MEDITECH AND INTEROPERABILITY

Keeping You Connected

March 2018

EXECUTIVE SUMMARY

MEDITECH's interoperability solutions improve patient care and provide the foundation for a solid population health strategy by supporting the active exchange of EHR data across care settings of all sizes. Our commitment to interoperability includes membership in the CommonWell Health Alliance® and the Argonaut Project, which bring a multitude of exchange possibilities. MEDITECH's interoperability initiatives, when combined, average more than 300 billion data transactions per year.

Healthcare organizations using our interoperable solutions meet and exceed regulatory requirements by exchanging C-CDA medical summaries and consuming discrete data, utilizing FHIR APIs, and communicating with public health agencies for immunizations, syndromic surveillance, and registries. Organizations also routinely use MEDITECH's industry-standard capabilities to participate in health information exchange (HIE) networks, perform context-aware launching to and from other vendors' platforms, manage electronic ordering at physician practices, reconcile clinical information across care settings, support the Blue Button® initiative, and electronically access clinical decision support.

A positive consumer experience means putting patients at the center of their care. MEDITECH provides the means with FHIR APIs and the active exchange of patient information to support apps and consumer devices, while presenting patients with summary data in their portal. Interoperability at work is about supporting a frictionless patient experience.

BUSINESS CHALLENGE

Healthcare organizations struggle to match patient data and locate records in a fragmented environment due to barriers in technology and processes that inhibit health data exchange and silo data. Adding to the challenge are regulatory requirements, which demand more attention towards data sharing and use of established standards to meet benchmarks and reporting mandates.

To meet these challenges, MEDITECH's interoperability strategy is to enhance technology in support of care coordination, consumer engagement, and patient safety, while aligning with national and international goals and adhering to nationally recognized standards to deliver cost-efficient, patient-centered care. In addition, interoperability lays the foundation for initiatives such as population health, precision medicine, and research.

MEDITECH's EHR complies with all government mandates, ensuring our customers meet regulatory requirements and deploy cost-effective, usable solutions that encourage data exchange. Our solutions meet all Meaningful Use requirements and are certified under the ONC-ATCB program, as well as the 2014 and 2015 Edition Electronic Health Record certification criteria.

True interoperability is the availability and exchange of data across platforms and systems, for timely decision making, regardless of care setting. This seamless connectivity is what drives efficient, patient-centered care. Let MEDITECH show you how we can help your organization achieve true interoperability success.

HOW IS MEDITECH ADVANCING INTEROPERABILITY?

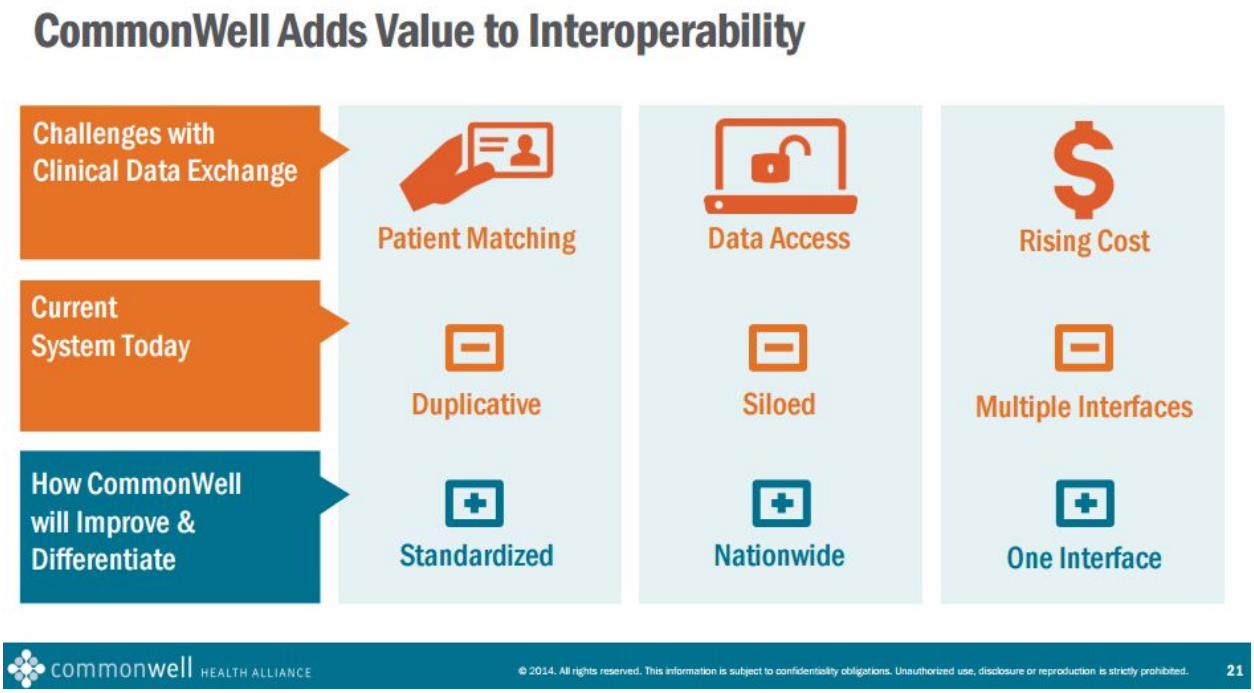
MEDITECH has a long history of supporting interoperability initiatives, advocating for the use of common standards, and promoting information sharing. We are connecting entities locally and nationwide.

