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[Click here for conference info!](#)

From the Director's desk

With the publication of this fourth issue of *PHINews*, we are excited that the [2008 PHIN Conference](#) is right around the corner. August 24-28 at the Westin Hotel in Atlanta, the [Centers for Disease Control and Prevention \(CDC\)](#) and the [Association of State and Territorial Health Officials \(ASTHO\)](#) plan to bring you an exciting agenda packed with opportunities to hear innovative approaches to public health informatics.



Lynn Gibbs Scharf

This year's theme, *Public Health Informatics: Collaboration at the Crossroads*, reflects our renewed emphasis on working together with all of our partners to tackle issues. It also represents the understanding that no one group can achieve a nationwide network; we must work together.

Here are just a few of the items in store for the PHIN community at this year's conference:

- **Open conversation:** This year, the entire conference will have an open-conversation feel to it, allowing you to collaborate with your peers and work directly with CDC leadership.
- **Keynote speaker:** Representatives from the [Office of the National Coordinator, CDC, ASTHO](#), and [NACCHO](#) will open the plenary session on Monday. Etienne Wenger, who coined the term *Community of Practice (CoP)* and is considered to be the father of the CoP model, will speak at the Tuesday plenary session.
- **CoP:** There will be a PHIN CoP kickoff at the Tuesday morning plenary session, as well as numerous opportunities throughout the conference to learn, join, and help build the future of PHIN.

I hope you enjoy this issue of *PHINews*. We're publishing a special daily edition of *PHINews* at the conference to keep you up to date with the latest conference news and events, so stay tuned for a daily dose of PHINews. We look forward to seeing you there!

[Lynn Gibbs Scharf](#)

Director,

Division of Alliance Management and Consultation (DAMC)
National Center for Public Health Informatics (NCPHI)

In and around PHIN

by *Phyllis McGuire*



PHIN Headquarters, Atlanta, GA

- NCPHI and the National Center for Health Marketing (NCHM) hosted an expert panel meeting on May 14, 2008, to solicit input on refining and expanding CDC and public health participation in Consumer Health Informatics (CHI). Results will be reported in the [Journal of Preventive Medicine](#) and a white paper. Contact [Jason Bonander](#) for more information.
- NCPHI and NCHM also collaborated on the Epidemic Information Exchange ([Epi-X](#)) Notification Proficiency Testing. On April 3, 2008, over 5,000 *Epi-X* users logged in to *Epi-X* and were routed to an OMB-approved survey. Over 60% of users completed the survey. Contact [Alan Davis](#) in NCPHI for more information.
- In related news, *Epi-X* was used to inform the public health community about the initial Minnesota cases of a neurological illness that was identified as a new disorder. The illness affected workers at several U.S. swine slaughterhouses and received widespread media coverage after the *Epi-X* posting. For more information, contact [Marsha Vanderford](#).
- On May 7, 2008, DAMC hosted the monthly NCPHI Partner Discussion. Topics included *Inside the Maryland HAN Portal*, presented by Arthur G. Thacher, MPH, Chief Information Officer with the [Maryland Department of Health and Mental Hygiene](#). Also, Jim Grant, PHIN Program Director with the [Wisconsin Dept of Health and Family Services](#), presented the *Wisconsin Electronic Disease Surveillance System (WEDSS)*. Please contact [Jessie Legros](#) for more information.
- DAMC hosted a presentation at the CDC's Roybal Campus Distance Learning Center titled, "Running a Successful Open Source Project", on May 5, 2008. The speaker was Jim Jagielski, Chairman of the Board of Directors for [Apache Software Foundation](#). Mr. Jagielski discussed the key factors that helped Apache become one of the largest, longest-lived open source development communities in history. Please contact [Nicole Fehrenbach](#) for more information.

On the PHIN site

www.cdc.gov/phn

Grantee IT Solutions Inventory

PHIN Vocabulary

In and Around *(continued)*

On the PHIN Collaborative Forum

Main Page

The main page of the forum. If you're not a member, e-mail a request to phin@cdc.gov.

Requirements

Ongoing discussion of the PHIN Requirements V. 2.0

Messaging

Forum devoted exclusively to PHIN messaging and the messaging implementation guides.

