NCVHS

The National Committee on Vital and Health Statistics
The Public Advisory Body to the Secretary of Health and Human Services

Electronic Standards for Public Health Information Exchange

Discretionary Advisory Committee on Heritable Disorders in Newborns and Children

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Outline

1. Introduction to NCVHS
2. Overview of Public Health Information Exchange Standards
3. Review of NCVHS Recommendations to HHS Secretary on Public Health Information Systems and Informatics Standards
4. Open Discussion on Relationship to DACHDNC

Part 1 – Introduction to NCVHS

The National Committee on Vital and Health Statistics

- One of the oldest statutory public federal advisory body to the HHS Secretary

- Focuses on health data, statistics and health information policy

- Provides advice and assistance to the Department (HHS Data Council, CMS, CDC, AHRQ and others)

- Serves as a forum for interaction with private and public sector groups on a variety of health data issues

NCVHS Milestones

1949	Established as federal advisory committee
1974	Public Health Services Act gave NCVHS official status as a statutory public advisory committee to the Secretary of HEW (now HHS)
1996	HIPAA charged NCVHS with advising Secretary on health data standards and privacy policy
2003	Medicare Modernization Act charged NCVHS with recommending standards for electronic prescribing
2010	Affordable Care Act charged NCVHS with advising the Secretary on Operating Rules for HIPAA Administrative Simplification

NCVHS Configuration

- 18 members appointed for four year terms
- Organized around four core areas:
  - Standards (including HIPAA administrative transactions, code sets, identifiers)
  - Population Health
  - Privacy, Confidentiality and Security
  - Health Quality
  - Data Access
- Holds quarterly meetings, convenes public hearings, listening session, workshops, roundtables
- Develops and delivers practical, timely, thorough recommendations to the Secretary

NCVHS Recent Notable Contributions

- Visioning Documents (2000 – 2002)
  - 21st Century Vision for Health Statistics report
    - Emphasized role of all factors influencing health
  - National Health Information Infrastructure:
    - Led to the creation of Office of the National Coordinator for Health Information Technology

- Population Health
  - Community as a Learning Health System Framework

NCVHS Recent Notable Contributions

- Administrative Simplification
  - Fifteen years of oversight and advice in the adoption and implementation of standards, code sets and identifiers to fulfill HIPAA and ACA administrative simplification provisions
  - Annual HIPAA Reports to Congress

- Privacy and Security
  - National Stewardship Framework for Health Information Privacy

Shaping a Health Statistics Vision for the 21st Century (2002)

Place and Time

Context

Community attributes

Natural environment
Air quality
Water quality
Climate and weather
Topography and soil
Environmental contaminants
Animals and plants

Cultural context
Norms and values
Religion
Racism and sexism
Discrimination
Competition/cooperation

Political context
Public policies and Laws
   Social
   Economic
   Health
   Environment
Political culture
Differential political
   enfranchisement or
   participation

Health services
Structure
   Numbers of personnel
   Types of personnel
   Organization
   Facilities
   Types of services
   Accessibility
Processess
   Professional behaviors
   Utilization
   Treatment modalities
Cost and financing
Access and Use
Quality

Economic resources
Employment
   Control over work
Income
Income inequality
Economic change
Education
   Child care
   Early childhood
   experience
   and education

Built environment
Housing
Workplace
School
Transportation
Communication
Access

Biological characteristics
Community age distribtuion
Community gender distribtuion
Genetic make-up

Social attributes
Cohesion
Influence
Networks
Support
Social change

Population-based health programs
Water Supply
Waste Disposal
Air Pollution Control
Public Health Programs
   Children
   Adults

Collective lifestyles and health practices
Diet
Wellness behavior
Physical activity
Sexual practices
Smoking
Substance abuse
Violent behavior
Access to health information

The population's health

	Level	Distribution
Disease		
Functional status		
Well-being		

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Part 2 – Overview of Public Health Information Exchange Standards

Public Health Data Standards

- <u>Standards</u> that support the <u>electronic exchange</u> and <u>interoperability</u> of information required to achieve the core public health disciplines

Behavioral Sciences

Biostatistics

Health Policy and Management

Public Health

Health Services

Environmental Health

Epidemiology

Public Health Data Sources

- **Medical Data** – information collected on individuals in clinical setting during patient encounter

- **Environmental data** – details gathered through monitoring systems or as part of special investigations

- **Survey data** – conducted through various methods such as direct clinical examination, phone and household interviews and data abstraction from medical records

Lumpkin, J. R., & Richards, M. S. (2002). Transforming The Public Health Information Infrastructure. *Health Affairs*, *21*(6), 45.

Public Health Information Infrastructure

- ## Automation
  - Began with the 1890 census
  - Long history with automated systems in vital statistics systems
  - States began to adopt computer technology in 1960s and currently manage multiple systems to support various PH programs

- ## National Databases
  - Network of local and state PH agencies working in collaboration with federal agencies to establish the form and content of data submission for PH programs
  - Information submitted in electronic and paper forms today

Lumpkin, J. R. & Richards, M. S. (2002). Transforming The Public Health Information Infrastructure. *Health Affairs, 21*(6), 45.

