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digital bridge

Collaborative Body Meeting

Thursday, October 7, 2021
12:00 PM – 1:30 PM ET

This meeting will be recorded for note-taking purposes only.

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New Members

National Coalition on Health Care

- Sector: *Health Care*
- Representatives:
 - Jack Lewin – Chairperson (Primary)
 - Shawn Martin – Acting NCHC CEO (Alternate)

SAS

- Sector: *Industry Partner*
- Representatives:
 - Meg Schaeffer – National Public Health Advisor, Epidemiologist (Primary)
 - Theresa Do - Manager, Pre-Sales Support Federal Government (Alternate)
 - Sarah Newton – Manager, State and Local Government Industry Consultants (Alternate)
 - Katie Izenour – Industry Consultant, Federal Government (Alternate)

HIMSS Membership Update

- Amit Trivedi – HIMSS replacing Mari Greenberger
- Christina Caraballo replacing Christel Anderson

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Meeting Agenda

Purpose:

The purpose of this meeting is to discuss data modernization efforts underway at CDC, obtain an eCR and eCR Now update, and discuss the progress and status of Digital Bridge workgroups and related work since the last Collaborative Body meeting in July 2021.

Time	Agenda Item
12:00 PM	Call to Order and Roll Call
12:05 PM	Agenda Review, Approval, and COI Declarations
12:10 PM	IZ Gateway Update – <i>Kelly Carulli, Audacious Inquiry and Susan Pierce-Richards, CDC</i>
12:30 PM	Data Modernization – <i>Dan Jernigan, CDC</i>
1:00 PM	Discuss Data Modernization Follow Up
1:10 PM	eCR and eCR Now Update – <i>John Loonsk, Consulting CMIO APHL</i>
1:15 PM	ExeCC Workgroup Update – <i>Richard Hornaday, Allscripts and Joe Rogers, CDC</i>
1:25 PM	Announcements and Next Steps
1:30 PM	Adjournment

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Conflict of Interest Declarations?

Items for Discussion Today

- Data Modernization and Next Steps

Standing Rule III. Conflicts of Interests

Whenever a member (i.e., organization), member representative, officer, or a member's workgroup **appointee has a financial or personal interest in any matter coming before the Collaborative Body or workgroup**, the affected person shall

- fully disclose the nature of the interest and
- withdraw from discussion, lobbying, and voting on the matter.

Any transaction or vote involving a potential conflict of interest shall be approved only when a majority of disinterested members determine that it is in the best interest of the organization to do so.

The minutes of meetings at which such votes are taken shall record such disclosure, abstention and rationale for approval.

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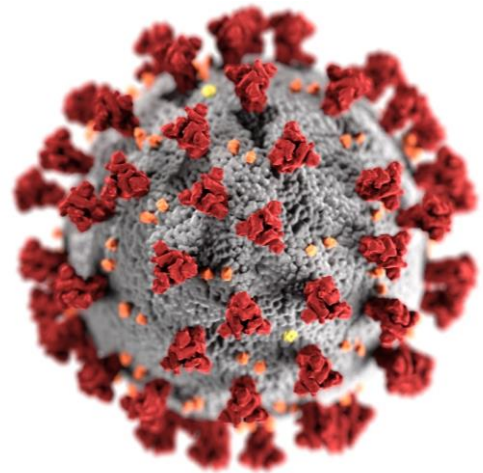
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Digital Bridge

Immunization (IZ) Gateway

Susan Pierce-Richards, CDC
Kelly Carulli, Audacious Inquiry

October 7, 2021



cdc.gov/coronavirus

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Welcome

Susan Pierce-Richards(CDC)



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Agenda

Topic	Presenter
Immunization (IZ) Gateway Background	Kelly Carulli
Use Cases	Kelly Carulli
Onboarding Status	Kelly Carulli
IZ Gateway's Upcoming Priorities	Susan Pierce-Richards
Call to Action	Susan Pierce-Richards
Q&A	Kelly Carulli & Susan Pierce-Richards

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IZ Gateway: Where Are We Now

Kelly Carulli





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Introducing the IZ Gateway

WHAT IS THE GATEWAY?

