

ORACLE HEALTH INFORMATION EXCHANGE: SECURE, SEAMLESS DATA SHARING



Healthcare organizations and governmental agencies around the world envision the secure electronic exchange of healthcare information. Oracle Health Information Exchange solutions enable these stakeholders to realize the promise of that vision and to move forward on their initiatives.

Oracle Health Information Exchange is a solution built to optimize the secure exchange of electronic health information. Here are the key components:

- **Oracle Health Sciences Information Manager** is a performance-optimized solution for standards-based health record locator services and governance.
- **Oracle Health Sciences Information Gateway** enables secure, health policy-based cross-community communication of health data.
- **Oracle Healthcare Master Person Index** provides a single point of reference to a patient, provider or other healthcare entity within a healthcare organization or across HIE networks
- **Oracle Healthcare Data Repository** provides clinical data and document repository functions including the ability to produce and consume HL7 CCD-compliant patient summary documents.

Health information exchange: Progress on a global scale

As healthcare costs continue to spiral upwards, and higher levels of care and access remain elusive for many countries, providers and governmental agencies alike are actively pursuing initiatives focused on health information exchange (HIE)—the seamless, secure, electronic sharing of health data across networks. Many challenges remain, but the progress is encouraging: In the U.S., with the guidance of Nationwide Health Information Network (NwHIN) standards, there are currently more than 250 active HIE initiatives, with the majority of these operational (i.e., currently transmitting data that is being used by stakeholders). Major HIE initiatives in Singapore, the U.K., Australia, Canada, and Spain are being implemented, and like those in the U.S., they are exchanging data between stakeholders. Now more than ever, it's clear that the right information, in the right hands at the right time, can have a dramatic impact both on quality of care and the cost of delivering that care.

Oracle Health Information Exchange: An Integrated Set of Solutions for HIE

Helping to drive this progress is Oracle Health Information Exchange, an extensible, standards-based solution built upon a reliable technology infrastructure for the secure exchange of electronic health information. These solutions are empowering healthcare entities globally to reduce costs; enhance revenues; and, most importantly, improve patient care.

Further, they are helping providers in three vital areas: complying with governmental regulations; realizing a higher level of personalized healthcare; and in the U.S., meeting “meaningful use” requirements.

- **Governance and compliance:** Moving forward, providers will experience even higher demands from federal and local agencies to establish and maintain compliance with an evolving range of regulatory requirements. Oracle Health Information Exchange solutions enable these organizations to manage risk by



implementing systems to safeguard critical patient data-while ensuring these patients access to their own health information. They also help providers with auditing and enforcement of government-mandated e-trading partner legal contracts and lowering the risk of collaboration with business partners.

- **Personalized healthcare:** The secure sharing of health data across networks can help providers move toward a model of personalized healthcare, whereby they can better meet patients' expectations for transparency and security-and securely utilize longitudinal patient information (such as disease states or reactions to certain medicines) to provide higher-quality care. Oracle Health Information Exchange solutions can also enable providers to support translational research by getting critical data to-and from-the point of care, and to establish the consent management needed to deliver care that is authorized and personalized.

- **Meaningful use implementation:** In the U.S., the American Recovery and Reinvestment Act of 2009 (ARRA) has set aside funding to help healthcare organizations with the meaningful use of health information technology (HIT), with the ultimate goal of increasing efficiencies in healthcare while improving care delivery and patient choice. The ARRA incentives commenced in 2011, and these incentives -along with the specter of government-mandated reductions in Medicare reimbursements beginning in 2015 are driving organizations to establish secure sharing of health information.

Oracle Health Information Exchange solution will give providers the ability to comply with meaningful use requirements regarding the collection, transformation, and aggregation of data, and to substantiate their progress in care quality and the integration of HIT.

The key components of the Oracle Health Information Exchange are:

- **Oracle Health Sciences Information Manager**
- **Oracle Health Sciences Information Gateway**
- **Oracle Healthcare Master Person Index**
- **Oracle Healthcare Data Repository**
- **Portals and Applications**

Oracle Health Sciences Information Manager

Oracle Health Sciences Information Manager supports secure electronic communication of health information. Its architecture includes support for DMZ Gateway and datacenter adapter components, along with adapter plug-in integrations that provide both data persistence capabilities and integration with consumer/provider end-user applications. In various implementation combinations, Oracle Health Sciences Information Manager supports federated HIE, including enterprise, regional, statewide, or NwHIN HIE models that might be highly distributed, highly centralized, or hybrid in nature.

Oracle Health Sciences Information Manager provides a range of standards-based Web services to HIE applications, in a performance-optimized solution.

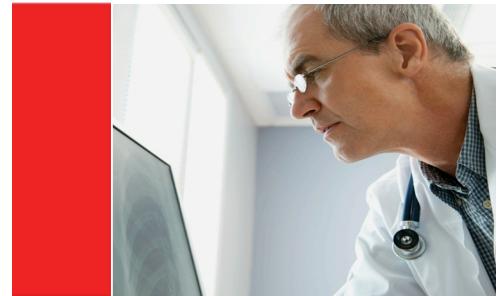
Oracle Health Sciences Information Manager includes these key components:

- **Health Record Locator:** enables the registering of documents by tracking document location. It supports centralized, federated, and hybrid data models, and it facilitates interaction between the master patient index (MPI), registry, and healthcare data repository in the query-and-response process.
- **Health Policy Monitor** aids providers in complying with governmental regulations, by centralizing EHR-access audit records and providing data to monitoring tools for the privacy officer.

