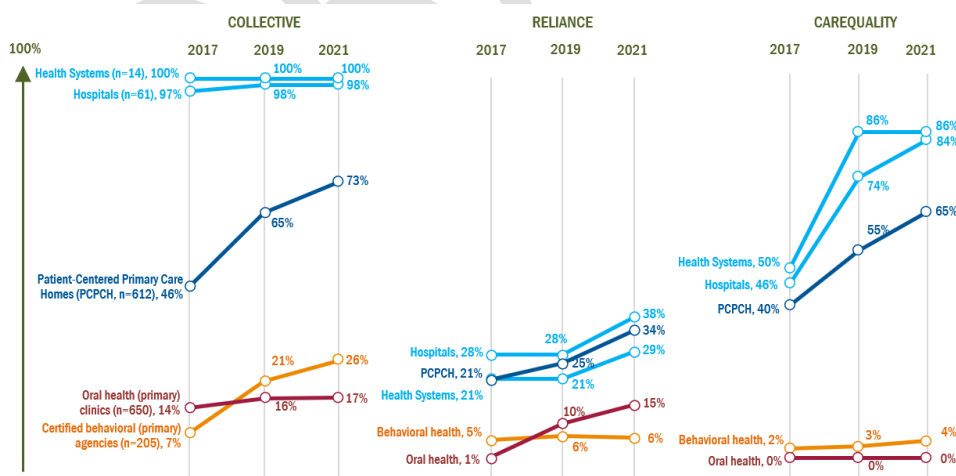
Figure 1: Adoption of Various HIE Tools in Oregon

Patient Story: Barbara

Barbara is a 68-year-old female who recently suffered a stroke and was transported by ambulance to a Portland-area stroke center from her residence on the Oregon coast. While being treated at the hospital for her stroke, she was seen by a neurologist and an internist. While Barbara did recover enough to be discharged from the hospital, she was referred to a SNF as she had several needs for occupational therapy, physical therapy, speech rehabilitation and required the use of a walker to move around. The hospital discharge planner and Barbara's Medicare Advantage plan care coordinator were unable to find a SNF placement in her home county, and Barbara was ultimately taken to a SNF in Hillsboro, about an hour's drive away from her residence.

Neither her primary care provider, nor the hospital, had visibility into Barbara's health status at the SNF. While there, Barbara suffered additional complications from a blood clot in her leg and was readmitted to a hospital in Hillsboro. After stabilizing her it was decided that Barbara would benefit from home health services upon discharge, so that she could recover at her residence on the coast. Without an immediate family member to help her, Barbara needed non-emergent medical transport to get back to her home, and finding this resource proved to be difficult—forcing Barbara to stay at the hospital longer.

HIE Questions:

- How will Barbara's primary care provider access her medical records from the multiple hospital visits and the various specialist notes?

- How will Barbara's primary care provider get additional information about what occurred at the SNF which led to her readmission to the hospital in Hillsboro?

- How will Barbara's family, who is travelling into Oregon to help take care of her, be able to navigate this complex encounter and receive the information they need?

Overarching Objectives and Strategies

As described in the *Statewide Vision for HIE* concept paper, there are three overarching objectives identified by the HIE Workgroup that relate to *Connecting the Care Team*, each with a set of strategies. These overarching components apply to each of the focus areas described in the rest of this paper. For more information about these objectives, refer to the *Statewide Vision for HIE* concept paper.

Objective 2: Address digital inequity and promote HIE for all

- Providing funding and other support to behavioral health, oral health, and small independent physical health providers to adopt interoperable EHRs and/or participate in HIE
- Exploring approaches to lower the cost of interoperability products offered by EHRs and other health IT vendors
- Developing HIE adoption strategies for entities that were not included in federal EHR incentive programs

Objective 3: Enable broad and timely care coordination

- Increase the use of electronic, closed loop clinical referrals
- Adding more high-quality information from different sources
- Ensuring that data sources via HIE are integrated into EHRs

Objective 5: Promote knowledge of HIE and broad contribution of data by all parties

Educate and influence Oregon entities to participate more broadly in HIE. For example:

- Identifying and prioritizing the standardized and non-standardized data that should be included in HIE efforts
- Prioritizing who should contribute data and when
- Identifying barriers to information sharing and developing mechanisms to address these barriers and discourage data silos; which may include governance efforts

Behavioral Health[1]

Background Context

Behavioral health organizations continue to experience significant challenges in access to health IT and HIE functionality. Part of this is due to history—given that most behavioral health providers were excluded from financial incentives for EHR adoption as part of the HITECH Act.[2] Without these incentives, some behavioral health providers have lagged behind their physical health colleagues in terms of health IT adoption, including HIE solutions. Behavioral health partners have shared that EHRs available for behavioral health clinics do not adequately support their full range of needs. In addition, lack of resources, and concerns about privacy and security of information are barriers to behavioral health providers using health IT and exchanging information.

---

[1] Per OAR 309-008-0200 "Behavioral Health" means mental health, mental illness, addictive health, and addiction and gambling disorders. "Behavioral Health Treatment Services" means mental health treatment, substance use disorder treatment, and problem gambling treatment services.
[2] Health Information Technology for Economic and Clinical Health (HITECH) Act, enacted as part of the American Recovery and Reinvestment Act of 2009.

In addition to a lack of financial incentives, there are specific regulatory barriers to sharing some behavioral health information. 42 CFR Part 2 (hereafter Part 2), a federal regulation that limits the sharing of information about substance use disorder (SUD) treatment, requires patient consent in almost all instances—a much higher bar than HIPAA[3] which permits data sharing for many health care purposes without specific patient consent. The concern of violating Part 2, either intentionally or unintentionally, is frequently cited by behavioral health leaders as a primary reason for their lack of HIE participation.

Recent changes to Part 2 have intended to improve this barrier. For example, changes were made to the Part 2 rule in 2017 to allow for a patient's general consent to share information with HIE solutions, with the limitation that this information can only be shared with the patient's treating providers. The federal government has recently announced additional proposed changes to Part 2 which would simplify the consent process to a single step, as well as align the enforcement mechanism of Part 2 with that of HIPAA. These changes attempt to balance the competing priorities of sharing SUD and other behavioral health information on the one hand to provide more informed health care services, and protecting the privacy of individuals who seek SUD treatment, who may risk consequences like loss of employment or housing if the information fell into the wrong hands. It is still common practice among EHR and other technology vendors to isolate patient records that contain SUD information in their entirety— preventing these records from being visible to treating providers or any other care team members. The HIE Workgroup encourages ONC[4] and other authorities to hold the technology vendor community to parsing out SUD treatment information more effectively and promote behavioral health information sharing per the principles of ONC's Information Blocking rules and HIPAA.

Part 2 permits patients to request a report on all disclosures that a provider has made under their Part 2 consent. As flagged by the HIE Workgroup's behavioral health representatives, many EHRs struggle today to provide this accounting. The HIE Workgroup's concept paper on the *Consumers, Privacy & Security and Data Quality* flagged the importance of educating patients about their role in holding the healthcare system accountable for transparency in information sharing. For SUD treatment under Part 2, this means that patients should be educated and empowered to request the accounting in a means that is convenient for them. This is one important step toward involving patients more closely in how their behavioral health information is shared.

The Workgroup also reviewed recommendations from HITOC's Behavioral Health Health IT Workgroup from 2019, to inform their work. The Workgroup was informed by interviews and a survey of behavioral health providers.

---

[3] Health Insurance Portability and Accountability Act (HIPAA), the federal regulation that governs the sharing of health information in the United States for all health care providers and health plans.
[4] ONC refers to the Office of the National Coordinator for Health IT, the federal agency that regulates health IT.

Behavioral Health HIT Workgroup (2019) Top Priority Recommendations

1	**Support BH agencies without an EHR or with an insufficient EHR to adopt an EHR, including:** • Develop a list of preferred EHR vendors to help support the EHR adoption/upgrade decision making process* • Promote hospital/health systems' support for behavioral health EHR adoption/upgrade
2	**Continue existing work on HIE, and bolster with additional strategies, including:** • Encourage larger organizations/hospitals/health systems to connect and contribute patient data to an HIE (e.g., Community Health Record) • Connect HIT systems to lower the effort required to access patient information across organizations (e.g., fewer clicks) • Information sharing guidance/support related to privacy & security (e.g., 42 CFR Pt 2, HIPAA)
3	**Support improved understanding of HIT/HIE, including:** • Provide HIT/HIE education • Create shared learning opportunities across a variety of topic areas (e.g., EHR adoption and use, HIE connectivity and use, data analytics/business intelligence, privacy and security) • Landscape assessment of EHRs/HIE
4	**Modernize state reporting systems to allow for improved interoperability with EHRs/HIE and data reporting back to agencies**

For more information, see the BH HIT Workgroup page.