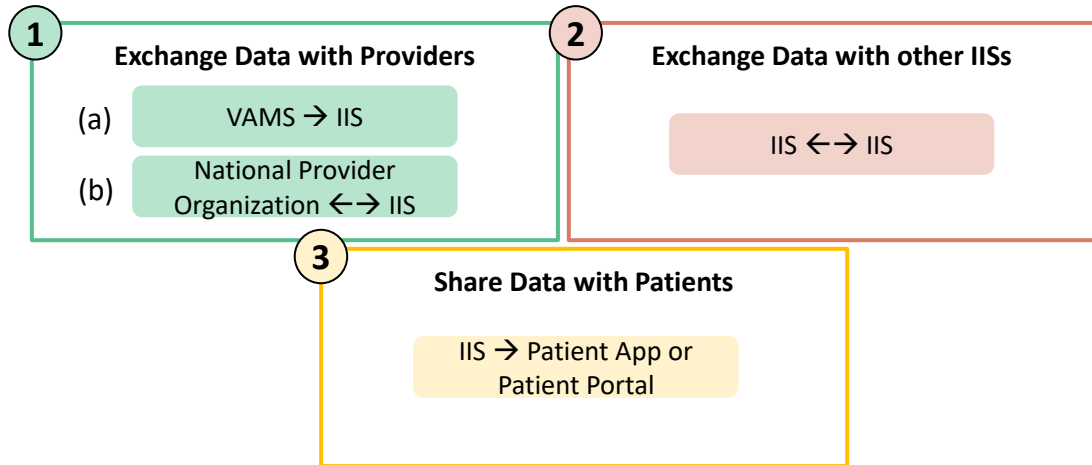
-  A cloud-based **message routing service** intended to improve immunization data flow, integration, sharing, and access
-  Promotes **centralized data exchange** among jurisdictional IISs, provider systems

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IZ Gateway Use Cases

CDC offers centralized onboarding support to providers and IIS on their path to using IZ Gateway capabilities. The IZ Gateway offers the following services:



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Baseline Requirements for Using the IZ Gateway

Technical Requirements

IIS prerequisites:

- Comply with CDC SOAP WSDL.
- Comply with HL7 2.5.1 Release 1.5 standards (VXU, QBP, and RSP).

IIS technical staff requirements:

- Perform connection tests with IZ Gateway in TEST and PROD environments

Legal Requirements

IIS programmatic staff requirements:

- Sign data use agreement (DUA) with Association of Public Health Laboratories (APHL).



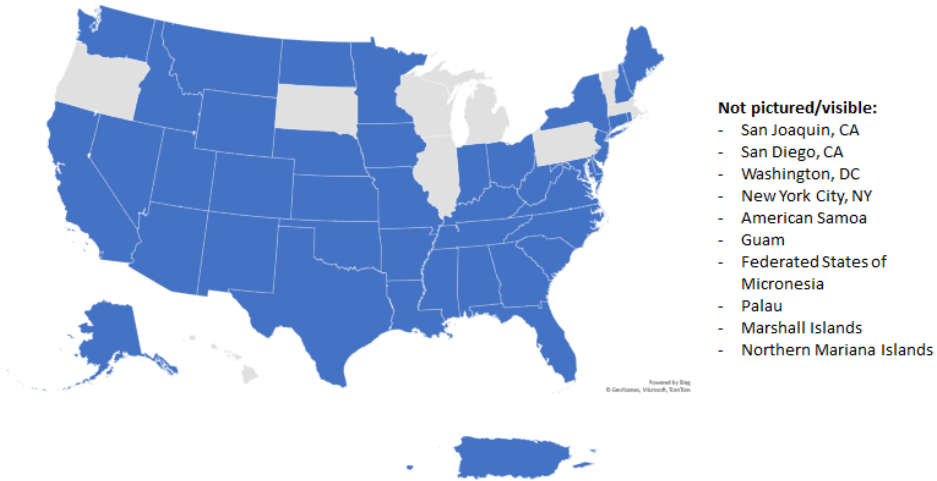
SOAP - Simple Object Access Protocol
 WSDL - Web Services Description Language
 VXU - Unsolicited Vaccine Update
 QBP - Query by Parameter

