



## A PATH TO IMPROVED CARE: Communities **CONNECTing** to the NHIN

Organizations throughout the country – including federal agencies, states and private sector organizations – are making real progress in achieving nationwide health IT interoperability. The Nationwide Health Information Network (NHIN) is providing the framework for interoperability – including the standards, services and trust fabric – and CONNECT delivers an open source solution for organizations wanting to use the NHIN.

The Federal Health Architecture and the Office of the National Coordinator for Health IT (ONC) are sponsoring a series of demonstrations within the NHIN and CONNECT area in the HIMSS Interoperability Showcase that illustrate progress toward interoperability. The 25 demonstrations involving 42 organizations show a broad range of uses for the NHIN, including improving care coordination, streamlining benefits determinations, and advancing public health, among others.

The demonstrations are divided into four categories that align with key health outcome policy priorities:

- Improving Quality, Safety, Efficiency and Reducing Health Disparities
- Improving Care Coordination
- Engaging Patients and Families in Their Health Care
- Improving Population and Public Health

Demonstrations in each of these four areas also include another key priority: Ensuring Adequate Privacy and Security Protections for Personal Health Information.

All of the priorities are outlined in more detail in the Interim Final Rule (IFR), an initial set of standards, implementation specifications and certification criteria released by ONC on December 30, 2009, with a request for comments (read the IFR and comment online at <http://healthit.hhs.gov/portal/server.pt?open=512&objID=1153&mode=2>).

➔ **LOCATION:**  
Interoperability Showcase,  
Hall C, Booth #233



The participation of any company or organization in the NHIN and CONNECT area within the HIMSS Interoperability showcase does not represent an endorsement by the Office of the National Coordinator for Health Information Technology, the Federal Health Architecture or the Department of Health and Human Services.



## Improving Quality, Safety, Efficiency and Reducing Health Disparities

One of the five health outcome policy priorities outlined in the Interim Final Rule is entitled “Improving Quality, Safety, Efficiency and Reducing Health Disparities.” This priority is associated with specific care goals, including:

- Providing access to comprehensive patient health data for patient’s health care team
- Using evidence-based order sets and Computerized Physician Order Entry (CPOE)
- Applying clinical decision support at the point of care
- Generating lists of patients who need care and using them to reach out to patients
- Reporting information for quality improvement and public reporting

The descriptions below provide a brief synopsis of the demonstration scenarios occurring related to this outcome goal within the NHIN/CONNECT area.

### ➤ Supporting Midwestern Grandparents on Vacation

**Redwood MedNet**

**HealthBridge**

**Thayer County Health Services**

HealthBridge, a large urban HIE in Cincinnati, Thayer County Health Services, a community HIE in southeast Nebraska, and Redwood MedNet, a rural HIE in California, will demonstrate how the CONNECT toolkit enables the use of health data as farming community grandparents from Nebraska travel across the country visiting their urban daughter in Cincinnati and grandsons in California. As they visit the different HIEs, the three HIEs exchange electronic medication and diagnostic health data, thereby improving the quality, safety and efficiency of their care.

### ➤ Simplifying Medicaid Administration through Collaboration

**Community Health Information Collaborative (CHIC)**

**Medicaid Information Technology Architecture (MITA) System**

**Medicaid Provider Portal**

This demonstration of MITA and CONNECT collaboration will illustrate the interaction between Medicaid providers and a states’ MITA-based Medicaid system to support the workflow associated with verifying a member’s eligibility. This demonstration illustrates how NHIN services are applied to existing, industry-standard interfaces and aligned with the Medicaid Information Technology Architecture.

### ➤ Improving Adverse Event Reporting

**Food and Drug Administration**

**Safety Reporting from EHR**

**Brigham and Women’s Hospital**

In this demonstration, adverse events related to human medical products are captured at the point of care within electronic health record systems and reported to the Food and Drug Administration (FDA) directly via built-in reporting capability in electronic health record systems. This automated adverse event reporting capability has the potential to ease the burden of reporting for healthcare providers and provide timely, high quality information required by the FDA and the biopharmaceutical industry.

## 👉 Transforming Worker Experiences in NYC

### New York City

This demonstration will highlight Worker Connect, a Web-based system developed by New York's HHS-Connect that links data across five agencies and seven programs and is used by 11 agencies across 6,000 users so that caseworkers are able to share client information without compromising confidentiality. Clients' personal and case information is included in a virtual integrated case file which can be viewed by case workers in a secure way to provide the appropriate services to clients.