- The third and final [BioSense](#) Roundtable meeting was held on April 23, 2008, in Atlanta, GA. Attendees included representatives from state and local public health departments (Nebraska, Georgia, North Carolina, and New York City, New York) and academia (Emory University, Washington University in St. Louis, Missouri) as well as CDC's NCPHI, Division of Emergency Preparedness and Response (DEPR), DAMC, and the Coordinating Center for Health Information and Service (CCHIS). The group heard presentations from Dr. Les Lenert about the future state of biosurveillance and Lynn Gibbs-Scharf about building the biosurveillance community. Please contact [Lynn Gibbs-Scharf](#) for more information.
- On April 22, 2008, Deborah B. Gwaltney, Knowledge Application Team Leader, Federal Highway Administration (FHWA), presented "*What if We Build It, and No One Comes?*" Ms. Gwaltney's presentation shared FHWA's experiences with CoPs and the new opportunities Web 2.0 offers for building successful virtual communities. Attendees learned what organizational support FHWA provides to establish and nurture communities, including the use of facilitators to sustain communities over time without FHWA taking control. For more information, contact [Lynn Gibbs-Scharf](#).
- The Department of Health and Human Services (DHHS) of Long Beach, CA, recently used CDC's [Countermeasure and Response Administration](#) (CRA) application to track administration of HPV vaccines in a local clinic. For more information, contact [Jeanne Tropper](#)
- The [National Electronic Disease Surveillance System](#) (NEDSS) team conducted its first training of NEDSS Brokering Tool (NBT) and Orion Rhapsody outside Atlanta. The NEDSS team held the training in Jackson, MS, April 7–11, 2008. Ten state employees representing the disease surveillance, syndromic epi group, and other areas with the state and local public health department attended the training. For more information, contact [Arunkumar Srinivasan](#).
- On November 16, 2007, RADM Craig Vanderwagen, the Health and Human Services (HHS) [Assistant Secretary for Preparedness and Response](#), and [Dr. Julie Gerberding](#), CDC Director, agreed that CDC would assume lead federal agency authority and responsibility to carry out the two HSPD-21 urgent bio-surveillance requirements (including all the related specified and implied tasks). On December 14, 2007, CDC convened a biosurveillance summit with key internal CDC stakeholders to discuss current threat detection, monitoring, and response knowledge management capabilities and to determine a strategy for achieving HSPD-21, as well as the global bio-surveillance requirements of the 21st Century.



In and Around (*continued*)

Remember these dates

- 2008 PHIN Conference, Atlanta, GA, August 24—28
- Partner calls are on the first Wednesday of each month.

- The Johns Hopkins University School of Medicine's [Division of Health Sciences Informatics \(DHSI\)](#), in conjunction with the [Bloomberg School of Public Health](#), have announced their 2007-2008 Seminar Series. These seminars occur approximately three times per month on Fridays at the Bloomberg School of Public Health and cover a wide variety of topics in public health and health informatics. For more information and a complete listing of future speakers in this series and webcast instructions, please visit the [DHSI website](#). To be added to the mailing list for this seminar series, please email [Kersti Winny](#).
- The [Michigan Center for Public Health Preparedness](#) provides distance learning opportunities including online training courses, archived webcasts, and live webcasts of new courses. In March, 2008, they hosted a Public Health Grand Rounds: *Public Health in China* via webcast. Anyone interested in other events and learning opportunities provided by the Michigan Center for Public Health Preparedness should contact [Holly Szafarek](#) or visit their [website](#). Future distance learning opportunities will be posted on the PHIN website as well.
- From the NACCHO Public Health Informatics List:
 - **HITSP Free Webinar Series Starting June 2008:** The [Healthcare Information Technology Standards Panel \(HITSP\)](#) will host a series of 90-minute webinars sharing different topics on health information technology and interoperability. The webinars are targeted to consumers, government representatives, policy makers, healthcare providers, standards developers, vendors, and any other interested stakeholders. For more information, visit www.HITSP.org or email hitsp@ansi.org.
 - **The National Alliance for Health Information Technology (NAHIT) releases HIT Definitions Report:** On May 20, 2008, the [National Alliance for Health Information Technology \(Alliance\)](#) released its final report, *Defining Key Health Information Technology Terms*. This report reflects consensus work completed over the last several months on definitions for five important health information technology (IT) terms: electronic medical record (EMR), electronic health record (EHR), personal health record (PHR), HIE, and regional health information organization (RHIO). For more information on the definitions and to view the full report, visit the [NAHIT website](#).
 - **Free webinar series:** Starting May 2008, the [National Association of Public Health Information Technology \(NAPHIT\)](#) will host a webinar series for professionals in public health information technology and informatics. For more information on upcoming webinars, visit www.naphit.org.

In and Around *(continued)*

- Scott Danos retired on May 31, 2008, after 30 years of service with CDC as the Senior Advisor to the Director, Division of Integrated Surveillance Systems & Services (DISSS), NCPHI. Scott joined CDC as a Public Health Advisor in May 1978. His first assignment was with the Venereal Disease Program in Los Angeles.