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As of October 1, 2021

Jurisdictions Ready to Receive Data via IZ Gateway

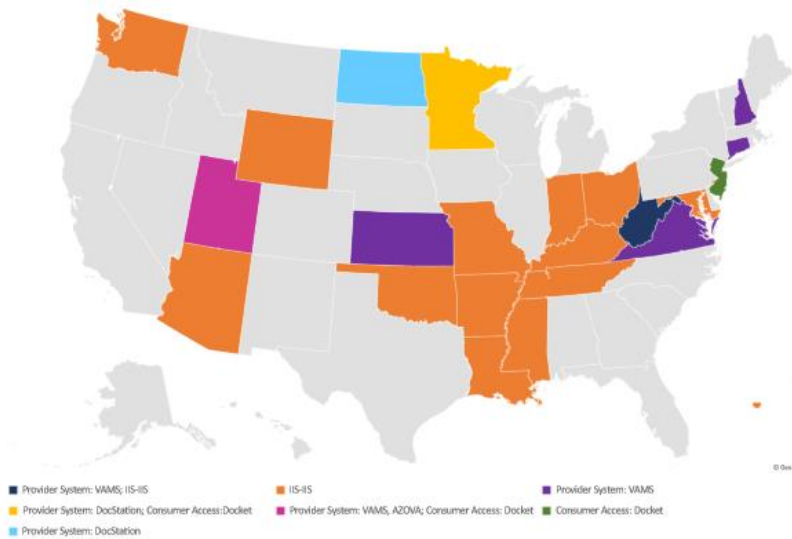
- Jurisdictions highlighted in blue have completed all policy and technology prerequisites for receiving messages from EHRs through the IZ Gateway.



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As of October 1, 2021

Jurisdictions Participating in Data Exchange with IIS and Providers through the IZ Gateway



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IZ Gateway's Menu of Services: Status Update

Use Case Data Flow	Progress
1) IIS ↔ IIS	<ul style="list-style-type: none"> • 19 IISs currently exchanging data (79 data exchange connections total) • Majority of IIS platforms are functionally ready for data exchange with IIS • 74% signed necessary policy agreements
2) VAMS → IIS, NPO/Federal Agency ↔ IIS	<ul style="list-style-type: none"> • 91% of IISs are ready to receive data • VAMS – 7 jurisdictions • AZOVA – 1 jurisdiction, 2 in progress • DocStation – 2 jurisdictions
3) IIS → Patient App/Portal	<ul style="list-style-type: none"> • 3 jurisdictions live with Docket • Conversations underway with AZOVA
4) Provider ↔ Mult. IISs	Requirement gathering in progress
5) IIS → CDC	Requirement gathering in progress

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On the Horizon

Susan Pierce-Richards (CDC)



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IZ Gateway's Upcoming Priorities



Programmatic Efforts

- Increase participation in IIS-to-IIS Data Exchange
- Elevate awareness of consumer access options
- Facilitate NPO-IIS Data Exchange (e.g., Federal Agencies, EDN, AZOVA, and DocStation)

Public Health Services Expansion

- Facilitate data exchange and availability of refugee vaccination data

Future Functionality

- Implement multijurisdictional query enhancement
- Facilitate IIS-to-CDC (Data Repository) Data Submission via IZ Gateway
- Leverage future contracts to optimize architecture and functionality

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Next Steps for Digital Bridge

Susan Pierce-Richards (CDC)



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What's Next?

The IZ Gateway plans to **expand functionality** for NPO and IIS users and will seek input from the community through the following activities:

- Familiarizing work groups with the IZ Gateway functions and use cases
- Providing input on proposed enhancements

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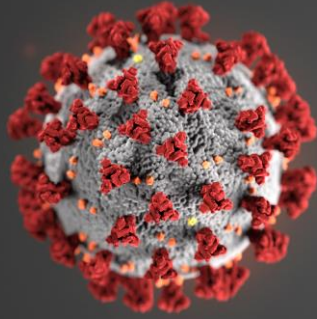
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Q&A



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For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.



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Data Modernization

Dan Jernigan, CDC

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Data Modernization: Priorities and Next Steps

Daniel B. Jernigan, MD, MPH

Deputy Director for Public Health Science
and surveillance (DDPHSS)

Digital Bridge Collaborative Body Meeting

October 7, 2021



What is the problem we are trying to solve?



