



Electronic Health Records

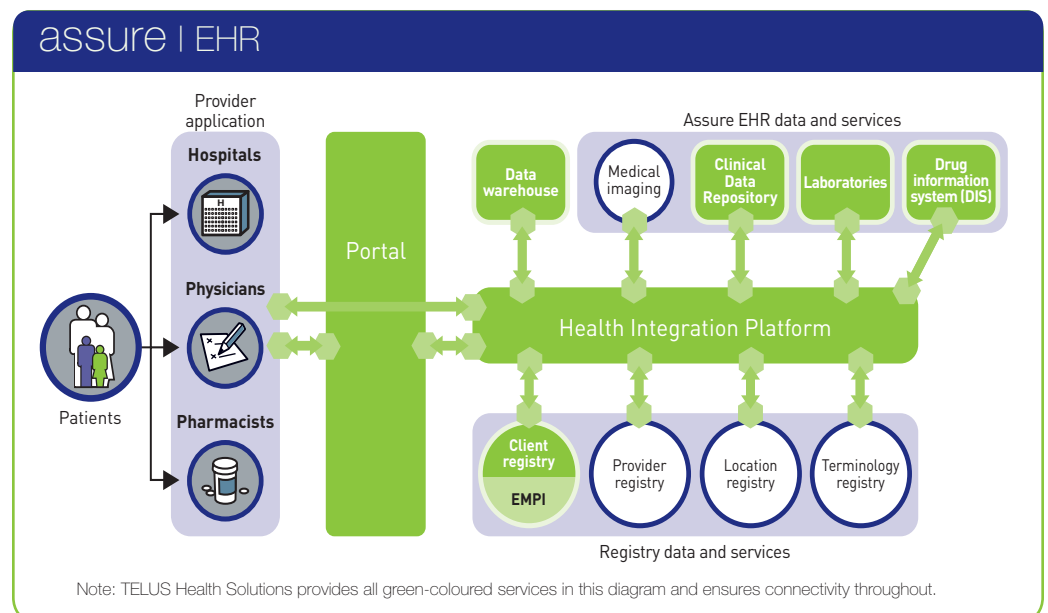
Powering interaction

Providing timely access to complete patient health information

TELUS Health Solutions assure | EHR product suite is helping save lives and provide better patient care in North America and Australia. Physicians, nurses and other care providers rely on a patient-centric view in assure | EHR to make informed decisions, order tests, review results and securely manage the efficient delivery of care.

assure | EHR gives users secure web-based access to patient medical information from multiple sources, including key information from the Electronic Medical Record (EMR). Easy to use, assure | EHR is accessible from any web browser. Patient and other data is secure, continuously updated and available in real time at the point-of-care.

assure | EHR meets HL7v3 standards for the exchange, integration, sharing and retrieval of electronic health information. Open architecture and scalability make assure | EHR a true cross-platform suite designed to support future needs as they arise.





Connecting healthcare providers improves healthcare

aSSURE | EHR enables Regional Health Information Organizations (RHIOs), Health Maintenance Organizations (HMOs), hospital groups and clinics to improve communication and/or create a Health Information Exchange (HIE) between hospitals and physicians. It facilitates referrals by making patient information readily available to relevant medical users. Sharing personal health information within a regional network enables healthcare professionals to easily track and manage chronic diseases and alert patients to potentially serious findings. It also ensures that physicians, regardless of their location, have the accurate, up-to-date patient information they need to prevent, for example, serious adverse drug interactions or other such lapses.

aSSURE | EHR also enables the collection of data for uses other than direct patient care, such as quality improvement, outcome reporting, resource management, public health communicable disease surveillance, demographic information and other non-clinical administrative data.

Why deploy an aSSURE | EHR?

- **Proven** in North America and Australia, aSSURE | EHR effectively serves millions of citizens every day.
- **Open** architecture protects your IT investment. aSSURE | EHR uses industry-standard tools and open-source components to make it platform-independent.
- **Standards-based** HL7v3 messaging protocol was pioneered by TELUS Health Solutions and is accepted worldwide. aSSURE | EHR adheres to HL7v3 standards to provide secure access to timely, accurate health data.
- **Modular and scalable**, aSSURE | EHR's infrastructure components work together seamlessly yet can be implemented individually. aSSURE | EHR is scalable to support any size organization, today and tomorrow.

