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Towards Health IT Standards Adoption: A Web-based Resource of Health IT Applications and Projects in Public Health

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Presenter Disclosures

Noam H. Arzt

(1) The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:

Consultant, Public Health Data Standards Consortium, Health IT





Outline

- Context for this project: Business Case
- Implementing the Business Case
- Web Resource Center
 - □ HIT Standards Resources
 - Public Health Participation in HIT Standardization
 - ☐ HIT Adoption Stories
 - Public Health Needs for HIT Standardization
- Summary and Conclusions



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Business Case: Public Health in HIT Standardization



URL:

http://www.phdsc.org/standards/pdfs/PHDSC_Business_Case_Public_Health_HIT-Standardization.pdf





Business Case: Public Health in HIT Standardization

- National HIT standardization process requires <u>collective input</u> from public health on **what** public health issues need to be addressed in national interoperable HIT standards.
- This input needs to be collaboratively developed, put through the national HIT standardization process and uniformly implemented.
- Public Health's "Organized Voice on HIT Standards" will have to take on a character reflective of this reality.
- We define Public Health's Organized Voice on HIT Standards as an open, transparent, participatory process of harmonizing programspecific and jurisdictional needs with national HIT interoperability standards by working with public health stakeholders and HIT standardization entities on various phases of HIT standardization.





What do we want to achieve?

National Health IT adoption strategies have created unprecedented interest in using population-level data. Such data can be available if public health information systems successfully interoperate, *i.e.*, receive and send data between clinical information systems; and across health information systems at all levels of government.

We propose a business strategy that

- Maximizes the impact of those who participate on behalf of public health in the national Health IT standardization process, and
- Obtains input from, informs, and educates other public health stakeholders.

Through this collaborative public health effort, we could achieve meaningful interoperability across public health information systems as well as between public health and clinical information systems.





How will we want to achieve?

Implementing the Business Case through

- Developing a methodology for Public Health Participation in HIT Standardization Efforts
- Educating Public Health Community about Health Informatics and HIT Standards



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Developing a methodology...

PHDS	PHDSC Business Case: HIT Standardization Phases, Products and Entities					
HIT Standardization Phases	Needs & Priorities	Development & Maintenance	Selection & Harmonization	Testing/Trial Implementation	Certification	Deployment
Goals	What should be accomplished ?	What are the standards?	What standards to use?	Show what can be accomplished	Certify standards- based products	Deploy standards- based products
HIT Standards and Interoperability Framework Development Entities	HIT Policy Committee HIT Standards Committee (Formerly AHIC)	SDOs (e.g., HL7, SNOMED (IHTSDO), LOINC, ASC X12, NUBC, ISO TC215)	IHE HITSP ONC Standards & Interoperability Framework	NwHIN IHE	Certification Entities (CCHIT, Drummond Group, Inc)	Proposed IHE & PHDSC Deployment Workshops
Standards Documents	Use Cases (Description of the health information exchanges)	Standards	Interoperability Specifications Technical Frameworks Integration Profiles	Test Reports	Functional Profiles Certification Criteria	Deployment Reports





...and working on projects

HIT Standardization and PHDSC Projects						
HIT Standardiza- tion Phases	Needs & Priorities	Development & Maintenance	Selection & Harmonization	Testing /Trial Implemen- tation	Certification	Deploy- ment
Goals	What should be accomplished?	What are the	What standards	Show what can be	Certify standards- based	Deploy standards -based
	•	HITSP Projects	to use?	accomplished	products	products
	AAIC / MU: Biosurveillance	Biosurveillance	Biosurveillance	Б	LIDEC Draine	
	Immunization	[mmunization	Immunization	P	HDSC Project	S
Public Health	ELR	PH-Lab	PH-Lab	PH-Lab	PH-Lab	PH-Lab
Domains Undergoing HIT Standardiza- tion	Public Health Reporting	Public Health Reporting	Public Health Reporting	Public Health Reporting	Public Health Reporting	
	Newborn Screening	Newborn Screening	Newborn Screening	Hearing	Hearing	Hearing
	Vital Records	Vital Records	Vital Records	Vital Records	Vital Records	





Educate Public Health and Clinical Professionals about HIT Standards

■ PHDSC Webinars:

- Series of Webinars on Meaningful Use of Health IT for Public Health in partnership with JPHIT
- □ HIT Standards for Early Hearing Detection and Intervention
- Re-evaluation of HL7 EHR-S Functional Model from Public Health Perspectives
- HL7 Ambassador Presentation on Syndromic Surveillance and Meaningful Use of Health IT
- University-based Health Informatics Training in partnership with Johns Hopkins University
- Health Information Technology Standards Web-Resource