In 2004, Scott transferred out of the STD program to the organizational unit that was soon to become NCPHI, where he assumed the role of NEDSS Project Team Lead. In 2005, Scott transitioned to overall NEDSS Project Director.



Scott Danos

Photo by Scott Wilson

Scott will travel with his wife, Beanie, to see adult sons living in the Netherlands and Southern California. He also hopes to work on a photography hobby, both above and below water.

OpenELIS: How a small lab community created a world-wide database

by Jay Jones

A successful open source software project is impossible without collaboration. What began as an Association of Public Health Laboratories (APHL)-funded project among several state public health laboratories morphed into two state labs that produced open source software that is now fully implemented in Vietnam and continues to grow nationally.

For this article, I interviewed Gary Jones, Information Systems (IS) Manager, Minnesota's Public Health Laboratory; Dari Shirazi, Information Technology (IT) Director, University of Iowa Hygienic Laboratory; and Michelle Meigs, APHL Senior Laboratory Informatics Program Manager. In my conversations with each of them, three terms were mentioned by all when describing Open Source Enterprise Laboratory Information System (OpenELIS)—a Laboratory Information Management System (LIMS): community, collaboration, and open source.

Given that community, collaboration, and open source are the new focus areas of PHIN, *PHINews* investigated how OpenELIS—a software project with limited funding, time constraints, and dispersed global teams—was built and successfully implemented around the world.

Community: How it began

OpenELIS is the result of a project that formed around 2001. At that time, APHL worked with the Public Health Informatics Institute (PHII), an informatics think tank, and received initial funding by the Robert Wood Johnson Foundation (RWJF).



University of Iowa Hygienic Laboratory team.

Photo by Pat Blake

What is OpenELIS?

A LIMS is database software that labs use to manage the data they collect and analyze. For a single lab or a group of labs, "homegrown" or lab-developed LIMS software works in the short term and for their specific needs, but in order to manage and share data with disparate systems in other labs, the software must have common attributes, such as a standard vocabulary for labeling specimens (i.e., interoperability).

OpenELIS is a LIMS database that uses standard vocabulary and data sets that were agreed upon by the community that developed it. It is also built on open source technology, which means that members of the community can use the source code to build versions (or branches) of the software to meet their own unique needs. As this occurs, the software's capabilities continue to grow and evolve with each enhancement.

OpenELIS *(continued)*

According to Gary Jones, “part of APHL’s strategic plan was to get an effective and efficient LIMS into every public health laboratory. In order to do that, APHL needed to start by determining if there were common requirements from all public health labs, and so the collaboration among APHL, PHII, and some of the public health labs across the country began.”

During the next few years, and under the direction of PHII, a six-state workgroup (i.e., Kansas, Iowa, Virginia, Minnesota, New York, and Alaska) met to review, identify, and document the requirements, and ultimately published the document on APHL’s website: [Requirements Document for Public Health Laboratory Information Management Systems](#).

After the publication of the final requirements document, there were three states remaining from the initial six-state workgroup—Minnesota, Iowa, and Kansas (Kansas later had to withdraw from the group after their IT Director retired)—that wanted to implement the plan for an open source LIMS system. Dari Shirazi states: “PHII went back to the RWJF and said that they would like to extend the project and do a logical design, which is basically a more detailed view of the requirements, showing how the plan can incorporate business processes.”

Collaboration: Sharing resources for a common goal

From the beginning of the project, the workgroup worked collaboratively with each other and with APHL, PHII, and CDC. “We knew we had what we needed to build the database: the team, the resources, the need, and the expertise. We (Minnesota and Iowa) also knew, from day one, that we wanted an open-source environment to reduce the amount of time spent supporting a large LIMS” says Dari. “The community realized that one member could not do everything, but together we could build OpenELIS.”

Anatomy of an open-source project

“We had some goals for the project itself: We wanted open source based on things that laboratorians do every day. When you develop a method for a testing process, you share that method with other people so they can duplicate your work. Open Source is nothing more than that: You share the code so that others can see what you’re doing and allow them to improve that process. We do that *all the time* in the lab. The method is openly shared. We knew from day one that we wanted to combine our resources.”

Gary Jones

IT Manager, Minnesota Department of Health

OpenELIS *(continued)*

For the last two years, Minnesota and Iowa have continued the OpenELIS project. At about the same time, APHL had been working globally, partnering with CDC on laboratory information system projects in African countries and Vietnam. When Vietnam was getting ready to implement a LIMS, APHL proposed to CDC that they examine OpenELIS. After review and evaluation, the decision was made to implement the OpenELIS system in Vietnam. Vietnam then became an OpenELIS collaboration partner, making the once small, domestic project an international open collaboration success story.