Siloed information:

Disconnected and/or proprietary disease systems driven by disease-specific budget lines keep us from seeing the complete picture



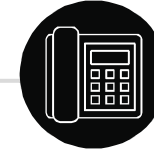
Outdated skills:

The public health workforce needs training to use today's technologies more effectively



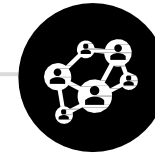
Heavy burdens for Providers:

Providers in healthcare and at health departments are burdened with sending data to many places in many ways



Older technologies:

- Most systems at health departments are not flexible, do not use cloud, and are not scalable



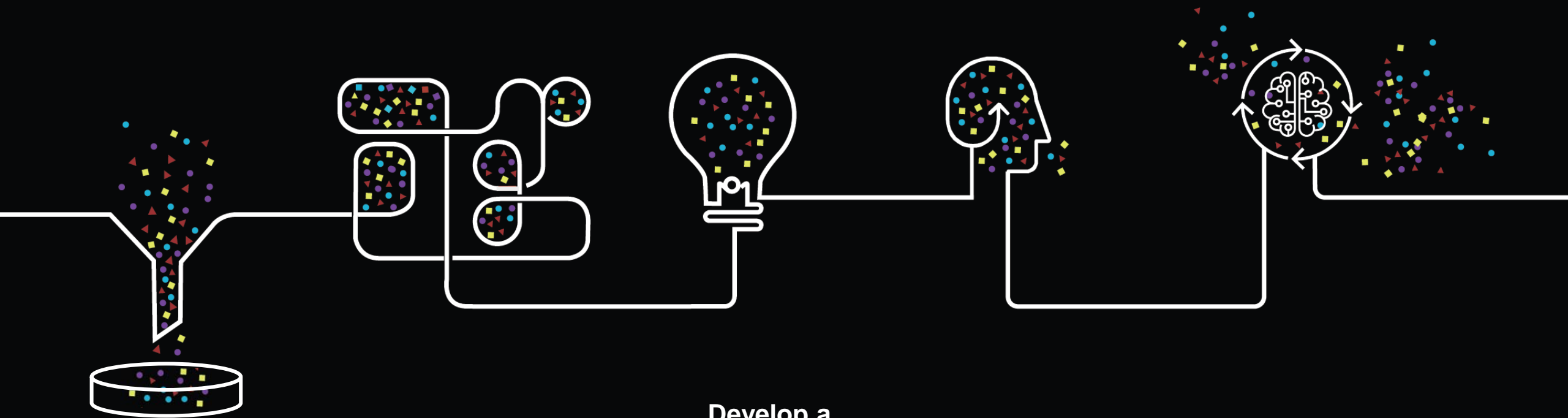
Public health is not a part of the healthcare data ecosystem

- Public health got left behind as federal incentives and regulations helped healthcare systems to be able to easily share data automatically in the Electronic Health Record.

Our Ultimate Goal

To move from siloed and brittle public health data systems to connected, resilient, adaptable, and sustainable **‘response-ready’** systems that can help us solve problems before they happen and reduce the harm caused by the problems that do happen.

DMI Priorities



Build the right foundation

Provide the new information infrastructure and automated data sources for pandemic-ready data sharing

Accelerate data into action

Create faster, more integrated use of data to have more real-time situational awareness and forecasts of health threats for greater prevention and response

Develop a state-of-the-art workforce

Identify, recruit, and retain experts in Health IT, Data Science, and Cybersecurity to generate meaningful public health insights

Support + extend partnerships

Engage with state, territorial, local, and tribal partners to address policy challenges and create new strategic partnerships to solve problems

Manage change + governance

Provide the necessary structure to support modernization and aid adoption of unified technology, data, and data products

Priority 1: Build the right foundation

Alignment to DMI Roadmap: Coordinate People and Systems

Provide the new cloud foundation and automated data sources for response-ready data sharing and to break down data system silos.

- a. **Develop a shared vision of a public health ecosystem** for coordinated and seamless exchange of actionable data between healthcare data providers and public health agencies.
- b. **Expand foundational infrastructure** to provide scalable, flexible services for timely and appropriate access to actionable data in the public health ecosystem.
- c. **Modernize and connect public health systems and sources** for streamlined and consolidated collection, routing, exchange, and linkage of public health data using standards and the foundational infrastructure.
- d. **Transform legacy public health data systems, processes and activities** to use the foundational infrastructure, thereby replacing and combining existing siloed systems with systems that work for all diseases and conditions and will reduce duplicative activities, cost, and time to scale up and respond in emergencies.
- e. **Create the ability for CDC and STLT staff to easily store, discover, analyze, and visualize data** in the public health ecosystem.