Oracle Health Sciences Information Gateway

Oracle Health Sciences Information Gateway orchestrates secure, health policy-based communication over the Internet for the protection in-flight of health information. This solution includes these two key components:

- **DMZ Gateway** protects electronic health information by enforcing privacy policies regarding release of information, encrypting information in-flight over the Internet and ensuring NwHIN compatibility.
- **Datacenter adapter** enables the standardized orchestration of HIE business processes and supports release-of-information policies. It also ensures the encryption of information in-flight through the firewall and inside the datacenter.



Oracle Healthcare Master Person Index

Oracle Healthcare Master Person Index provides a single point of reference to a patient, clinician, payer, or other healthcare entity within a healthcare organization or across HIE networks. It's a comprehensive offering for the standardization, matching, cleansing, and profiling of individual entities, ensuring that data is capable of being retrieved regardless of how many systems reference this entity with different identifiers or names. The result: a single source of truth for person management.

Oracle Healthcare Master Person Index offers a variety of configurable, single-view solutions with a services-enabled approach. It is a customizable standards-based solution tightly integrated with products in Oracle's complete HIE solution and technology stack and interoperates easily with third-party products.

Oracle Healthcare Master Person Index includes support for Person/Patient and Provider entities. Person Index covers all and any individuals including patients. Provider Index covers individual and organizational providers. These solutions combine best practice usage and requirements from a variety of standards including Integrating the Healthcare Enterprise (IHE) profiles, U.S. National Provider Identifier, Australian standard for Healthcare Provider and Client Identification.

Oracle Healthcare Data Repository

Oracle Healthcare Data Repository provides organizations and HIEs with "gold-standard" terminology-normalization functionality, supporting critical requirements for data aggregation and improved data quality. It enables a multiuse repository that supports a variety of deployment options such as document repository, comprehensive clinical data repository, HIE infrastructure, and application development. And it improves access to critical information, enabling healthcare analytics, detailed reporting, and timely information exchange with both internal and external healthcare organizations.

Oracle Healthcare Data Repository unlocks data from isolated systems by serving as the platform for data consolidation and for building custom healthcare applications. Oracle Healthcare Data Repository can serve as the single normalized store for data that can be used for care provision and as a source of data for research. In addition it also serves as an operational data store to manage the detailed source data from disparate sources with diverse terminologies.

Portals and Applications

Portals and Applications present the business process GUIs for consumers, providers, and other health information stakeholders. They are supported by Oracle Health Information Exchange solutions in an open, flexible, standards-based presentation environment.

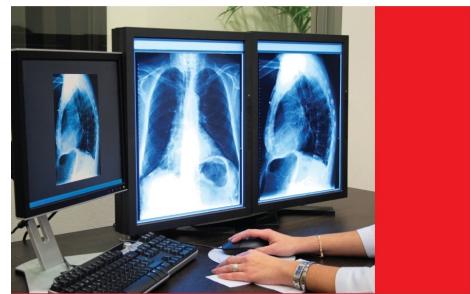
Oracle is the leading provider of life sciences applications, which are increasingly aligned and integrated with

evolutions in HIE, patient care, and healthcare analytic applications.

Oracle Health Information Exchange: Efficiencies across a range of stakeholders

Oracle Health Information Exchange offers significant benefits to a range of stakeholders:

- For patients: It enables secure, confidential, and timely access to patient information across providers, for delivery of high quality care.
- For providers: It accelerates the implementation of meaningful use objectives through scalable health information data capture, data transformation, data persistence, and data retrieval services. It also provides a platform for personalized, patient-centric healthcare.
- For clinical researchers: It ensures that optimal recruitment into clinical research is supported by consumer consent for release of health information and a complete set of phenotypic information.
- For academia and life sciences companies: It reduces the cost and time needed to obtain consumer consent for release of health information for research purposes, thereby improving the research-dollar ROI. It also enables "cohort identification" for clinical trials and provides patient registries and a foundation for quality/efficiency research.
- For payers: It provides key benchmark data, enabling them to perform analysis versus peers using de-identified data. It also enables payers to better understand future healthcare trends.
- For academic medical centers: It facilitates HIE for research purposes and patient care purposes at a very low IT cost.



A Value-Added Partnership with Oracle

Oracle brings unmatched resources and experience to the challenge of improving healthcare globally. We offer our partners the benefit of our targeted investments through collaborative relationship models; the open, standards-based products that drive transformation and innovation; and a commitment to a long-term enterprise roadmap designed to realize vision and value.

Consultants from Oracle Health Sciences are part of a global consulting organization with extensive domain expertise and proven experience in implementing Oracle's healthcare and life sciences solutions. Oracle's consultants complement Oracle Health Sciences products to provide a comprehensive solution, helping organizations to:

- Reduce project risk and improve quality with Oracle's distinctive resources and expertise
- Diminish total cost of ownership
- Realize faster time to value by leveraging Oracle's unique library of consulting assets and accelerators
- Address current and future challenges and opportunities.

Solutions for an urgent mission

The establishment of secure electronic sharing of health information is an urgent global mission-for both medical and business reasons-yet many challenges remain. With the Oracle Health Information Exchange set of solutions, healthcare organizations will address these challenges, resulting in increased quality of care that is delivered to patients and increased profitability through better access to high quality healthcare data. All of these efforts help improve the healthcare organizations capacity to compete in a rapidly evolving environment.

CONTACT US

To learn more:

Join us for a Web-based overview on Oracle Healthcare Information Exchange solutions. See www.oracle.com/us/industries/healthcare.

call **+1.800.633.0738** to speak with an Oracle representative.

Outside North America, visit oracle.com/corporate/contact to find the phone number for your local Oracle office



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