“During our initial design, we hadn’t considered global needs, so we developed our database based on domestic requirements—name and address, and things like that. With Vietnam, we had to make some changes, so a consulting firm was hired through CDC-Vietnam and APHL to work on the Vietnam localization and customization and to provide in-country support. A consulting firm from Ho Chi Minh City provided the language translation and other system customizations to meet Vietnam’s requirements. They continue to work closely with Reshma Kakkar of CDC-Vietnam and representatives from the pilot laboratories using OpenELIS in Hanoi and Ho Chi Minh City.”

Michelle Meigs adds that the Vietnam lab, which employs its own developers who work along side CDC-Vietnam staff and the Vietnam Ministry of Health, is now adding the functionality that will make OpenELIS a true international application. Gary Jones’s team provides consultation on design and functionality for the Vietnam implementation, since the version Vietnam uses is the same base code as the one in Minnesota.

Open Source: Sharing the keys to development

The ultimate goal of OpenELIS is to create and implement a universal, interoperable LIMS, replace disparate systems, and to have a system that will be modified and improved by the community of labs.

Minnesota and Iowa each employ software engineers who collaborate with one another and make design improvements as a group. Once fully implemented, the system will manage clinical, environmental, newborn, and animal data. It will be an enterprise-wide system, one that probably could not have happened without the early and ongoing community collaboration. In a very real sense, the OpenELIS team has given the Vietnam developers the keys to drive their own version of OpenELIS, allowing them to steer software development in a way that best fits their needs as they extend the capabilities of OpenELIS for the community.



OpenELIS timeline

2002: APHL and PHIL, spurred by the Anthrax attacks, receive funding from RWJF to evaluate and determine the feasibility of interoperable public health laboratory information management systems.

2003: Participating state labs, PHIL, APHL, and CDC review and publish requirements document.

2004: Iowa and Minnesota begin collaborative, open source development of OpenELIS.

2006-2007: Vietnam public health lab collaborates with APHL, CDC, Iowa, and Minnesota to build and implement a new branch of OpenELIS.

2008-2010: Minnesota and Iowa release OpenELIS to production.

OpenELIS (continued)

In fact, the Vietnam version of OpenELIS is now in production, Minnesota is in the process of rolling out, and Iowa plans to go into production within the next year and half. All involved believe it to be successful because of the collaborative, open source environment. Although unilateral decisions are made faster, the community decisions led to a more robust, interoperable solution. Dari says that by next year's PHIN conference, they will be able to present OpenELIS and allow the PHIN community to evaluate it and "kick the tires."



Serology laboratory technician at the National Institute for Infectious and Tropical Diseases in Hanoi, Vietnam, uses OpenELIS to manage results.

Photo by Michelle Meigs

For more information

- [OpenELIS website](#) (in development)
- [APHL](#)
- [Requirements Document for Public Health Laboratory Information Management Systems.](#)
- For more information on OpenELIS, please contact Michelle Meigs at APHL: 240-485-2771, michelle.meigs@aphl.org

InformationLinks Community of Practice: Advancing Health Information Exchanges

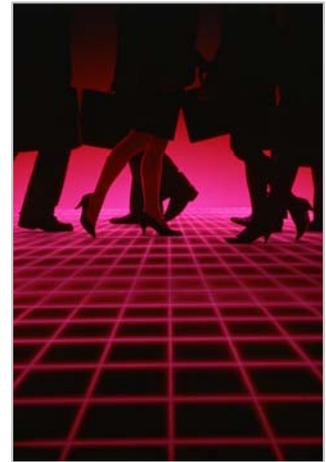
by Keena Hamilton

Overview

The InformationLinks Community of Practice (InfoLinks CoP) officially launched in February 2008 and is designed to facilitate knowledge sharing and collaborative problem solving between public health professionals who have expertise and/or active involvement with the development of Health Information Exchanges (HIEs) in the United States. InfoLinks CoP is funded by CDC's NCPHI, the [Robert Wood Johnson Foundation \(RWJF\)](#), and also receives support from the [Public Health Informatics Institute \(PHII\)](#). InfoLinks CoP members share a commitment to promote HIEs within public health systems, and the community serves as a venue where they can openly discuss issues, share their personal HIE story or lessons learned, and exchange ideas on various aspects of HIE.

History of InformationLinks

The InfoLinks CoP that exists today builds upon a two-year program originally funded by the RWJF. RWJF has a 35-year history of addressing some of the most pressing health and health care problems facing Americans and works with diverse groups of organizations to identify solutions. RWJF funded the original InformationLinks program from 2005-2007 to explore ways information technology could be used to improve healthcare and, more specifically, to encourage state and local health departments to participate in HIEs.