Behavioral Health Strategy Recommendations

In addition to the overarching objectives and strategies above, which include fundamental support for behavioral health provider adoption of interoperable EHRs and provider education, the Workgroup identified the following specific recommendations for behavioral health.

Focused Recommendations:

1. **Greater Accordance to Part 2 rule from Health IT Vendors**. As discussed above, the Workgroup recommends that future work or rules be put in place to ensure that health IT vendors are complying with all components of, as well as the spirit of, the Part 2 rule. Part 2 is not intended to hinder appropriate data sharing for care coordination. Patients in Oregon are entitled to request a report of all Part 2 disclosures from any health IT

vendor—including EHRs and HIEs—to ensure that health IT vendors are held accountable to the requirements of Part 2. Furthermore, the Workgroup believes that more could be done by vendors to parse out Part 2 information from patient records to encourage greater sharing of behavioral health information through HIE solutions.

2. **High Value Behavioral Health Information Assessment**. The Workgroup identified that more work is needed to clarify what types of behavioral health information are of primary importance to be shared through HIE solutions to drive value for behavioral health and other end users like primary care providers and hospitals. This is particularly important for data types that do not currently have a federally recognized standard. Some examples of high-value behavioral health information identified by the HIE Workgroup include:

   - Medications
   - Behavioral health diagnosis
   - SUD history, when appropriate or when informed consent exists

   The Workgroup acknowledges that these examples are only a small sample and encourage more effort of this kind in Oregon. The Workgroup also discussed how some of the valuable behavioral health information is found within providers notes or is otherwise not parsed out which creates barriers for data sharing. Members pointed out that natural language processing (NLP), artificial intelligence, and other technologies are starting to unlock some of this information from patient charts, and these kinds of information sources should also be considered as part of this assessment work.

   Lastly, Workgroup members noted that this assessment could also identify what types of information should not be shared, in general, in Oregon. For example, under existing law, psychotherapy notes cannot be shared in HIE. The Workgroup anticipates other types of information that might need to be restricted in this way.

   HITOC noted that any future workgroup or committee that looks at this question of high value behavioral health information needs to be tied to ongoing HIE governance where principles of patient privacy and impacts of data sharing are monitored. They continued that any such effort should prioritize diversity and broad representation to ensure that the many considerations around impact of sharing behavioral health information are identified and mitigated. Lastly, HITOC identified the importance of cross referencing behavioral health information with other important data insights like housing insecurity/SDOH concerns.

3. **Private Sector Investment in Behavioral Health IT Infrastructure**. One of the strategies recommended by the 2019 Behavioral Health HIT Workgroup includes encouraging the private sector to invest further in behavioral health technology infrastructure, is still a relevant strategy recommendation from the Workgroup's perspective. By private sector, the Workgroup is predominantly referring to health

systems and health plans (as opposed to OHA or other state entities). This strategy acknowledges the benefits to health systems and health plans/CCOs in having behavioral health information more integrated into overall health and encourages these parties to help cover the costs of these sometimes cost-prohibitive solutions for many community behavioral health providers. Poorly coordinated care for patients experiencing unmanaged behavioral health issues negatively impacts their health and the entire health care system.

4. **Health IT Workforce Support and Development**. One key insight provided by HIE Workgroup members was that many health IT professionals in the behavioral health field feel isolation and/or lack of professional support or mentorship from the larger health IT workforce of Oregon. The Workgroup encourages more effort to identify the health IT/HIE contact(s) at different organizations across the state and to provide more development opportunities for these professionals, including education, training, networking, and/or professional advancement. This recommendation would also extend to supporting organizations in finding and recruiting health IT workforce.