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## 👉 Applying Reusable Technology for HIE

### The States of Oregon, Illinois, Utah and Minnesota

During this demonstration, participants will learn about the Strategy for Applying Reusable Technology (START) vision, a game-changing approach to building and deploying re-usable code/systems in government. This partnership between Utah, Illinois, Oregon, the federal government and a number of other key stakeholders serves to demonstrate a high quality, cost-effective approach to modernizing enterprise systems in the future and building the foundation for a "secure government cloud computing platform" to serve the citizens in the digital age we live in.

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## 👉 Analyzing Data for Public Health and Quality Measures

### Primary Care Information Project, NYC Department of Health and Mental Hygiene

Population CCR (popCCR) is an open source solution developed for the Primary Care Information Project within the NYC Department of Health and Mental Hygiene. This demonstration will illustrate popCCR's ability to express prospective, real-time, or retrospective decision support to be run against per-patient or aggregate clinical and administrative data sets. popCCR allows rapid, real-time expression of complex rules and cohorts which can be run against any system that can generate a CCR, CCD, HL7 2.x, NCPDP, X12, or any other parsable flat file format. In the demo, popCCR will validate compliance with criteria for quality measures, guidelines and protocols, and it can automate public health, regulatory and syndrome surveillance reporting.

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## 👉 Linking Health and Human Services

### TRANSFORM, Federal Health Architecture

Learn more about the work underway that brings together federal, state, local and private communities to electronically link health and human services by improving business processes, information sharing and interoperability. This demonstration will highlight the business challenges being advanced and the approach to create shared solutions that improve services to citizens and create operational efficiencies.

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## 👉 Solving the Paper Record Problem

### TRANSFORM, Federal Health Architecture

Even if all healthcare providers were to adopt electronic health records today, paper records exist with historical information that needs to be shared for many years. This demonstration will illustrate how federal, state and private organizations are working together to develop a solution which will allow paper and non-standard data records to be exchanged across the NHIN.

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## 👉 Open-Source Population Health Reporting Tool

### popHealth

This demonstration will provide an overview of popHealth, an open-source software prototype that extracts data from a provider's EHR (initially using the HITSP C32 data standard), and uses predefined or user defined reports for individual quality measures to provide physicians with a better understanding of the overall health of their patient population based on the reporting metrics. popHealth streamlines transmission of data on summary quality measures from individual providers to federal agencies. Summary quality information may be transmitted through the CONNECT solution to federal agencies.



## Improving Care Coordination

“Improving Care Coordination” is one of the central outcome goals outlined in ONC’s Interim Final Rule. It focuses on promoting information sharing among care providers to aid in improving care for U.S. citizens. This priority is associated with the specific care goal of:

- Exchanging meaningful clinical information among a professional health care team

The descriptions below provide a brief synopsis of the demonstration scenarios occurring within the NHIN/CONNECT area at HIMSS. These demonstrations illustrate the progress organizations are achieving in sharing health data to support citizen health.



### ↘ Coordinating Care Across California

**East Kern County Integrated Technology Association**

**Long Beach Network for Health**

**Santa Cruz Health Information Exchange**

Care coordination represents one of the most promising ways to increase patient safety, improve outcomes and avoid unnecessary procedures. This demo shows how an emergency department physician can evaluate information from different care episodes in far-flung communities across California while addressing an emergent health situation. HIE enables choice of the proper treatment, avoiding a dangerous invasive test, because a more complete knowledge of the patient was available.

### ↘ Delivering E-Care and EHR Interoperability

**Federal Communications Commission**

**University of Virginia**

This demonstration will follow a veteran from Charlottesville with high blood pressure who develops signs and symptoms of a stroke while traveling in rural Virginia. The demo outlines his coordinated care experience from the community hospital, to the University of Virginia Hospital and finally to his home.

### ↘ Enhancing Value in Health Care through Health Information Exchange

**Mayo Clinic, HealthPartners, Minnesota HIE**

This demonstration will illustrate how health information exchange from HealthPartners to Mayo Clinic through the Minnesota Health Information Exchange using CONNECT can add value by enabling the exchange of continuity of care documents for a patient with a complex medical problem. The information in this demonstration is a prototype, but based upon true-to-life cases.