As explained in the [Regional Health Information Organization article](#) featured in the Spring 2008 issue of *PHINews*, HIEs allow for the rapid exchange of clinical and administrative healthcare data across disparate systems and organizational boundaries. On its website, the [Agency for Healthcare Research and Quality](#) states that "the sharing of such data could improve health care processes with respect to safety, quality, cost, and other indicators."

Through InformationLinks, RWJF awarded twenty-one grants of up to \$100,000 to state and local health departments and public health institutes for 12-month projects focusing on HIEs. During the course of the program, the grantees partnered with health care providers in their local areas to examine how public health agencies could leverage HIEs to share data with providers and understand how sharing that information could improve both clinical care and public health. The participants reviewed various aspects of how to make HIEs work and meet the needs of both private care providers and public health. Some of the grantees and projects included the following:

InformationLinks *(continued)*

- **Indiana State Department of Health:** Developed a model health exchange network that identifies the components, resources, and personnel needed in the state and local community to establish an information exchange.
- **Louisiana Public Health Institute:** Created an HIE to develop shared disease control protocols between public health and health care to support rapid and coordinated diagnosis, treatment, and prevention of HIV, STDs, TB, and Hepatitis C.
- **State of Rhode Island Department of Health:** Assisted with the adoption of electronic data standards for use in the HIE and converted lab and child health data to facilitate data flow between the department and the HIE.

While some progress was made, many found that in order to truly make HIEs work with local partners, public health agencies needed to first clearly understand their own business processes and requirements. RWJF decided to address this by funding [Common Grounds](#), an initiative to describe what business processes state health departments have in common that can be leveraged to develop systems based on common needs.

“Open conversations and genuine dialogue can reveal those ah-ha moments and unwritten rules that build up to solutions or spark further innovation.”

Janise Richards
NCPHI Senior Advisor

Once the RWJF InformationLinks program ended, participants felt that one of the most valuable, yet unexpected, results of the project was the relationship and candor the grantees established with one another. A sense of community developed among the grantees as they openly discussed issues and shared ideas. The CDC, RWJF, and PHII saw this new “community” as an opportunity for professionals to learn and collaboratively develop solutions to further promote the use of HIEs within public health. The CDC, RWJF, and PHII agreed to support and move InformationLinks forward as a CoP to continue the dialog on public health information exchange, with a primary focus on documenting the historic knowledge.

Partnering for healthy communities

Today, the InfoLinks CoP builds upon the original RWJF project and brings together public health professionals from across the nation; this includes a wide variety of organizations, such as state, local, federal, or non-profit agencies who have hands-on experience with HIEs, including 15 participants from the original RWJF InformationLinks project.

InformationLinks (continued)

According to Janise Richards, PhD, MPH, MS, the Facilitator for the InfoLinks CoP and Senior Advisor within NCPHI, a key objective for the newly established InfoLinks CoP is to create an environment (both in-person and online) where community members can share their personal HIE stories and insights, openly discuss issues, and collaboratively develop innovative solutions to current barriers.

“Collectively, the members bring dozens of years of expertise and involvement with national HIEs to the community,” commented Janise. “The problem is, sometimes people don’t know what they know or that what they know may be valuable to someone else until they start talking. Open conversations and genuine dialog can reveal those ah-ha moments and unwritten rules that build up to solutions or spark further innovation.” The InformationLinks CoP was formed to facilitate these conversations between people on the “frontlines” of HIEs so that the tacit knowledge, knowledge that only comes from doing, can be documented, analyzed, and shared more broadly with the public health community.

During this early stage, Janise plans to encourage participation and engage community members in HIE discourse by organizing webinars, teleconferences, face-to-face meetings or site visits, and develop an online [web portal](#). The portal serves as a community hub and online knowledge repository. Users can share their personal stories, read and discuss recent issues raised by InfoLinks

CoP members, and view announcements and calls to action detailing upcoming events and various ways to get involved in current HIE projects. They can also contribute to an organized collection of HIE-related information, such as industry news, funding opportunities, and related organizations and initiatives. Future plans include building collaborative workspaces to support InfoLinks community projects and adding interactive content such as audio/video recordings of community members that capture their HIE stories and perspectives.

COMMUNITY OF PRACTICE
InformationLinks
Partnering for Healthy Communities

Welcome to the InfoLinks Community of Practice (CoP)

The InfoLinks CoP is a vibrant community of public health professionals from across the United States with hands-on experience in organizing, implementing, and working with HIEs. We seek to promote the use of HIEs and spark innovative solutions to today's barriers by sharing knowledge and openly discussing the real challenges faced by those on the frontlines of HIE.