CommonWell Health Alliance

CommonWell Health Alliance was formed to develop and deploy a vendor-neutral platform that enables scalable, secure, and reliable interoperability. The platform enables health data exchange nationwide to improve patient care quality and safety. As a Contributor Member of CommonWell, MEDITECH has the unique opportunity to help steer the future direction of this collaboration, and our customers are in a prime position to take advantage of CommonWell services, which include sharing medical summaries with a greater number of EHRs nationwide. MEDITECH is initially planning to deploy CommonWell Health Alliance services - patient enrollment and FHIR document exchange - in the first part of 2018 to customers on our latest release.

Since its founding, CommonWell has grown to over 70 members, representing health IT vendors and industry organizations. Provider usability is crucial, and CommonWell is making strides to ensure the services seamlessly weave into providers' and administrators' workflows. The Alliance

contributes to the continued development and utilization of APIs for data exchange, which means a brighter interoperability future for MEDITECH customers.



The Argonaut Project

The Argonaut Project was formed by EHR vendors eager to speed the development and adoption of the HL7® FHIR® standard across the healthcare industry. As the next-generation framework for interoperability, FHIR uses the latest web-based standards.

A collaborator in the Argonaut Project since its inception, MEDITECH is committed to increasing our customers' data exchange avenues. FHIR is a RESTful API, which leverages the latest web standards, has similarities to internet conventions, and is widely adopted in other industries. Known for its flexibility in accessing and delivering data, the technology can be applied to web-based applications, mobile devices, the cloud, and EHRs.

The Argonaut Project seeks to develop FHIR-based services to expand the sharing of EHRs. Part of MEDITECH's Meaningful Use Stage 3 release includes API infrastructure to support initial FHIR transactions.

APIs and Apps

APIs play an important role for patients accessing and generating their own health data using apps. Through collaboration with Validic, PGHD is integrated into MEDITECH's Patient & Consumer Health Portal via an API from patients' personal devices.

MEDITECH is also providing infrastructure to support FHIR-based APIs to serve the requirements of Meaningful Use Stage 3 and beyond. MEDITECH's APIs will be developed in accordance with The Argonaut Project's implementation guide for FHIR; a consistent and recognized standard. All

APIs will be published by MEDITECH and made available in the API infrastructure for app development and testing by both MEDITECH and third-parties via a “sandbox.”