## 👉 Processing Claims with Authorized Release of Information

**Social Security Administration**

**MedVirginia**

The demonstration will show how the Social Security Administration requests information from a medical provider (MedVirginia) based on authorization to release information and receives the information using the NHIN. The information flow is seamless and does not require any human intervention. This exchange of information dramatically reduces the time required for the exchange compared to the traditional paper process.

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## 👉 Releasing Authorized PHR Information Over the NHIN

**Social Security Administration**

**Personal Health Record**

The demonstration will show how the Social Security Administration can potentially interact with a PHR using the same technology that it uses to request and receive information from a provider. The information obtained through this interaction can reduce the stress on the claimants by automatically populating the information into the disability application rather than having them fill the information out manually. The demonstration is a technical proof of concept which tries to identify the policy and technical issues to make this interaction work in a production setting.

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## 👉 Enhancing Tribal Care Coordination

**Indian Health Service**

This demonstration showcases cross-agency, cross-region and cross-facility health information retrieval from across the IHS enterprise-wide health information exchange utilizing the NHIN. The demo will show a provider retrieving C32 documents by logging on to the Universal Client and navigating through the workflow to search for the patient, obtain patient document links, and finally, retrieve the documents.

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## 👉 Delivering HIE Through Medical Grade Networks

**Wels Hospital**

The session will illustrate how Wels Hospital is utilizing a standards-based architecture to deliver medical data securely and cost-effectively over its network. It will explain how Wels Hospital is addressing its need to exchange data between disparate systems and align with national and European data exchange initiatives. It will also describe how Wels Hospital will participate in the ePSOS project, the European initiative similar to the NHIN.

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## 👉 Enhancing Wounded Warrior Care

**Department of Defense**

**Department of Veterans Affairs**

**Kaiser Permanente**

Using fictional, but true-to-life medical encounters and real-time NHIN information exchanges, this demonstration will illustrate how the data exchange through the NHIN can support continuity of care for the wounded warrior patient population.

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## 👉 Exchanging Medical Records During Disasters

**National Disaster Medical System, Department of Health and Human Services**

This demonstration will highlight a hurricane scenario in which patients in high risk areas are evacuated to remote locations. This scenario will record the initial patient encounter at the high risk location and illustrate the ability for medical teams to access the patient's record once relocated to an evacuation site.



## Engaging Patients and Families in Their Health Care

Promoting health IT interoperability delivers on one of the main priorities outlined in the Interim Final Rule, namely “Engaging Patients and Families in Their Health Care.” This priority is associated with a specific care goal:

- Providing patients and families with timely access to data, knowledge and tools to make informed decisions about their health.

At HIMSS 2010, participants will hear from organizations working to deliver information to patients and their families to empower them to be more active in managing their health care.

### ➤ Protecting Soldiers Using Health Information

#### **Military Health System’s MiCare Portal**

The U.S. Army enables soldiers and their families to manage their electronic personal health records worldwide online. This demonstration will highlight the Military Health Systems’ (MHS) MiCare patient portal that allows military beneficiaries to export and share their personal health information online and take best advantage of the expanding ecosystem of PHR applications for personalized patient decision support.

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### ➤ Engaging Patients in Their Care

#### **Spartanburg Regional Healthcare System**

Spartanburg Regional Healthcare System will demonstrate a model for providing private-sector physicians access to federal health summary information when caring for military personnel. The demonstration includes the ability for the patient to participate directly in the health information sharing through a connected personal health record.

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### ➤ Enabling PHRs with Wireless Technology

#### **Meridian Health**

As a premier provider of hospitals in New Jersey, Meridian Health delivers a broad continuum of care through its five hospitals. This demonstration will highlight how wireless technology such as a remote patient monitoring system can enable personal health records (PHRs) to aid in the care of the more than 250,000 people who visit Meridian Health’s hospitals in Monmouth and Ocean Counties.

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### ➤ Empowering Consumers with Family Health Data

#### **Surgeon General’s “My Family Health Portrait”**

This demonstration will showcase how the Surgeon General’s “My Family Health Portrait” Web tool helps consumers easily gather their family health histories, and then assembles this information in a structured format. The solution enables families to work together in gathering histories; helps providers obtain better family history information; provides data in formats that can be saved in interoperable form in EHRs/PHRs; and enables the consumer to obtain automated, personalized health information from Web-based services. The demonstration will use Mayo Clinic Health Manager to showcase interoperability.