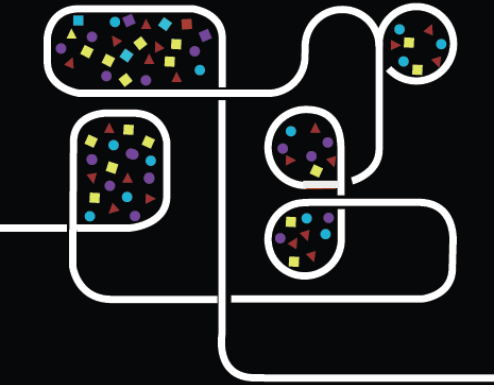


Priority 2: Accelerate data into action

Alignment to DMI Roadmap: Accelerate Data for Action

Faster, more interoperable data provides high-quality information that, in turn, leads to knowledge and provides a more real-time, comprehensive picture to improve decision-making and protect health.

- a. **Develop, align, test, and implement new data standards** to increase interoperability
- b. **Increase data linkages** across diverse data assets
- c. **Advance the use of forecasting and predictive analytics** to make efficient and effective decisions to respond to outbreaks, emerging threats, and exposures
- d. **Implement tools for scalable outbreak or emerging threat response**
- e. **Identify health inequities and promote equitable health outcomes**





Priority 3: Develop a state-of-the-art workforce

Identify, recruit, and retain critical workforce in Health IT, Data Science, and Cybersecurity Specialists to be stewards of larger quantities of data and tools – better and faster – to generate meaningful public health insights.

- a. **Identify workforce capacity and capability** needs and opportunities
- b. **Increase the data science capacity and capabilities** of the CDC workforce.
- c. **Facilitate data science upskilling** for epidemiologists and technologists at STLT agencies

Priority 4: Support + extend partnerships

Engage with state, territorial, local, and tribal partners to ensure transparency, address policy challenges, and create new strategic partnerships to solve problems.

- a. **Increase collaboration, communication, and messaging** among CDC and partners to ensure alignment and participation across DMI activities
- b. **Public health policies support the exchange and use of data** between CDC, STLTs, partners, and data providers

Priority 5: Manage change + governance

Data Modernization Initiative

Sets **strategy** and funds innovation ... and ultimately

evaluates impact



IT and Data Governance

Ensures compliance, manages **governance**, and provides guidance necessary to

enable execution

We are listening...

Challenges and Opportunities
for Strengthening the US
Public Health Infrastructure

Findings from the Scan of the Literature

MAY 2021

 National Network
of Public Health Institutes

JPHMP JOURNAL OF
Public Health Management & Practice

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THE MANAGEMENT MOMENT

Modernizing Our Nation's Public Health Information System: Toward an Integrated Approach


Outline
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Singletary, Vivian JM, MBA; Richards, Chesley L. Jr MD, MPH; Ross, David A. ScD; O'Carroll, Patrick MD, MPH; Baker, Edward L. MD, MPH

Editor(s): Baker, Edward L. MD, MPH, Column Editor


Author Information 

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doi: 10.1097/PHH.0000000000001400

 Bipartisan Policy Center

**Positioning
America's Public
Health System for the
Next Pandemic**

June 2021



**Public Health API Concept
Paper Version 1.0**

Prepared by the Digital Bridge Public Health API
Workgroup

Workgroup Chair – Walter Suarez, MD, MPH
September 2021

VIEWPOINT

**Modernizing Public Health Data Systems
Lessons From the Health Information Technology
for Economic and Clinical Health (HITECH) Act**

Kushal T. Kadakia, MSc
Google Health,
Mountain View,
California.

**Michael D. Howell,
MD, MPH**
Google Health,
Mountain View,
California.

**Karen B. DeSalvo, MD,
MPH, MSc**
Google Health,
Mountain View,
California.

Barriers to timely data collection and exchange hindered health departments throughout COVID-19, from fax machines creating bottlenecks for disease monitoring to inconsistent reporting of race and ethnicity. Modernizing public health data systems has become a bipartisan postpandemic imperative, with President Trump engaging the US Digital Service to improve data exchange and President Biden issuing an Executive Order on his second day in office to advance public health data and analytics.

