

NATIONWIDE HEALTH INFORMATION NETWORK (NHIN)

CHALLENGE/SITUATION

The NHIN addresses the requirement in the recent healthcare reform bill of having a nationwide adoption of Electronic Health Record (EHR) across providers (health systems), physicians, patients, and payors over the last five years. It requires the building of standard architecture, technology, and integration mechanisms that would foster collaboration between the stakeholders, information exchange, meeting regulatory compliance, and safety and best practices. The challenge of building such a network requires the knowledge of existing sources of data; the ability for acquisition, integration, and necessary management; and the capability for analysis and dissemination. In particular, state and regional Health Information Exchanges (HIEs) would work with other healthcare provider networks to provide consumers with the capability to manage the flow of their information; allow health information to follow the consumer; provide critical information to clinicians at the point of care; and to improve healthcare, population health, and the prevention of illness and disease.

APPROACH

Our approach was to provide a self-contained, utility-based solution for any HIE to provide core exchange services within its community and to exchange information with other HIEs in the United States. This utility-based health information service would allow HIEs to leverage the NHIN's capabilities in a modular and scalable fashion. CTIS was involved with both the NHIN1 (Prototype Architecture) and NHIN2 (Trial Implementations) and provided managed hosting services compliant with The Health Insurance Portability and Accountability Act (HIPAA) and Federal Information Security Management Act (FISMA). We also provide HIE Utility infrastructure using the best practices, supported by competent and certified personnel for North Carolina Healthcare Information and Communications Alliance, Inc. (NCHICA) and MedVA HIE needs.

SOLUTION

We created a robust architectural design that lays the foundation for future healthcare information interoperability in collaboration with various healthcare stakeholders, such as provider partners and the other vendors. We provide valuable input/oversight and project coordination and, by effectively utilizing information to improve the quality and safety of patient care, ensure that the CTIS perspective was represented in the prototype implementation. For the NHIN1 (Prototype Architecture), CTIS provides managed hosting services and site-to-site virtual private network connectivity to Regional Health Information Organizations (RHIOs) and associated member organizations through its specific prototype environments within its secure data center facility. During NHIN2 (Trial Implementation), we extended Consumer empowerment functionality, explored population-focused functions, enacted a quality use case, and enabled secure network connectivity to facilitate the exchange of prototype HIE data between its hosted NHIN infrastructure with over 15 RHIOs and/or RHIO-member organizations. In addition, CTIS managed and operated the backend for the NHIN HIE Utility Infrastructure, providing project management, system administration, database and network administration, and information assurance services, including virtual private network integration, HIE edge server provisioning for NCHICA, MedVA, and other RHIO members.

BENEFITS

CTIS successfully implemented performed services under contract, on budget, and on time, and integrated over 25 software components through our managed hosting environment for NCHICA and the MedVA.

- 100% managed hosted turnkey HIE Utility infrastructure
- Seamless deployment of infrastructure and services for both HIE Utility and NHIN edge participants
- Utility provisioning and remote technical support for RHIOs
- Highly secure site-to-site connectivity between HIE Utility and over 15 RHIOs
- Turnkey Infrastructure & software deployment support to NHIN Development team
- Highly Redundant HIE Utility Infrastructure with 24 x7 uninterrupted HIE Utility Operations
- HIPAA & FISMA Compliant Processes