## Improving Population and Public Health

Secure health data sharing throughout the country has the potential to dramatically impact the intended outcome of “Improving Population and Public Health.” This priority is associated with the specific care goal of:

- Communicating with public health agencies

Communication between care providers and public health agencies has the potential to provide much better data to track public health and respond more quickly and effectively to public health problems. NHIN standards, services, and trust fabric, and the CONNECT solution are helping make this a reality.

The following demonstrations illustrate work underway in the U.S. – as well as an example of U.S. collaboration internationally – to better protect citizens through effective public health tracking, analysis and proactive situation response made possible through access to more accurate, timely public health data.



### ➤ Improving Public Health Cancer Registry Reporting

#### Centers for Disease Control and Prevention

In this demonstration, a state cancer registry receives complete health data on patients diagnosed with cancer in their state jurisdiction. The state cancer registry compiles and consolidates this information into a complete record of the cancer case in a standardized format with patient identifiers removed. Using CONNECT, the cancer registry transmits electronic data to the Centers for Disease Control and Prevention (CDC). After the data are received from all state cancer registries from across the United States, the CDC processes the data and produces official federal statistics on cancer incidence and cancer mortality for the nation. These de-identified data are also made available for use by researchers.

### ➤ Tracking Public Health Outbreaks

#### Centers for Disease Control and Prevention

#### Indiana Department of Health

#### Washington Department of Health

This demonstration will follow a fictional character who visits a physician where he is diagnosed with Influenza A. The physician sends the nasal swab to the state lab for identification of H1N1. Local and state public health epidemiologists query the clinical documents submitted by the physician office and lab, and an epidemiologist at the State Public Health Department is able to look at displays of current Influenza data from the HIE (gathered by regular polling of lab documents). Data from the state public health agency is aggregated into the GIPSE format and transmitted to the CDC.

### ➤ Facilitating International Disease Tracking

#### Centers for Disease Control and Prevention

This demonstration highlights possible international disease surveillance and standardization efforts for international aggregate case information sharing. An international physician diagnoses a patient with Influenza A within their EHR and uses a situational awareness (SA) solution to visualize real-time Influenza cases voluntarily reported by other SA solution contributing providers. A case management system receives new Influenza cases from across a region outside of the United States and is used by public health epidemiologists to review individual cases, aggregate outbreaks for analysis, and create a public response to the increasing severity of Influenza illness. Nightly aggregates of case reports are formatted using the GIPSE format and shared with U.S. state public health officials also monitoring Influenza illness severity. Data collected by the state is then shared with the Centers for Disease Control and Prevention (CDC) to develop a more comprehensive national response.

## Ensuring Adequate Privacy and Security Protections for Personal Health Information

Though privacy and security are not presented as standalone demonstrations in the NHIN and CONNECT area at HIMSS, these important areas are incorporated into demonstrations throughout the showcase.

The Interim Final Rule identifies “Ensuring Adequate Privacy and Security Protections for Personal Health Information” as one of the important outcomes for health IT initiatives. The IFR Stage 1 Objectives of this outcome policy priority are for eligible professionals and hospitals to protect electronic health information that is created or maintained by certified electronic health record technology by implementing appropriate technical capabilities. This priority is associated with specific care goals, including:

- Ensuring privacy and security protections for confidential information through operating policies, procedures, and technologies with compliance with applicable law
- Providing transparency of data sharing to patients

Security and privacy are the foundation for the NHIN's trust fabric, which includes critical security controls for protecting patient information. CONNECT incorporates these controls into the software solution.

## Moving Down the Path to Improved Care

Stop by the demonstrations taking place throughout the NHIN and CONNECT area within the HIMSS Interoperability Showcase to learn more about the efforts of organizations throughout the country to make health IT interoperability and information exchange across boundaries a reality.

In addition to the demonstrations, you can attend education sessions within the area that provide more detail on a wide variety of topics related to the NHIN and CONNECT, including:

- Best practices from organizations now in production using NHIN standards, services and trust fabric
- Steps for using the NHIN
- An overview of the CONNECT solution and the CONNECT open source community
- Descriptions of the current NHIN and CONNECT architectures



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