In addition to the Meaningful Use Stage 3 requirement to allow access for patient-facing apps, MEDITECH has developed its own apps to supplement both the patient and clinician experiences:

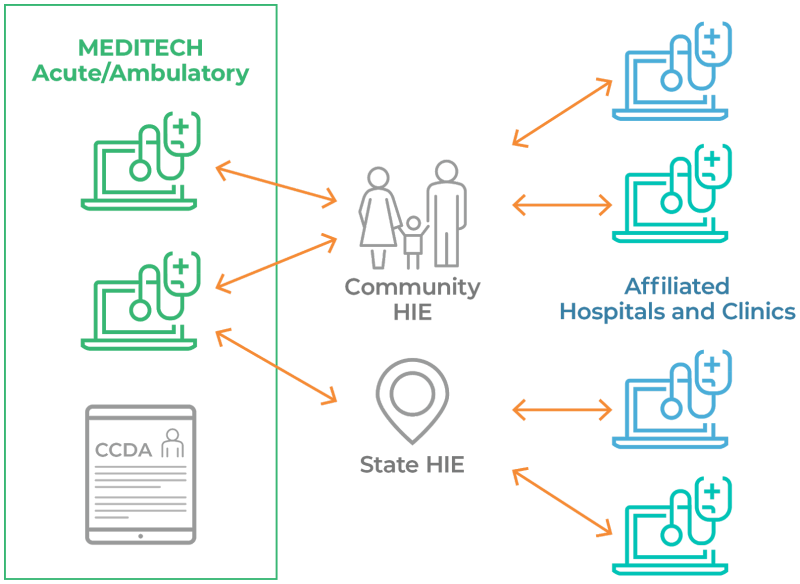
MHealth - an app which gives patients direct access to their information within MEDITECH’s Patient & Consumer Portal.

MConnect - (coming soon) an app which allows clinicians to connect to MEDITECH’s web products.

All MEDITECH app offerings are available in both the Apple Store and the Google Play store.

C-CDA

MEDITECH’s Meaningful Use Stage 3 release includes the latest mandated C-CDA version (v2.1), which will support additional data categories, content changes, and document types. Our support of C-CDA architecture includes a CCD® interface suite that enables many hospitals and ambulatory care facilities to exchange care summaries at the point of care using industry-standard protocols from HL7, IHE, and ONC. Clinicians use MEDITECH’s CCD interface exchange suite to view relevant information without disruption. Flexible workflows present clinicians with pertinent sections of the received information, or the whole document, in various formats, making it easy to familiarize themselves with a patient’s past history. Clinicians also have the option to reconcile medications, allergies, and problems directly from imported summaries.



Salinas Valley Memorial Healthcare System

Central California’s Salinas Valley Memorial Healthcare System, Natividad Medical Center, and Montage Health implemented a county-wide Health Information Exchange (HIE) named **Central Coast Health Connect**. This collaborative effort was developed to promote cross-system exchange of patient data to better serve the population shared among these unaffiliated organizations.

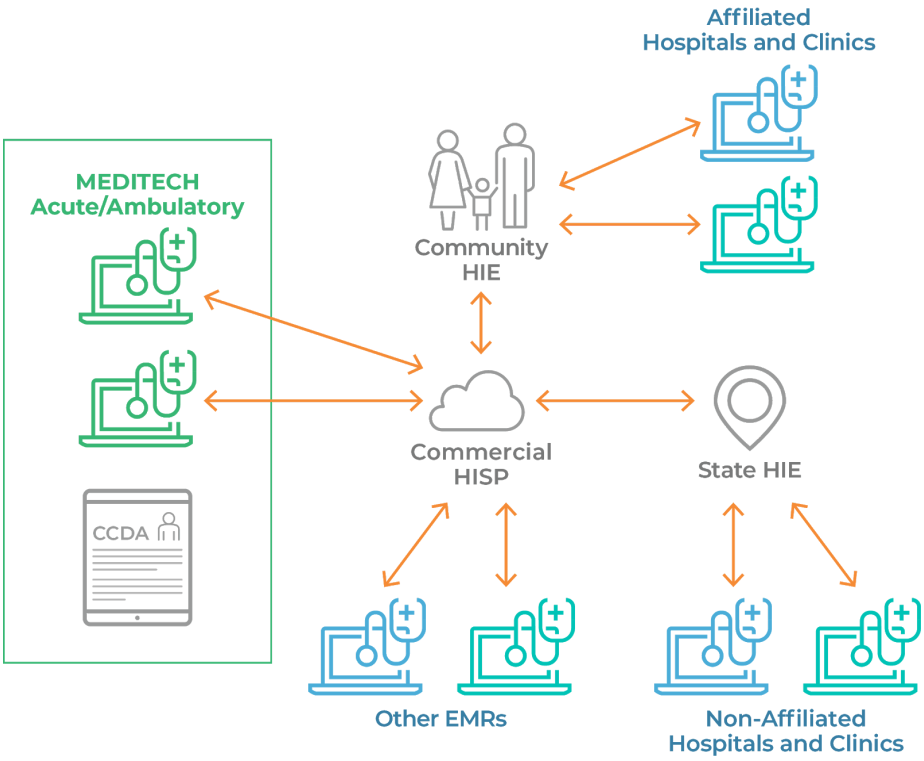
Currently, the HIE is populated with data sent from these hospitals and over 40 clinics, urgent care, primary care, and specialty care locations. Additionally, there are a number of providers and clinics that only receive data from the HIE. Two of the three hospitals utilize MEDITECH, and throughout all the contributing facilities there are a total of eight different EHR vendors. There are three functional components included in the HIE:

- A consolidated medical record from sources across the county.
- Results and report distribution to providers.
- A patient portal and a provider portal.

Discover the details of the collaboration in this **blog post**.

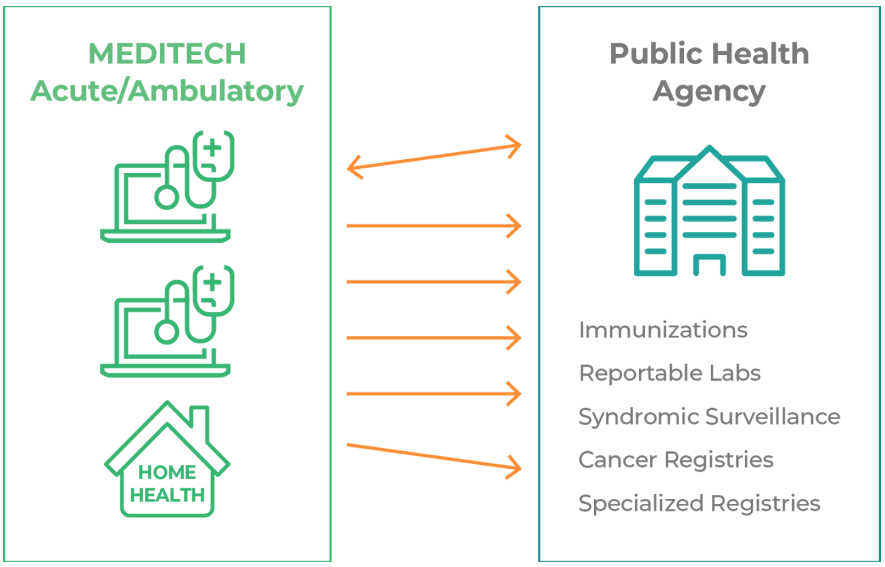
Direct Messaging

MEDITECH's CCD interface suite supports all required and optional methods for submission and receipt of C-CDA summaries via the Direct Messaging toolset. This workflow provides additional pathways for exchanging medical summaries each time a patient transitions between points of care, whether inside or outside of your HIE network.



Public Health Reporting

MEDITECH is involved in all state initiatives requiring organizations to report biosurveillance data, immunization records, reportable lab results, and cancer case documentation to public health reporting agencies. HL7 interfaces are available and modified according to states' specifications. MEDITECH's Emergency Department Management and inpatient applications such as Nursing and Laboratory yield data that supports our nation's public health reporting efforts.



Meaningful Use Stage 3 introduces new requirements for query-based bidirectional immunization exchange, syndromic surveillance, cancer and other registries, and Antimicrobial Use/Resistance Reporting for public health. MEDITECH supports these initiatives as part of its Meaningful Use software enhancement.

Independent Physician Practice Interoperability

Physician practices that do not use MEDITECH's Ambulatory EHR can exchange data via a variety of interoperable solutions. We have worked with many ambulatory EHR vendors to ensure seamless reporting and referral order services through a secure data exchange, from exchanging medical summaries and referrals to processing laboratory and radiology results ordered remotely. We also work with Forward Advantage® to manage electronic orders from ambulatory EHRs. The Data Express® solution provides a "one-to-many" interface suite, built on experience gained from connecting over 80 industry- standard and custom EHR solutions.