Community Announcements

Join in! Community Meeting: Patient Privacy, Ethics, & Public Health Data
June 19, 2008 @ 2PM [view details>>](#)

- Save the date: August 24-28, 2008! InfoLinks CoP activities during 2008 PHITF! [View](#) Don't miss this opportunity to network in Atlanta, GA with your fellow community members and others passionate about HIEs.
- Contribute to policies related to HLT and CCHIT
- Suggest others who may be interested in joining the InfoLinks CoP
- Give feedback on the web portal

Upcoming HIE Conferences & Events

- May 29-31 2008 AMIA Spring Congress (Phoenix, AZ)
- June 8-12 2008 Annual CCHIT Conference (Denver, CO)
- June 9-12 National Health IT Week (Washington, DC)

Member Spotlight

Wiring Michigan for HIE
Please join your colleagues at the May 8-9, 2008 MIHIE Annual Conference. The Michigan Health Information Network (MIHIN) conference at the Chardon, MI Hyatt Regency enables medical professionals, information technologists...

HIE Industry News

- CDC: Open source is key to agencies' HIEH connections (Government Health 7/1/08)
- Indiana's HIE may go national (HJ.com 4/29/08)
- Health Care Industry: Illinois' Privacy, Health Care Case 1 West Street Journal 4/29/08
- Pharmacies to Push E-Prescribing (Health Data Management (HDM) 4/29/08)

InfoLinks web portal

InformationLinks *(continued)*

According to Janise, it takes a village to raise an HIE, and while HIEs are in their infancy in the United States, the InfoLinks CoP provides an opportunity for individuals passionate about this kind of work to get involved in the discussions.

By facilitating in-person meetings and building an online community, Janise believes those interested in HIEs will find a variety of ways to participate in InfoLinks CoP that fit both their personal learning styles and their busy schedules. These activities and interactions will help build a sense a community, energize participants, and create an open environment where those grappling with HIE issues can pose questions, voice their concerns, learn from those more experienced, and collaboratively develop solutions to improve HIE use in America.

To learn more about InfoLinks CoP and how you can get involved, join us at our upcoming community meeting at this year's [PHIN conference](#). Community meetings provide a great opportunity to meet and connect with new and interesting people from around the nation who share the same passion and interest in advancing HIEs.

For more information

- [InformationLinks CoP web portal](#)
- [Agency for Healthcare Research Quality HIE Information](#)
- [Robert Woods Johnson Foundation](#)
- [Public Health Informatics Institute](#)

eHealth Initiative: Partnership, collaboration, and public health

by *Jessie Legros* and *Melissa Bundy*

What is the eHealth Initiative (eHI)? What does the organization hope to accomplish, and where does public health fit in the initiative? *PHINews* interviewed Janet Marchibroda, the CEO of eHI, to explore the history and future of eHI and the role of public health.

eHI mission

According to its [website](#), “the mission of eHI is to drive improvements in the quality, safety, and efficiency of healthcare through information and information technology.”

eHI was formed seven years ago to raise awareness of the importance of Health Information Technology (HIT) in addressing health and healthcare challenges across mainstream healthcare. Janet Marchibroda states: “There wasn’t a combined voice that represented all the actors in healthcare,” referring to clinicians, consumers, employers, health plans, hospitals, health IT vendors, public health, and states and communities.



Janet Marchibroda

Photo courtesy of ehealthinitiative.org/

What need does eHI fill that no other organization does?

“We talk to policy makers. Whether on the Hill or at the state and local level, [the policy makers] know that we represent a common voice that reflects multiple stakeholders across the system.” She goes on to say that “on so many healthcare issues, there is no agreement on how to move things forward. For a whole host of issues, including how health IT supports quality or healthcare reform, we bring people together and try to find common ground. We’re not always able to get there—given diverse interests—but when we do, it’s very powerful.”

The following eHI Blueprint demonstrates how eHI successfully established common ground among multiple stakeholders. Over 200 organizations, including public health, came together to gain consensus on a shared vision for improving health and healthcare through HIT. The eHI Blueprint principles, strategies, and actions that emerged from that meeting fall into five categories:

- Engaging consumers
- Transforming care delivery
- Improving population health
- Aligning financial and other incentives
- Managing privacy, security, and confidentiality

eHealth Initiative *(continued)*

What is eHI's work on an ongoing basis?

- Monitoring, evaluating, and influencing policy when common ground is found (public and private sector)
- Finding synergy in strategy and tactics
- Creating a place for learning using a cooperative model
- Developing learning laboratories utilizing funds from philanthropic organizations, the private sector, and the federal government. The value of IT solutions is put to the test and then shared through the public domain.