Oral Health

Background Context

Oral health providers—including dentists, orthodontists, and others—also face hurdles to HIE participation. Unlike many behavioral health providers, dentists were included in the HITECH incentives that led to the vast adoption of EHRs[5]. Despite this, many dentists opted not to purchase an EHR using these funds and instead invested in a more streamlined dental practice management software (DPMS). DPMSs are software solutions that assist dental practices with billing and charting, but are not certified by ONC like EHRs and do not have the same expectations for interoperability. Given this trend toward DPMSs and away from EHRs suggests that some dentists in Oregon do not find as much value in an EHR for their daily operations, despite the interoperability advantages that EHRs offer compared to DPMSs. A cursory search for DPMS vendors online will mention many advantages—but interoperability is rarely mentioned.

A 2021 study by the Oregon Rural Practice-Based Research Network (ORPRN) on dentists' views of EHRs and HIE identified several short-term needs:

- Improve the ability for dentists to pull reports from software solutions with relevant patient information;
- Improve the ability for dentists to manage referrals more seamlessly;

---

[5] Federal EHR Incentives were available for specific provider types, including physicians, nurse practitioners, dentists, and some physician assistants. While some behavioral health providers were eligible, like psychiatrists and psychiatric nurse practitioners, many types of behavioral health providers were not eligible like licensed clinical social workers, etc.

- Improve the ability to share x-rays—by far the most common type of data that needs to be shared between oral health providers;
- Improve the bi-directional nature of information sharing back to dentists (many dentists flagged that HIE feels like a one-way street from their systems to physical health EHRs with little beneficial information flowing back to them).

The Workgroup considered these findings, but ultimately focused its recommendations below on addressing more systemic issues around how oral health is considered (or not) in HIE strategy. Notably, the ORPRN report asked dentists about EHRs while, as mentioned above, many dentists use DPMSs. The needs listed above still apply to DPMSs, but oral health providers using DPMSs will face even greater barriers in participating in HIE as DPMSs function as closed systems. More work is needed to understand the technology environment of oral health providers and how it differs from more traditional physical health-based EHRs.

Oral Health Strategy Recommendations

In addition to the overarching objectives and strategies described above, the Workgroup identified the following specific recommendations for oral health. While the Workgroup acknowledged that the findings of the ORPRN report signal promising future outcomes, the Workgroup also offers the following focused recommendations for the near future.

Focused recommendations:

1. **Support Oral Health as Part of the Health Care System**. A broader recommendation of the Workgroup was to do more to ensure that both health care leaders and patients understand the important role of oral health to the broader health care system. As one Workgroup Member put it, we need to "put the mouth back in the body." Examples of action for this recommendation could be to promote the role of dentists in preventing substance use disorder where they are prescribing pain medication, or the emerging role of dentists in testing hemoglobin A1C for patients with diabetes.

2. **Cross-Sector Focus Groups on Valuable Data**. Similar to the behavioral health recommendation, the Workgroup recommends that OHA or another entity facilitate one or more cross-sector provider focus groups to identify what oral health data is considered high-value in HIE solutions. The recommended focus groups should include physical health, behavioral health, oral health, long-term post-acute care, and others to ensure the broadest consensus possible.

3. **Support oral health exchange of imaging information**. Per the findings from the 2019 ORPRN report, referenced above, the Workgroup recommends action to support oral health providers in identifying and implementing HIE solutions to exchange x-ray and other imaging data between oral health providers to reduce waste and encourage greater participation in HIE.

4. **Explore HIE Opportunities for Dental Practice Management Solutions**. DPMSs are distinct from EHRs, and future analysis or assessment of dental use of health IT and HIE should look more closely at the HIE functionality of DPMSs and how it differs from EHRs. Future strategies need to explore how HIE solutions can integrate with DPMSs and engage dental providers within their own systems and workflows.