(http://www.phdsc.org/standards/health-information-tech-standards.asp)





Public Health IT Standardization Resource Center

Four module website:

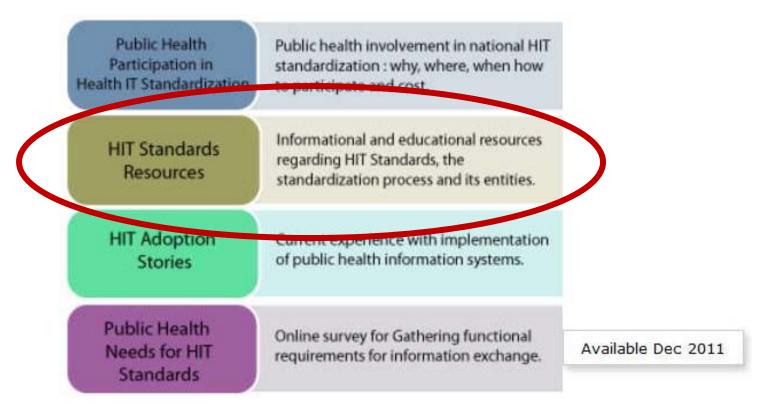


Available Dec 2011



Public Health IT Standardization Resource Center

Four module website:







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Health Information Technology Standards

- Health Information Technology Standardization
- Health Information Exchange Priorities
- Standards Development
 - o Data Standards
 - o Information Content Standards
 - o Information Exchange Standards
 - o Identifiers Standards
 - o Privacy and Security Standards
 - o Functional Standards
 - o Other Standards
- Standards Harmonization
- Certification of Standards-Based Health IT Products
- Implementation of Standards-Based Specifications
- Adoption of Standards-Based Health IT Products

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Health Information
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Health Information Technology Definitions Project

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Participation in Health
IT Standardization

Health Information Technology Standards

HIT Adoption in Public Health

Health Information

Health Information Technology Standards

HIT Standardization | Health Information Exchange Priorities | Standards
Development | Harmonization | Testing | Certification | Deployment | Adoption

Definitions of Standardization, Standard and Standards Categories

Definitions | Related Topics | Tutorials

Standardization, as defined by the International Organization for Standards (ISO)), is the process of agreeing on standards, which represent the common language that allows the exchange of data between disparate data systems. The goals of standardization are to achieve comparability, compatibility, and interoperability between independent systems, to ensure compatibility of data for comparative statistical purposes, and to reduce duplication of effort and redundancies.

A <u>Standard</u>, is a definition, set of rules or guidelines, format, or document that establishes uniform engineering or technical specifications, criteria, methods, processes, or practices that have been approved by a recognized standard development organization (SDO), or have been accepted by the industry as de facto standards, or de jure standards, i.e., formal legal requirements. De facto standards have become standards because a large number of companies have agreed to use them. They have not been formally approved as standards, but they are standards nonetheless.

Standards Categories. In February 2006, the <u>Health Information Technology Standards Panel (HITSP)</u> identified the following health information technology standards categories:





Health Information Technology Standardization Panel (HITSP)

Certification Commission of Health Information Technology (CCHIT)

Privacy & Security Standards			
Examples of Standards Development Organizations	Domains		
<u>ASTM</u>	Security, Confidentiality		
<u>ISO</u>	Privileged Access, Pseudonymization, Audit Trail		
IHE	Patient Consent, Anonymization/Pseudonymization		
HITSP	Patient Consent, Anonymization/Pseudonymization		

<u>ASTM Committee E31</u> – American Standards for Testing and Materials Committee E31 on Health Informatics

ASTM International is one of the largest voluntary standards development organizations in the world- for technical standards for materials, products, systems, and services.

ASTM Committee E31 on Healthcare Informatics develops standards related to the architecture, content, storage, security, confidentiality, functionality, and communication of information used within healthcare and healthcare decision making, including patient-specific information and knowledge. The Committee, with a current membership of approximately 300 members, has 3 technical subcommittees that have over 30 approved standards and additional draft standards

ISO - International Organization for Standardization

ISO is a network of national standards institutes from 140 countries working in partnership with international organizations, governments, industry, business, and consumer representatives.