These initiatives should be informed by the experience of digitizing health care delivery. The Health Information Technology for Economic and Clinical Health (HITECH) Act drove the near-universal adoption of certified electronic health records (EHRs).

more than \$1 billion for the CDC's Data Modernization Initiative (DMI), such overdue resources are the means, not the ends. Policy makers need to learn from HITECH—which had 30-fold more funding and still encountered roadblocks—to ensure data systems meet the needs of the public health community, and in turn, the US population.

Lessons From HITECH
Like public health today, health care in 2009 predominantly relied on paper-based systems despite the increasingly digital nature of US society. The HITECH Act sought to address this gap by accelerating EHR adoption. However, building EHRs was no guarantee of adoption by hospitals and use by clinicians. Thus, it was

What will be different because of DMI?

When the next emergency happens, we will have:

- A foundation for data sharing across all levels of public health for coordinated, scalable and timely case investigation, management, and reporting
- Shared analysis capabilities for rapid identification of trends within and across jurisdictions, including:
 - Race/ethnicity-specific trends and risk factors
 - Improved forecasting and response capabilities



Questions

eCR and eCR Now Update

John Loonsk MD FACMI

eCR Lead, Association of Public Health Laboratories

October 7, 2021

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eCR Update

- In January 2020:
 - 187 facilities at 3 healthcare organizations were using eCR
 - 21 states, Washington D.C., and 2 local jurisdictions were receiving eCR data

- In October 2021:
 - More than 9,400 facilities at 101 healthcare organizations are sending eCR for COVID-19 to public health agencies
 - All 50 states, Washington D.C., Puerto Rico, and 12 local jurisdictions have received electronic initial case reports for COVID-19
 - More than 11 million COVID-19 reports have been sent from healthcare to public health agencies.

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eCR Update

- CMS issued a rule requiring eCR for Promoting Interoperability hospitals in the 2022 reporting period
- CMS is processing comments on a proposed rule requiring eCR for Promoting Interoperability providers of care in the 2022 reporting
- CSTE, CDC, and APHL are updating the RCKMS system software and scaling the supporting infrastructure for this upcoming expansion and the move to “full” electronic case reporting (>108 conditions can now be authored)

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eICR Utility

- Growing awareness of the breadth and utility of the electronic Initial Case Report (eICR) and EHR data for public health
- Public health has extracted huge value from electronic laboratory results and ADT data and is beginning to see the power of broader eICR / EHR data
- For example, relevant to issues of the day:
 - eICRs contain patient demographics, race, and ethnicity
 - Also contain, things like vaccine history, vaccination timing, vaccine details – data are linked with breakthrough diagnoses and other clinical findings

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eCR Data Quality and Consistency Activities

EHRs

- eICR content testing during EHR “native” eCR product development
- eCR pilot testing of EHR “native” eCR solutions in initial HCO implementations
- EHR testing for other “native” deployments and possibly EHR updates
- eCR Now App development – the app provides significant data consistency and quality advancements
- On-line and in-line error and warning testing and feedback
- Engaging EHRA and others

PHAs

- “Mapper” tools for simplifying CDA content ingestion
- Technical support contract for eICR mappings and distribution for state and local PHAs
- Work with surveillance systems to align capabilities for eICR use
- Support of HTML “hybrid” eICR use as bridging capabilities

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ExeCC Workgroup Update

Richard Hornaday, Allscripts and Joe Rogers, CDC

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Expanding eCR's Capacity & Capability (ExeCC)

- Expanding eCR's Capacity & Capability (ExeCC) Concept Paper
 - Change in focus:
 - Identification of Aspects of Existing eCR that Motivate Expansion
 - Identification of Potential Limitations from Existing eCR that may Require Enhancement to Enable Expansion
 - Identification of Aspects of Existing eCR where Changes Should be Avoided
 - Market Requirements for All Potential Enhancement Needs
- No longer focused on Implementation and Pilots

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Projected Concept Paper Outline

- Introduction
- Background
- Evolution Considerations
 - Aspects of Existing eCR that Motivate Expansion
 - Potential Limitations from Existing eCR that may Require Enhancement to Enable Expansion
 - Aspects of Existing eCR where Changes Should be Avoided
- Enhancement: Security
- Enhancement: Decision Support Intermediary (DSI) Authoring
- Enhancement: EICR Message Filtering
- Policy, Privacy, and Public Health
- Strategies and Steps Needed to Expand eCR
- Conclusions and Next Steps

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Projected ExeCC Concept Paper Meeting Schedule