Proven

Open

Standards-based

Modular

Scalable

The aSSURE | EHR suite

The aSSURE | EHR product suite is comprised of leading technologies, best practices and industry knowledge and standards.

- The Infostructure, created by the broad connectivity of the **Health Integration Platform**, brings together all information sources and consumers.
- The **Enterprise Master Patient Index** (EMPI) guarantees complete, accurate patient records by consolidating duplicate patient records.
- The web-based **Portal** provides easy and secure access, from any location via a web browser, to all patient-centric health information in the aSSURE | EHR.
- The **Clinical Data Repository** provides clinically relevant information from encounters and patient notes.
- The **Drug Information System** delivers better drug management, prescribing and fulfillment to physicians and pharmacists.
- The **Laboratory Results Repository** collects, normalizes and stores data from local or regional Laboratory Information Systems.
- The **Health Data Warehouse** solution provides essential data analysis and reporting capabilities.

Health Integration Platform

Securely provides broad connectivity

Through the standardization of application interfaces, the Health Integration Platform (HIP) module of aSSURE | EHR enables pharmacists, physicians and other healthcare professionals secure access to information in a patient's electronic health record.

The Health Integration Platform is the component of the interface layer that provides logical connections between all aSSURE | EHR components. The Longitudinal Record Services (LRS) is the component of the HIP that handles the complexities of aggregating health information from various data sources.



The assure | EHR Health Integration Platform solution

- **Supports** authorization and authentication of users and applications.
- **Guarantees** delivery of messages between components and users.
- **Orchestrates** the execution of work according to a predetermined workflow.
- **Enables** the rapid flow of information to different levels (practices, organizations, regions, states, provinces).
- **Securely connects** all systems involved in electronic health records, including such systems as registries, data warehouses, repositories, clinical systems and points-of-services.
- **Complies** with the Infoway Health Integration Access Layer (HIAL) model.

Enterprise Master Patient Index

Better access, improved information

The EMPI component of assure | EHR easily integrates existing patient records and makes sure that updates are merged with the correct patient records to provide an accurate view of patient information. The system automatically checks and eliminates duplicate transactions and patient records. It includes a merge/unmerge feature.

Consolidated access to patient information improves hospital management, reduces duplication, provides for faster, more informed care and less frustration for patients.

assure | EHR's EMPI

Rationalizes all the data in the health record. **Resolves** duplicates.

Ensures accurate and complete information.

Data Standardization + Shared ELECTRONIC ACCESS =

Better Data

Better Management

Better Clinical Care

**assure | EHR's
health integration
platform
represented
the first
North American
implementation
of HL7v3
messaging
standard.**

Portal

User-friendly web access for better decisions

The aSSURE | EHR Portal is a web application that lets users login, search, query and access patient information across all the repositories of aSSURE | EHR. Navigation is patient-centric.

The aSSURE | EHR Portal displays patient data at the point-of-care in a smart summary that users can personalize for their own unique practice patterns. From the summary level, users can quickly and easily drill down for more detailed information.

Benefits of the aSSURE | EHR Portal

- **Consolidates** views of patient records across broad regions and jurisdictions.
- **Provides** enhanced ability to process larger amounts of information through graphical data visualization.
- **Builds efficiencies** and ease of use into critical process.
- **Web browser accessible** from any location, including mobile and wireless, so it is available when needed.
- Intuitive **alert summary** lets users drill down for more detail.
- **Improves** clinician workflow immediately with all data available.
- Visual cues **guide** clinicians towards important exceptions.
- **Enables** clinicians to practice care beyond the boundaries of the traditional medical record.

Clinical Data Repository

Ensuring relevant data is available for improved patient management

The **ASSURE** | EHR Clinical Data Repository manages encounter histories, patient notes, clinical documentation and other clinical data not stored in the other EHR repositories. It is a robust, expandable and scalable repository based on a data model derived from years of experience with the **OACIS** | EMR suite. By providing a single shared health record for each patient, **ASSURE** | EHR provides region-wide clinical tracking across multiple hospitals, physicians' offices and care facilities.

Hospital personnel and physicians can immediately see the original diagnosis, description of symptoms, patient notes and allergies of a newly transferred patient. Hospitals do not need to maintain duplicate records.

ASSURE | EHR makes clinically relevant data available through the Clinical Data Repository – information such as encounter history, discharge summaries, critical conditions, circle of care, diagnosis, observations, wait list information and more. It also links to such public health information as immunization data, communicable disease cases, infectious disease outbreaks and public health alerts.