*Physician Results include Laboratory, Microbiology, Blood Bank, Pathology, ITS, Radiology, and Departmental

Medication Reconciliation and e-Prescribing

MEDITECH reconciles patients' medications each time they transition between care settings. Through integration with the DrFirst® e-prescribing technology, clinicians are able to review a patient's list of current medications upon arrival and add reported home medications. In addition, clinicians can convert home or emergency department medications to inpatient medications upon admission, convert inpatient medications to ambulatory medications upon discharge, and send prescriptions to a preferred pharmacy.

Additionally, MEDITECH supports requirements for Electronic Prescriptions for Controlled Substances (EPCS) through collaboration with Forward Advantage®.

Context-Aware Launch to/from Other Vendor EHR

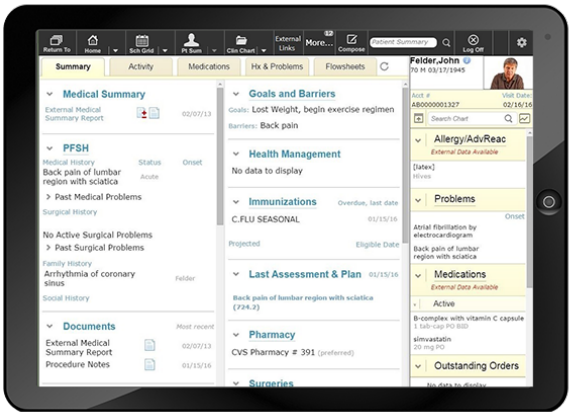
An increasing number of clinicians rely on access to external web-based products from within their EHR. Using MEDITECH's external connector feature, clinicians can access these services as part of their current workflows based on patient, user, and clinical context. A single click launches

secure, user- and patient-context aware URLs from within the patient's chart. Web-based applications such as the following are accessible in view format:

- HIEs
- Provider portals
- Web-based EHR products
- Vendor-neutral archives.

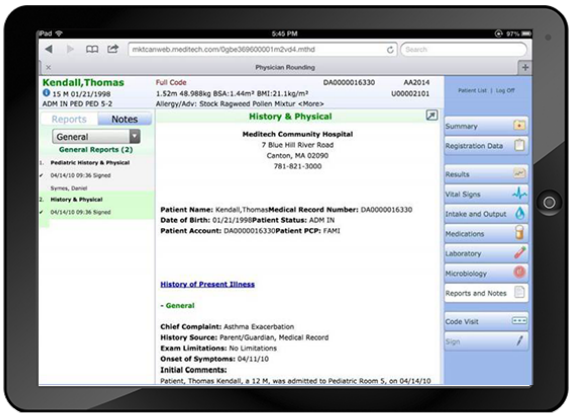
Conversely, a third-party EHR can launch securely into MEDITECH's EHR to enable physicians to view a patient's clinical information. Through a set of secure web services, the portal provides access to MEDITECH for "view only" access to the patient's chart. Available data includes:

- Advance directives
- Resuscitation status
- Contact information
- Allergies
- Medications
- Problems
- Microbiology results and reports
- Pathology, Imaging and Therapeutic Services, and Physician Documentation reports
- Nurses' notes
- Vital signs
- Intake and output
- Laboratory results.



Other Vendor EHR

Other Vendor EHR



Medical Device Solutions

MEDITECH collaborates with several vendors to bring medical device integration and aggregation into the caregiver workflow, by linking device data with patient chart data to improve patient

safety and outcomes. Examples include: hemodynamic devices, fetal monitors, and anesthesia information management systems (AIMS).