ISO 215 Technical Committee on Health Informatics (ISO/TC 215) works on the standardization of health information and communications technology to allow for compatibility and interoperability between independent systems through the following Working Groups: WG 1: Data Structure, WG 2: Messaging and Communications, WG 3: Health Concept Representation, WG 4: Security, WG 5: Health Cards, WG 6: Pharmacy and Medication, WG 7: Devices, and WG 8: Business Requirements for Electronic Health Records. The ISO/TC 215 developed standards for Privilege management and access control, Pseudonymisation and Audit trails for electronic health records.



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Public Health Participation in Health IT Standardization

Main | Why | Where | What | Who | How | How Much

Public health is a critical partner of the healthcare enterprise whose infrastructure, knowledge and services are essential and irreplaceable in delivering quality care and in protecting the nation's health. -- PHDSC

National Health IT adoption strategies have created unprecedented interest in using population-level data. Such data can be available if public health information systems successfully interoperate, i.e., receive and send data between clinical information systems; and across health information systems at all levels of government. We propose a business strategy that

- (a) maximizes the impact of those who participate on behalf of public health in the national Health IT standardization process, and
- (b) obtains input from and informs and educates, other public health stakeholders.

PHDSC works with public health community to assure that public health has a strong, coordinated voice in Health IT standardization to improve the public health of the Nation.

Through this joint public health effort, we could achieve meaningful interoperability across public health information systems as well as between public health and clinical information systems.



HIT Adoption in Public Health

Health Information Technology Standardization Panel (HITSP)

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Commission of Health
Information
Technology (CCHIT)

Why

Public health needs can only be communicated effectively by public health professionals.

Where

Public health needs can only be communicated effectively by public health professionals.

What

Public health needs can only be communicated effectively by public health professionals.

Who

Public health needs can only be communicated effectively by public health professionals.

How

Public health needs to speak with a strong, **coordinated voice** to Health IT standardization entities.

How Much

Participation cost has been estimated at \$39,500.

A Coordinated Public Health Action Plan on Health IT Standards sets an open, transparent, participatory process assuring that public health has a strong, coordinated voice in the national Health IT standardization process

Business Case

Call to Action

Learn More: Barriers to Participation

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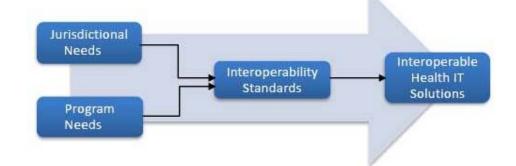
Public Health
Participation in Health
IT Standardization

Health Information Technology Standards Public Health Participation in Health IT Standardization

Main | Why | Where | What | Who | How | How Much

What interests should be brought to the HIT Standardization table

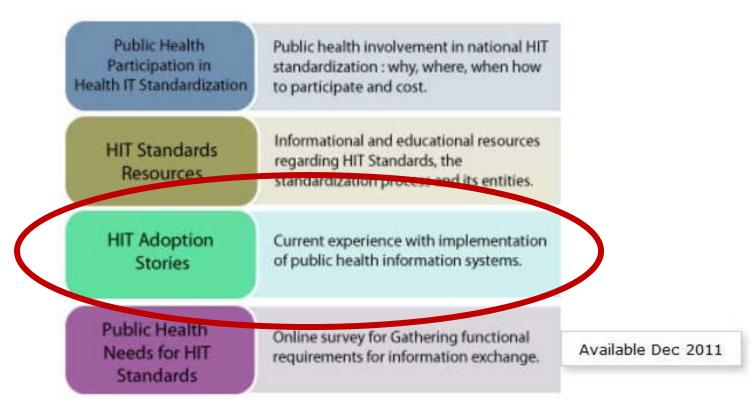
By participating in Health IT Standardization, you will be able translate your jurisdiction-specific and program-specific needs into standards-based IT <u>applications</u> to support public health program activities.





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Stories of Health IT Adoption in Public Health

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Welcome to the Public Health Standards story page!

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Search Terms

Go!