The TELUS Health Solutions **ASSURE** Clinical Data Repository

- **Conforms** to HL7v3 messaging standards.
- **Delivers** comprehensive patient information to allow for collaboration.
- **Extensible** data model to support evolution and customization.



Drug Information System

Excellent pharmacist-physician collaboration

The electronic exchange of information between pharmacists and physicians helps them make clinical decisions that improve the quality of care. The assure | EHR Drug Information System (DIS) module gives health professionals real-time access to a patient's complete drug profile. The DIS module of assure | EHR is a data base housing prescriptions as well as their effective dosages for patients within the given jurisdiction. Each patient's profile includes information on allergies, intolerances, vaccinations and counter-indications, as well as pertinent clinical observations.

Drug Utilization Review (DUR)

The assure | EHR DIS includes a drug review function that is available to both the prescribing physician and the pharmacist. Medication is evaluated according to such criteria as dosage, interaction with other medications, duplication of therapies, patient characteristics (sex, age), physical state (pregnant, nursing). This function alerts both physician and pharmacist to conflicts that may occur because of a patient's current medications or personal profile.

Improved medical administration and management

The assure | EHR Drug Information System is the right choice.

- **Selected** by Canadian jurisdictions as part of one of the pan-Canadian electronic record solutions.
- **Meets** Canadian Infoway requirements – one of the first national sets of standards in the world that ensures the secure sharing of electronic health records across an entire country.
- **Conforms** to standardized HL7v3 norms providing secure access to timely, accurate health data.
- **Delivers** quick, concrete results to pharmacists and physicians and integrates to their existing tools.



Laboratory Results Repository

Sharing, enhancing knowledge

The aSSURE | EHR Laboratory Results Repository manages laboratory results and orders from Point of Service Laboratory systems. It is based on scalable and expandable technology.

aSSURE | EHR's Laboratory Results Repository gives clinicians rapid access to lab results and data on individual patients no matter where the testing was performed. The Laboratory Results Repository collects, normalizes and stores data and makes that data available via the aSSURE | EHR Portal. A typical customer deploys the laboratory repository to support laboratory results of all types, including general laboratory, microbiology and pathology.

The aSSURE | EHR Laboratory Results Repository

- **Supports** HL7v3 messages for receiving and requesting lab data.
- **Standardizes** results information from multiple source systems.
- **Provides** ordering support and coordination.

Health Data Warehouse

Facilitates the creation and distribution of end-user reports over the web

ASSURE | EHR includes tools for easy access to data, data analysis and reporting. It provides advanced data analysis capabilities to clinical researchers, business executives and planning personnel. Non-technical users can also query, review and analyze substantial amounts of clinical and operations data through ASSURE | EHR's Health Data Warehouse.

Here are just a few of the potential uses of ASSURE | EHR's Health Data Warehouse.

- **Clinical** and population research
- **Case management** and decision support
- **Public** and environmental health studies
- Disease **surveillance**
- Staff productivity **improvements**

The design approach is based on Conformed Dimension architecture best practices to allow for integration of new repositories into the single health data warehouse solution.

The data is fed to the data warehouse from the various sources exclusively through the ASSURE | EHR Health Integration Platform. ETL services manage the extraction, transformation and loading of data to the various levels of the Data Warehouse. The data is physically organized into data models called Data Marts that reside on an Oracle 10 G data base. In addition, the system provides masking capabilities to de-identify data.

Change Management

An integral part of each project

ASSURE | EHR's Change Management programs draw from a wealth of experience and best practices used over our many successful healthcare initiatives. Our interactive and multi-path approach to change management engages stakeholders at multiple levels and points in the change management process and through multiple media. Key to this strategy is the creation of a well-articulated value proposition message directed to each stakeholder group as part of a targeted communication plan.

ASSURE | EHR's Change Management program is integrated within the deployment phase of different projects. Its proven approach aims to create conditions that maximize openness to change, and ultimately, adhesion by different participating parties. This flexible approach adapts easily to the specific needs of different environments within the health sector.

Facilitates rapid adoption by healthcare professionals through a proven methodology.





Information for life

TELUS Health Solutions is a leading provider of Information and Communication Technology (ICT) for the health industry. We develop, implement and manage healthcare applications, ICT processes and industry consulting services that optimize the efficiency of caregivers, drive better decisions, and foster prevention in the health system.

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