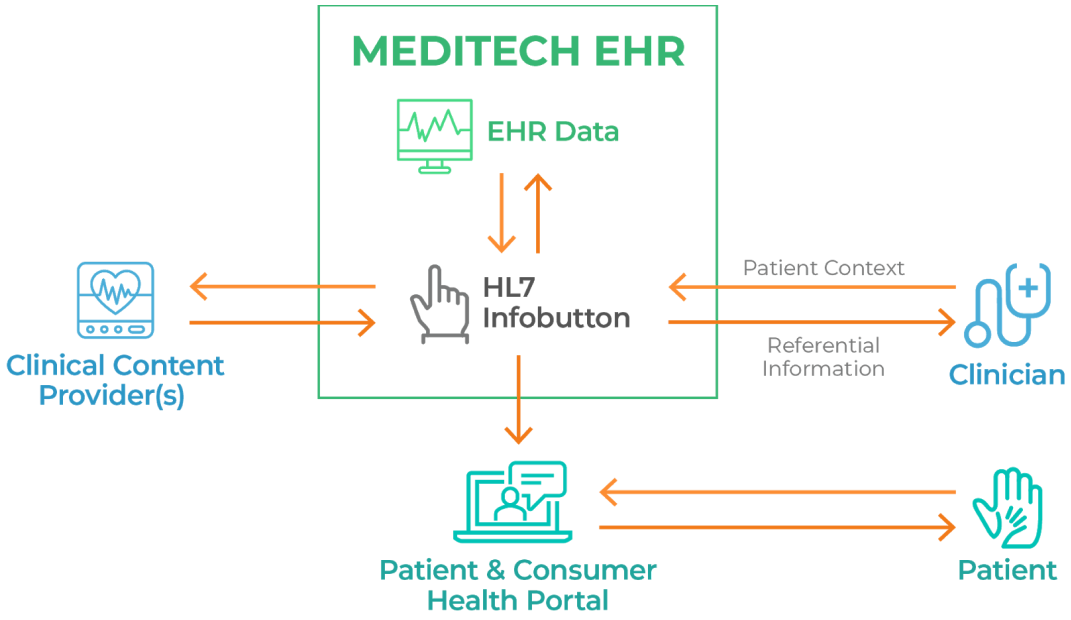
MEDITECH uses ADT data to associate patients to hemodynamic devices. The hemodynamic data is then gathered into a single stream which is fed into MEDITECH.

Clinicians using MEDITECH's later releases can connect with HL7-compliant fetal monitoring solutions to capture a mother's data during labor and delivery. The integration suite keeps the systems in sync, which greatly improves patient safety. Clinicians can document in either system knowing the data will be shared. For example, monitor strips are made available in MEDITECH, and medications and assessments are passed to the fetal monitoring system. Single sign-on ensures secure and easy user access.

MEDITECH can integrate with a variety of HL7-compliant anesthesia vendors. In addition, MEDITECH and Spectrum Medical offer a joint solution for customers on MEDITECH's latest release which enables seamless, bidirectional integration of anesthesia information as well as vitals, allergies, labs, and medications.

Infobutton

To improve workflow and patient care, MEDITECH supports the HL7 Context-Aware Knowledge Retrieval (Infobutton) Standard. Clinicians can launch URL-based clinical decision support and patient education materials from various points within a patient's chart and at discharge. Subscription services are provided through many of the leading content vendors used with MEDITECH.



Blue Button

MEDITECH supports the Blue Button initiative by providing patients with downloadable medical histories from our Patient and Consumer Health Portal. Patients download both a formatted, readable version as well as an additional copy formatted to the C-CDA XML specification — the upload standard for sharing with another provider's EHR.

International

MEDITECH is actively engaged in international efforts to further interoperability on a global scale, where interest in interoperability initiatives is growing rapidly and adoption is expanding. MEDITECH has developed a variety of features in conjunction with international organizations and in response to mandates to foster greater connectivity. Some of the initiatives MEDITECH works with include:

Canada:

- Ontario Laboratories Information System (OLIS) a single sign-on, context-aware viewer which provides access to aggregated patient data in the ConnectingOntario/eHealth portal. A future component of OLIS is for FHIR specifications related to data consumption.
- Wait Time Information System (WTIS) wait time data collected and reported for surgeries and diagnostic imaging procedures.
- iEHR adoption country-wide effort by Canada Health Infoway to expand adoption of an interoperable EHR in order to provide secure, private patient records and make them available to authorized care providers and each patient, regardless of location.