What are some barriers to achieving the mission of improving healthcare through HIT?

- **Interoperability standards**—Improving healthcare through HIT requires the establishment and adoption of interoperability standards that enable data exchange across the multi-stakeholder environment.
- **Funding and financial incentives**—The current system pays healthcare providers according to quantity rather than quality. This system does not support a model for coordinated, high quality, and preventive care.
- **Privacy and confidentiality**—Managing patient privacy and confidentiality while enabling the exchange of electronic data to support improvements in health and healthcare is essential.
- **Changes in workflow**—Improvement through HIT would also require management of the change in workflow needed at the patient care level to ensure adoption of new technologies.

“The collaborative model of public health [in this country] where national, state, and local efforts are linked and intentionally aligned is also the key to success around getting HIT adoption.”

Janet Marchibroda,
CEO of eHI,

What issues or areas of HIT have made progress but still need work?

eHI started its work by tackling interoperability standards, believing that electronic health records (EHRs) would have little value without standards because of the disparate sources of information that make up a person's health record. Without a way to effectively and consistently exchange data electronically between these sources, EHRs would largely be empty vessels with no way to receive the data they are designed to house.

eHealth Initiative *(continued)*

When momentum was developed around interoperability standards, eHI moved to the next challenge. “We aren’t where we need to be on adoption, and it isn’t because people working on standards aren’t working hard,” Marchibroda added. “It has more to do with the fact that we need to make a better business case for standards, and we don’t have one.”

While eHI might have left the standards fight too early, Janet says that she’s “really excited about the [American Health Information Community \(AHIC\) 2.0 process](#).” AHIC 2.0, the nationwide focal point for health information interoperability, is transitioning from a government advisory group to a public-private organization. This shift will maintain and accelerate nationwide initiatives aimed at using HIT to improve the quality and efficiency of health care.

How is the work of eHI related to public health on a local, state, or federal level? And how will public health fit into improving the quality, safety, and efficiency of HIT?

“Public health has been a critical component of eHI from the very beginning,” Marchibroda explains. Very early on, eHI worked closely with CDC on a private/public collaboration to determine how existing electronic clinical systems could be leveraged for public health disease surveillance. Marchibroda draws a parallel between the missions of eHI and CDC, saying: “They are considerably related,” because eHI is trying to improve quality, efficiency, and access to healthcare. She adds that she sees public health as “collaborators and partners” of eHI.

“The collaborative model of public health [in this country] where national, state, and local efforts are linked and intentionally aligned is also the key to success around getting HIT adoption. I believe we can use the same model to create a foundational infrastructure for electronic [health] information.” She continues: “Getting to our vision requires national standards and national changes in how we pay for healthcare, with implementation at the local level, where healthcare is delivered every day.”

“CDC has been a pioneer in standards and in informatics. CDC went before others, and [eHI] has much to learn from CDC.”

For more information:

- [eHealth Initiative](#)
- [eHealth Initiative Blueprint](#)
- [AHIC 2.0](#)

Expanding BioSense utility and situational awareness through new partnerships

by *Lourdes Martinez-Cox and Claudia Vousden*

The [BioSense](#) application began collecting and displaying data in 2004. Data sources included community hospitals and hospital systems and federal agencies such as the Department of Veterans Affairs (VA) and Department of Defense (DoD). Today, BioSense collects national laboratory and pharmaceutical data, connects to state syndromic systems, and contains an Influenza Module that displays both BioSense and Influenza Division data. The BioSense program has recently awarded cooperative agreements to three HIEs. Clinically rich data from the partnering HIEs will increase national coverage and make BioSense a more robust system.

However, lessons learned from increased outreach efforts with state and local partners have poised BioSense to take a new strategic direction. In response to partner guidance and the vision of Dr. Les Lenert, the Director of NCPHI, BioSense will begin to move away from direct connections with hospitals and move toward sources with access to clinical data covering large geographic areas. One example of a BioSense data source with statewide coverage is North Carolina's Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT).

"If I'm following an outbreak, I want others to know what I've done so they do not duplicate my steps."