Topic	Proposed meeting
Level Set – capture “good aspects of the existing eICR/RR methodologies that motivate this evolution	9/9/2021
Level Set – capture known additional limitations beyond those already identifies that may hinder evolution	9/9/2021
Architecture – centralized DSI versus distributed DSI (especially how this choice may impact evolution needs)	9/30/2021
Evolution Need – Requirements brainstorming for Enhanced Access Control & Authorization (Security)	10/21/2021
Infrastructure	
Evolution Need – Requirements brainstorming for Enhancements to DSI Authoring (especially for Security needs)	11/11/2021
eICR Filtering – Standards Impacts	12/2/2021
eICR Filtering – Architectural Impacts & Alternatives	12/2/2021
eICR Filtering – close on Recommendations	Basecamp
eICR Filtering – Requirements brainstorming	12/23/2021
Level Set – Summary of Evolution Plans	1/13/2022
Discussion – “Impacts” of proposed evolution plan on other existing sections of the concept paper	1/13/2022
Stake-in-the Ground – Finalize concept paper sections/organization & preliminary assignments	1/13/2022
Check-point of progress on assignments	2/3/2022
Check-point of progress on assignments	2/24/2022
Finalize initial draft	Basecamp
Initial Draft – collaborative review and commenting	3/14/2022
Incorporation of comments	Off-line action
Provide Draft for Collaborative Body review	Target end of March

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Digital Bridge Cancer Use Case Progress Update October 07, 2021

Joseph D. Rogers, M.S.

Team Lead

Informatics, Data Science, and Applications Team (IDSAT)

Cancer Surveillance Branch (CSB)

Division of Cancer Prevention and Control (DCPC)/CDC



CS319521U

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AGENDA

- Cancer Use Case Objective
- Rationale and Utility of These Reports
- CDC/NPCR EHR Vision
- What Has Been Accomplished Thus Far?
- Next Steps

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Cancer Use Case Objective

The objective of this use case is to reach near real-time cancer case data exchange by leveraging Digital Bridge's capability and capacity to engage stakeholders and establish trigger-based, electronic cancer case reporting from electronic health records (EHRs)

These EHR reports will then be sent to the state- and territory-based central cancer registry health information technology infrastructure.

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Rationale and Utility of EHR Reports

Rationale: Over time, all data elements relating to a cancer registry tumor will be found in an EHR report

Utility of EHR Reports

- Case Finding
- Starting an Abstract
- Augmenting or Completing an Abstract
- Validating and Consolidating Existing Abstracts

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CDC/NPCR EHR Vision

- To expand the existing eCR that is used to convey triggerable conditions / codes to Public Health to now also convey Cancer-related conditions & codes
- The ultimate goal is to develop a consensus HL7/NAACCR standard that the cancer surveillance community can use for EHR reporting
- By using the Digital Bridge eCR/RCMKS infrastructure, that standard can be developed (in conjunction with the MedMorph project) and implemented

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What Has Been Accomplished Thus Far?

- The base set of cancer use case trigger codes have been incorporated into the Reportable Conditions of the Council of State and Territorial Epidemiologists (CSTE) / Knowledge Management System (RCKMS). This was announced by CSTE June 2021.
- Central cancer registry (CCR) pilot sites contacted

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Next Steps

- Complete CCR technical documentation detailing the process of authoring to receipt of the report
- Finalize pilot site project plan
 - Identify healthcare system and EHR vendor
 - Work with the PHA currently receiving eCR reports for receipt, validation, and routing
 - Review reports for utility to the eCR
 - Expand trigger codes?
 - Expand eCR reporting requirement?
- Move to production

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ExeCC Concept Paper – Timeline of Workgroup Meetings

Topic/Activity	Projected meeting
Level Set – capture "good aspects of the existing eICR/RR methodologies that motivate this evolution	9/9/2021
Level Set – capture known <u>additional</u> limitations beyond those already identified that may hinder evolution Any new items may drive additional discussions	9/9/2021
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Sharing data to improve clinical care and public health. digitalbridge.us

ExeCC Workgroup – Cancer Registries

- Laura Conn is currently working on technical documentation to provide to pilot sites. Joe Rogers will convene subgroup once he receives this technical documentation.
- Initial pilot sites = California and Kentucky Cancer Registries. Joe reached out to them and they have agreed.

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Next Steps

- Next Collaborative Body Meeting: January Annual Meeting, Date to be Determined

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