Rural Communities

Background Context

The picture of both EHR and HIE adoption in rural communities is different than more urban environments, as observed by a recent GAO report[6] on HIE adoption (see figure 2). EHR systems are significant expenses for a provider organization and are typically precursors to HIE participation. Providers in more rural communities are often more resource-constrained than large urban health systems. In addition, rural communities tend to face greater geographic distance between patient hubs like hospitals and skilled nursing facilities, requiring different approaches to coordination of transportation needs and follow-up care. In Oregon, many rural communities are close to state borders, and providers there need access to information not only from HIE solutions used in Oregon, but also those used in neighboring states like Washington, Idaho, and/or California.
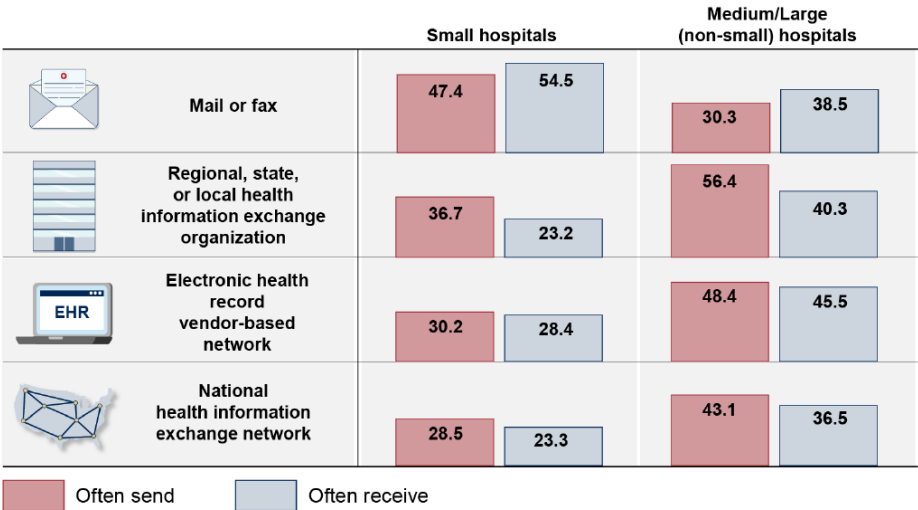
---

[6] United States Government Accountability Office (GAO) recently released a report on the use of HIE nationally.

Exchange Methods Often Used among Acute Care Hospitals by Size, 2021

Figure 2: GAO graphic on data exchange methods of hospitals by size

Rural Community Strategy Recommendations

In addition to the overarching objectives and strategies described above, the Workgroup identified the following specific recommendations for rural community health.

<u>Focused Recommendations:</u>

1. **Focus on closed-loop clinical referrals.** The Workgroup members that live and work in rural communities emphasized the importance of referrals in these regions. As discussed above, many rural providers are smaller entities compared to large urban health systems and this often leads to more outbound referrals to specialists and other services that rural providers cannot offer. For rural providers near state borders, these referrals may be sent to non-Oregon providers. Electronic approaches to clinical referrals need to consider the interoperability between Oregon and non-Oregon providers when patients are crossing state lines in rural areas of Eastern and Southern Oregon. See further discussion on 360X closed-loop referrals below.

2. **Improve broadband access in rural Oregon**. Workgroup members acknowledge that not all communities in Oregon have equitable access to broadband internet. Without it,

many cloud-based HIE solutions will not perform sufficiently—particularly solutions that perform real-time analytics or build custom reports, as they experience timing out and other issues. The Workgroup recommends XXX.

3. **Health IT Workforce Support and Development**. As discussed above in behavioral health strategies, Workgroup members identified the geographic isolation and lack of professional support many health IT workers experience in rural communities. The Workgroup encourages more effort to identify the health IT/HIE contact(s) at rural provider organizations and to provide more professional development opportunities for these workers, including education and training, mentorship, networking, and/or professional advancement opportunities. This recommendation would also extend to supporting organizations in finding and recruiting health IT workforce.

> **Commented [JK2]:** To be discussed as a group at June 16th meeting.

Long-Term Post Acute Care and Community-Based Long-Term Care

> **Commented [JK3]:** To be discussed as a group at June 16th meeting.

Background Context

The HIE Workgroup prioritized long-term and post-acute care providers as notable gaps for HIE adoption in Oregon. Many transitions occur between hospitals and these types of providers and communication errors and lack of HIE can contribute to adverse events for these patients, including readmission to the hospital and/or inability to discharge from the hospital when a provider cannot be found.