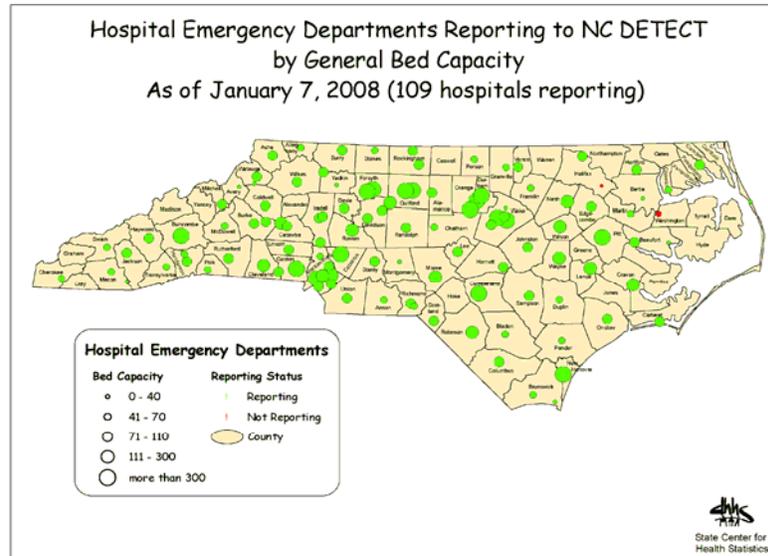
Dr. Anna Waller,
NC DETECT Principal Investigator at UNC
DEM

NC DETECT and BioSense

NC DETECT is a web-based public health surveillance system in the North Carolina PHIN that is developed and managed through collaboration between the [Department of Emergency Medicine at the University of North Carolina at Chapel Hill](#) (UNC DEM) and the [North Carolina Division of Public Health](#) (NC DPH). The system uses the CDC's Cumulative Sums (CUSUM) algorithms from the [Early Aberration Reporting System](#) (EARS) to monitor data sources for suspicious patterns. NC DETECT supports statewide capacity for early event detection, public health situational analysis, case finding, contact tracing, and timely surveillance related to injuries, chronic diseases, environmental exposures, and other public health concerns.

Expanding BioSense *(continued)*

At least once a day, NC DETECT receives data from 109 of the state's 112 hospital emergency departments, the statewide poison control



center, and the statewide EMS data collection system. In addition, a pilot test is underway using data from select urgent care centers, a regional wildlife center, and three laboratories of the North Carolina State College of Veterinary Medicine. According to Dr. Anna Waller, NC DETECT Principal Investigator at UNC DEM, "BioSense is an extension of our work," referring to the NC DETECT data visualized within the BioSense application. The application also employs automated quality checks for their data. A data quality manager for the program has the expansive task of monitoring the state's data.

NC DETECT serves over 200 registered users, and most are in public health agencies at the local, regional, and state levels. NC DPH owns the data, and all users must have approval from NC DPH before gaining access to the system. As a statewide system, NC DETECT serves users in multiple jurisdictions with varying responsibilities. Depending on the assigned user role and data source, users may access county and/or hospital views of the data and an array of tabular, graphical, and map-based reports. Users whose job responsibilities include outbreak investigation and response have access to more detailed, patient line listing information.

Combing systems for richer data

As end-user needs continue to evolve, developers rely heavily on user feedback to guide enhancements and development of new features. "Collaboration is critical to our program success. We use iterative development with the focus on good relationship building and partnerships," says Dr. Waller.

Expanding BioSense *(continued)*

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For example, such feedback, combined with the need for situational awareness and interest in improving communication among users, drove the development of the Annotation Report and the Custom Event Report in 2007. The annotation reports allow an NC DETECT user to document the steps in an investigation for other users to view. According to Dr. Lana Deyneka, epidemiologist for NC DPH, "If I'm following an outbreak, I want others to know what I've done so they do not duplicate my steps." The annotation reports are visible only to authorized NC DETECT users and do not contain patient's individual identifiers. The Custom Event Report allows quick deployment of search criteria to monitor existing events of public health significance. Dr. Deyneka said, "It pulls information just using keywords and generates a new report. This new report can be created and deployed in the system in less than two hours." She described it as "very accurate when compared with medical record information."

PHINews also asked Dr. Deyneka how BioSense fits in with NC DETECT, and she had this to say: "The NC DETECT system does not receive VA or DoD data, which is only available to us through BioSense. So, BioSense allows NC public health epidemiologists to have the complete Emergency Department data from all hospitals in the state, including Veterans Affairs (VA) and Department of Defense (DoD) hospital systems." Dr. Deyneka commented on the BioSense Influenza Module stating, "It is a great feature. We use it because it combines many sources on one page, making it easier to view." Deyneka added, "BioSense support is very important for our state NC DETECT system."

NC DETECT provides wide reaching and comprehensive coverage for the state of North Carolina within BioSense. Dr. Waller shared that, with the various NC DETECT data sources, "it was a boon for data availability in North Carolina." In a similar way, systems like NC DETECT will enhance data availability within BioSense, further enhancing national preparedness via partnership and outreach efforts with state and local partners.

For more information

- **NC DETECT:** e-mail ncdetect@listserve.med.unc.edu.
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