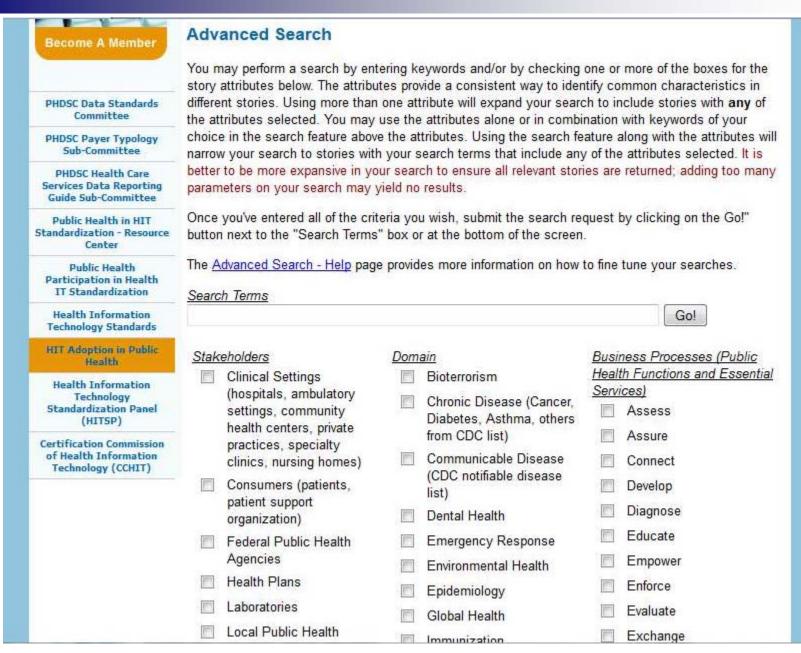
Advanced Search

The "stories" database provide public health entities a resource for locating public health efforts similar to those they may be planning and understand how standards were incorporated into and benefit the effort. It provides a range of information including a

- · description of the effort;
- successes and challenges;
- Web link and/or publication URL for complete information on the effort.

This stories database is a resource to assist public health to understand and navigate some of the complexities of the field of data standards, facilitate public health adoption of national standards into current and future HIT projects, and align public health applications with those of the broader health care industry.







Advanced Search

		_		
<u>Domain</u>		Business Processes (Public Health Functions and		
	Bioterrorism		ential Services)	
	Chronic Disease (Cancer, Diabetes,		Assess	
	Asthma, others from CDC list)		Assure Connect	
	Communicable Disease	_		
	(CDC notifiable disease		Develop	
	list)		Diagnose	
	Dental Health		Educate	
	Emergency Response		Empower	
	Environmental Health		Enforce	
	Epidemiology		Evaluate	
	Global Health		Exchange	
	Immunization		Identify	
	Injury		Inform	
	Maternal and Child Health (WIC, Newborn		Investigate	
	screening, Hearing, Birth		Manage	
	Defects, other from CDC and HRSA lists)		Mobilize	
	Mental Health		Monitor	
	Occupational Health		Research	
	Public Health Informatics			
	Vital Statistics (Birth Records and Death Records)			
	Zoonotic, Vector-Borne, and Enteric			

	<u>Informa</u> Functio	<u>ition Management</u>
		nalyze Data
	⊟ C	ollect Data
	⊟ C	ode Data
	(F	enerate Reports Reminders, otifications, Alerts, ummaries)
	⊟ In	tegrate Data
		anage Data (Store, erify)
•		
Stan	dardization	
	Certify HIT	product
	Deploy sta	ndard
	Develop sp	oec
	Establish o	compliance
	Establish o	conformance
	Establish f	
	Identify do	main need
	Identify ov	erlap/gap
	Implement	standard
	Resolve ov	verlap/gap

Standardization Phases	HIT S	Standards
Needs and Priorities		Data Standards
Standardized HIT		Functional Standards
•		Identifier Standards
Products Certification		Information Exchange Standards
Standards Development		Information Standards
Standards		illioillation Standards
Harmonization		Privacy & Security Standards
Standards Trial Implementation (Testing)		Standards
	Needs and Priorities Standardized HIT Products Adoption Standardized HIT Products Certification Standards Development Standards Harmonization Standards Trial	Needs and Priorities Standardized HIT Products Adoption Standardized HIT Products Certification Standards Development Standards Harmonization Standards Trial

•	CDC Domains		15
•	Public Health Essential Function	X	17
•	Informatics function	Χ	6
•	Standardization phase	Χ	6
•	Standardization Activities	X	12
•	= a lot!		