Long-Term Post Acute Care providers refer to most nursing homes, including skilled nursing facilities, home health, and other services provided by a licensed medical provider.

Community-Based Long-Term Care providers include but are not limited to adult foster homes, independent and assisted living facilities; memory care facilities, etc.

Like behavioral health, most post-acute care providers were excluded from federal incentives to adopt EHRs. Despite this, today, many skilled nursing facilities and other long-term post-acute care providers do have some form of EHR. Not all of them support interoperability to the degree that ONC requires from certified EHR technology. Noted for future effort was the need to encourage post-acute care EHR vendors to do more to facilitate data sharing and promote interoperability with physical, behavioral, and oral health.

Commonut-based post-acute care providers are more synonymous with other community-based organizations that do not typically use HIPAA-compliant health IT in their operations. Future efforts to promote HIE among these provider types will need to consider the lack of incentives and opportunities they have had in the past to adopt HIE solutions, and the difficulty that will exist in digitizing the information they know and/or collect on the patients they serve.

Post-Acute Care Strategy Recommendations

In addition to the overarching objectives and strategies described above, the Workgroup identified the following specific recommendations for post-acute care. The recommendations specify whether it applies to (as defined above) long-term post-acute care, community-based post-acute care, or both.

Focused Recommendations:

1. **Access to Post-Acute Care services.** HITOC members observed that one of the current challenges to coordinating with post-acute care is understanding what beds are available at different types of facilities. Future work should promote HIE efforts that identify and/or track access to post-acute care services by type and geography. This should include both long-term and community-based post-acute care.
2. **Include post-acute care in state reporting on health IT/HIE use.** Similar to what was discussed for DPMS and oral health above, HIE Workgroup members identified that state efforts to conduct environmental scans or other statewide data reporting on use of EHRs, other health IT, and HIE solutions needs to begin including both long-term and community-based post-acute care providers. Each group is distinct in terms of their adoption of technology and should be considered separately in future efforts.
3. **Explore HIE Opportunities for Post-Acute Care.** HITOC and the HIE Workgroup identified promising focus areas for future HIE use case development, including supporting medication reconciliation when patients transition from the hospital to a post-acute care facility. One member specifically called out medication management—across all provider types—during end of life care. Special attention needs to be paid to community-based post-acute care providers for this recommendation, as for many use cases that involve these providers, the information is likely manually collected and not yet digitized.

Other Strategies: Closed Loop Clinical Referrals

Background Context

Early in the HIE Workgroup's discussions, it became evident that broad use of closed-loop clinical referrals was a desired outcome of HIE in Oregon. Closed-loop referrals were noted as critical to helping achieve health care transformation efforts like value-based payments. A clinical referral is defined as a patient's transfer from one health care provider to another. Clinical referrals are key to how a patient and their primary care provider interact with specialists and other providers who are needed to help address the patient's care. From an HIE perspective, clinical referrals also create a HIPAA relationship between a provider and a patient—even if the provider has not yet treated the patient. Referrals become "closed loop" when each step in the referral process—the initial outbound referral, the response from a

recipient provider, and the outcome of the service—are all transparent and communicated electronically to both sides of the referral pathway. See Figure 3 for a graphical explanation.
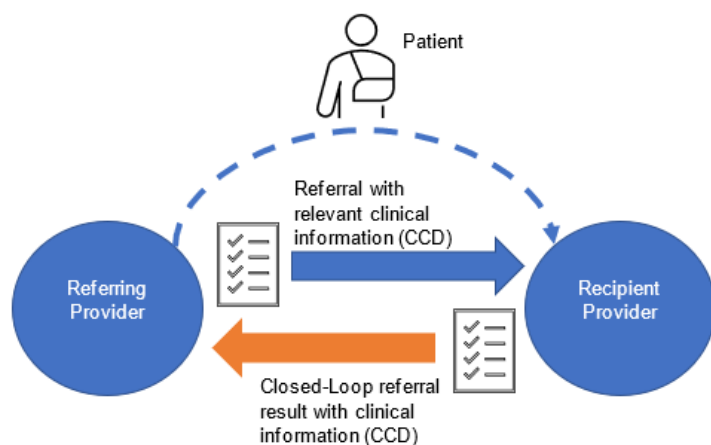

Figure 3: Basic closed-loop clinical referral process

The HIE Workgroup discussed different approaches that have been taken in the past to achieve broadly adopted closed-loop clinical referrals. The approaches essentially fall into two categories: 1) vendor-driven approaches where each participant in the closed-loop referral must use a common platform; and 2) federated approaches, where participants may stay within their own system (e.g., their EHR), but referrals from external EHRs or other systems are integrated seamlessly. Given the wide variety of EHRs in use in Oregon already, the Workgroup focused its discussion on federated solutions, which can facilitate communication between these different EHRs (and instances of EHRs, which can also differ significantly).