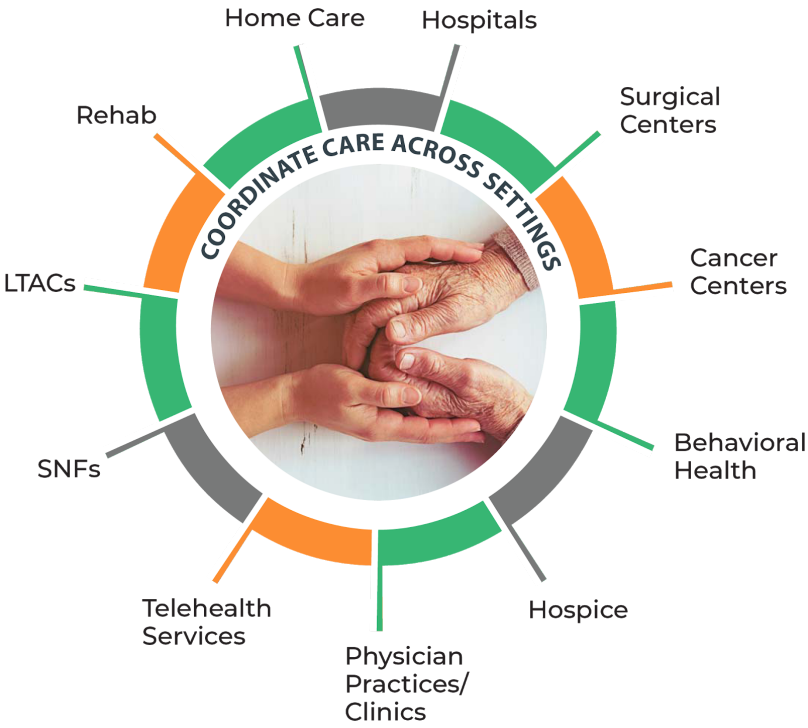
United Kingdom:

- Birth Notification Service assignment of unique NHS Number to each newborn and linked to the Personal Demographics Service (PDS).
- NHS e-Referral Service appointment booking service for patient use.
- Innovation & Collaborative Engagement Lab (ICE Lab) environment for interoperability between general practitioner offices and acute facilities. This includes orders in/results out and ADT functionality.
- CRIS national radiology system integration.
- EMIS Web portal viewing of a patient's record and future medical summary exchange.
- Five Year Forward View and the Personalised Health and Care 2020 initiatives are designed around changing models of care and providing a framework to take better advantage of data and technology for individual health improvement, raising quality standards, and reducing associated health care costs.

Population Health

To effectively manage patient populations, providers need an infrastructure that supports seamless care coordination. MEDITECH offers tools so you can deliver high-quality, low-cost care across the health ecosystem and help improve outcomes for all of your patients. Tools include an integrated and interoperable EHR, actionable and real-time patient registries, a consolidated patient portal, care management and home care workflows, predictive surveillance, and HIE capabilities.

COMMITTED TO INTEROPERABILITY



MEDITECH is a proven leader in the interoperability movement and provider of standards-based interoperability features for data and document exchange. We are a longtime member of HL7 International and founding member of the HL7 FHIR Argonaut Project. We are a Contributor Member of the CommonWell Health Alliance and supporters of Carequality and Sequoia eHealth Exchange network via active customer HIE engagements. We routinely demonstrate FHIR-based CCD transactions through our yearly participation in the HIMSS Interoperability Showcase, and will offer FHIR document exchange capabilities through CommonWell. In addition, we are an active participant in **The Digital Bridge**, which is an innovative partnership with the goal to advance information exchange between healthcare organizations and public health, starting with a multi-jurisdictional approach to electronic case reporting (eCR). MEDITECH is an ongoing member of ONC Direct Interoperability Workgroup, a continuing member of HIMSS Electronic Health Record Association (EHRA), and regularly attends Health IT Policy Committee (HITPC) meetings to stay engaged and advocate for the best use of technology for the betterment of cost-effective, patient-centered care.

To learn more about any of these solutions, please contact Marketing Solutions Manager Stephen Valutkevich or visit MEDITECH's website.