Select standardTest standard spec



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Search for a Story - Your Results

Search Terms: Immunization

A total of 41 results were found with the following criteria:

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Health Information Technology Standards

HIT Adoption in Public

New York City Department of Health and Mental Hygiene - Citywide Immunization Registry (CIR)

The Citywide Immunization RegistryThe New York Citywide Immunization Registry (CIR) provides a central record-keeping system to track the immunization status of individual children and to monitor immunization levels in the population in a timely manner. Th...

http://www.nyc.gov/html/doh/html/cir/cir-home.shtml

California Immunization Registry (CAIR)

The goal of CAIR is to improve immunization rates for all California children through an innovative publicprivate partnership. CAIR is a collaborative effort involving regional immunization registry services, with the support of their local health departm...

http://www.caiguab.org/indox.php?option=com_content&tack=riow&id=28&Itamid=





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Submit a Story

We would like to include your HIT adoption story in our examples and encourage you to take a few minutes to document and link us to your effort by using the entry form below. These submissions will be reviewed by a PHDSC team and posted to the database within one week.

We encourage you to fill out as much information as possible for other readers' benefit (including your contact information so that we can get in touch with you if we have any questions about your entry).

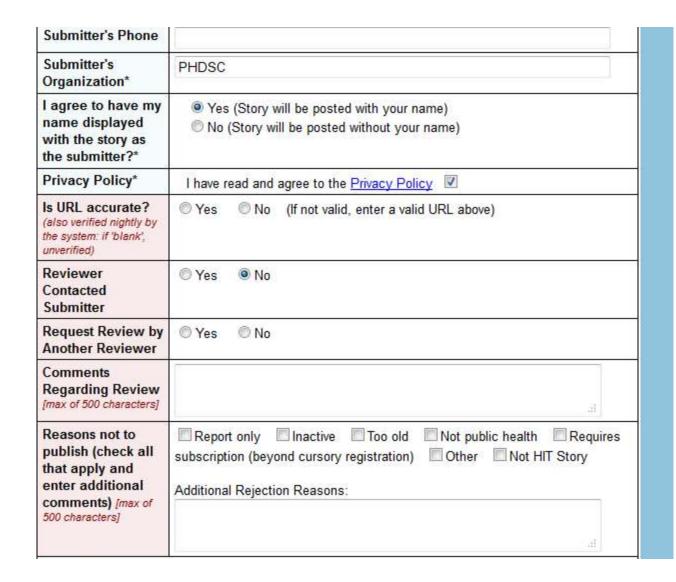
You may expand the text area box to see more of what has been written. Asterisk * indicates required fields.

Title*	
URL*	
Publication Reference	
Description* [max of 15,000 characters]	ial
Challenges Faced [max of 15,000 characters]	#! #! #! #! #! #! #! #! #! #! #! #! #! #
Lessons Learned [max of 15,000 characters]	al.
Key Words	
Submitter's First Name*	
Submitter's Last Name*	
Submitter's F-mail*	













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Administration - Review Stories with Invalid URLs

There are a total of 16 Stories that have invalid URLs.

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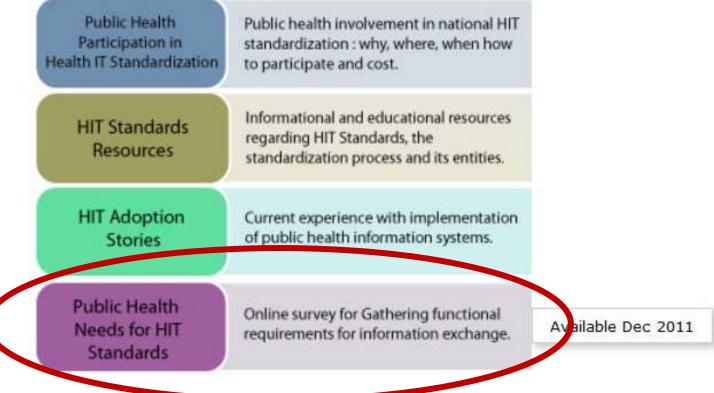
Health Information Technology Standardization Panel (HTTSD)

Title	Date Submitted	Status	URL (partial)
Arkansas Volunteer Registry	01/18/2011	Rejected	https://emcredential.emsystem.com
American Public Health Association : Ethical Guidelines	10/19/2010	Rejected	http://www.apha.org/programs/educ
CDC ATSDR Hazardous Substance Release and Health Effects (HazDat) Database	10/19/2010	Rejected	http://permanent.access.gpo.gov/l
Children's Medication Algorithm Project	10/19/2010	Rejected	http://www.dshs.state.tx.us/mhpro
Connecticut Occupational	10/19/2010	Rejected	http://www.ct.gov/doh/cwo/view.as



Public Health IT Standardization Resource Center

Four module website:







Summary and Conclusions

- Public health needs to "find its voice"
- We need to engage and education public health on HIT standardization issues
- We need to encourage public health to participate and show them how
- We need *your* stories!