360X

One federated approach to closed-loop clinical referrals is called the 360X project. Initiated in 2012 by ONC during the advent of EHRs and the concept of interoperability, 360X has now matured to the point where Oregon providers are beginning to pilot and test this functionality between large EHR vendors. The advantage of 360X is that it leverages federal standards that are already built into ONC's technical requirements for EHRs. Direct secure messaging, HL7 admit discharge transfer (ADT) messages, consolidated clinical data architecture (C-CDA), and cross-enterprise document media interchange (XDM) meta data are already established components of HIE across the state of Oregon. 360X leverages these standards and uses

them to accomplish a closed-loop clinical referral from one EHR system (e.g., a primary care provider) to another EHR system (e.g., used by a specialist like a behavioral health provider).

The HIE Workgroup heard from multiple efforts to implement 360X in Oregon. First, through a pilot project in Central Oregon, the Workgroup learned that 360X-like referrals are already live between two medical providers in that region, one using Epic EHR and the other using eClinicalWorks EHR. The Workgroup also heard from OCHIN, a national provider of Epic for community health centers and other providers, on their 360X pilot in Portland between OCHIN Epic and NetSmart MyAvatar EHR system (a prominent EHR nationally, used mostly by behavioral health providers). The OCHIN pilot is the first beginning-to-end implementation of 360X in the nation, hence the importance of this project for Oregon's HIE strategy in the future.

Closed-Loop Clinical Referral Strategy Recommendations

Success outcomes:

1. Increase the use of electronic, closed-loop referrals for clinical referrals between primary care providers and specialists (including behavioral health) using existing technology and leveraging federal data standards.

Strategy Recommendations:

1. **Monitor progress toward implementation of 360X for the top EHRs used in the following categories: primary care, behavioral health, and oral health**. As discussed above, 360X is ready for piloting and testing in the field with Oregon providers serving as the first to test 360X closed-loop clinical referrals anywhere in the nation. A key barrier to broader adoption is transparency across EHR vendors in exactly which components of 360X they currently support. The HL7 ADT messages back from recipient to initial referrer is a key area that not all certified EHR technologies support today. The Workgroup recommends that some entity—public or private—conduct the work necessary to provide this transparency and help health IT and HIE purchasers make informed decisions and promote greater use of 360X in the field. Notably, HITOC members identified that future efforts to promote 360X need to also account for how oral health providers not using EHRs could benefit, as well as the potential benefit to consumers in accessing their own health information related to referrals.

2. **Provide funding to support additional 360X pilots**. Funding would help to support participating providers and system partners take the time necessary to establish and implement 360X within their environments (funding should not be made to EHR or other technology vendors). Funds could be used to compensate organizations for the time and effort needed to work through operational issues, including the creation of templates for different referral recipients. For example, a gastroenterologist requires different information in a referral compared to a behavioral health provider. Different

components of a C-CDA can provide this information but automating which information is the most relevant will be key to a successful 360X workflow.

Oregon has already accomplished many HIE successes to support care coordination efforts across the state. Achieving progress on closed-loop clinical electronic referrals, in addition to the other recommendations included in this concept paper, would benefit these efforts further. Many care teams today are effectively using HIE solutions to connect on patients and the inclusion of more diverse providers, including behavioral health, oral health, and rural community providers, as well as long-term and community-based post-acute care, will only allow Oregon to progress further in serving patients' clinical needs.

You can get this document in other languages, large print, braille or a format you prefer free of charge. Contact Luke Glowasky at Luke.A.Glowasky@oha.oregon.gov or 503-576-9041 (voice and text). We accept all relay calls.