Public Health Information Infrastructure

- Data Integration
  - States may have separate systems related to different aspects of one program. For example:
    - HIV Registry
    - AIDS Registry
    - Ryan White Program
    - AIDS Drug Assistance Program
  - Mesh of "in house" developed and "turnkey" systems
  - Lack of interoperability among the various systems
  - Lack of consistency in data coding and data definitions across systems

Lumpkin, J. R., & Richards, M. S. (2002). Transforming The Public Health Information Infrastructure. *Health Affairs*, 21(6), 45.

Challenges for PH Data Interoperability

- "A serious shortcoming of these systems is that they are not integrated horizontally. Data cannot be exchanged, linked, or merged easily by different programs or used to evaluate problems by person over time and geographic areas."*

*Chute, G.C., & Koo, D. (2002). Public Health, Data Standards, and Vocabulary: Crucial Infrastructure for Reliable Public Health Surveillance. *J Public Health Management Practice*, *8*(3), 11-17

EHR and Administrative Systems Supporting PH Requirements

Administrative Systems

Electronic Health Record Systems

Public Health Requirements
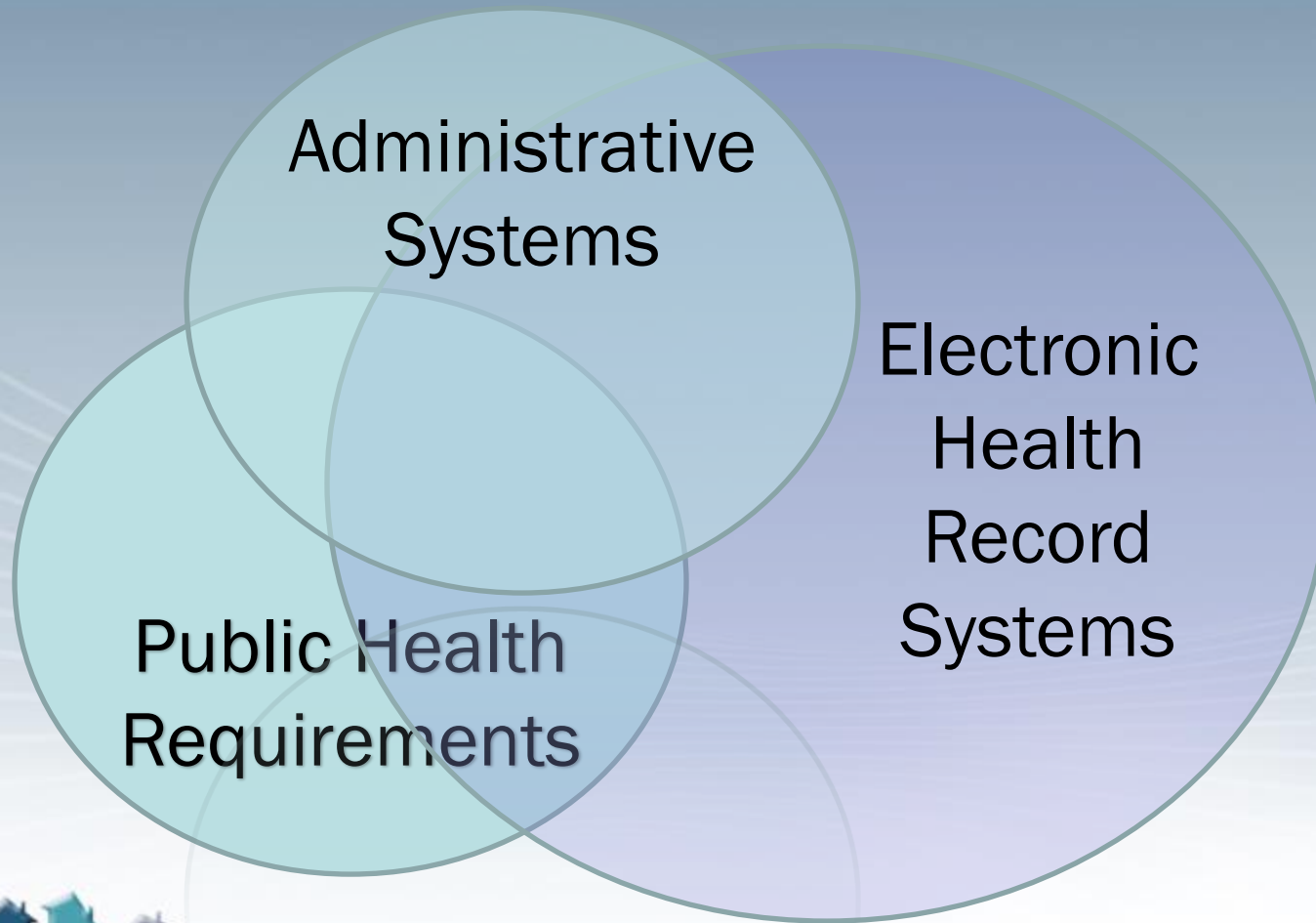
Public Health Data Standards Development

- Electronic standards that define the message structure, format, content, coding, vocabulary/terminology, transport, security, and other elements
- Applied to various health information exchange needs between public health and external entities (i.e., providers, payers, others)
- Moving from uni-directional to bi-directional exchanges
- Example areas include:
  - Vital statistics
  - Immunization data
  - Bio-surveillance reporting
  - Disease registry
  - Public Health Laboratory reporting

- International – not just a national/US domain

Public Health Standards

Sample of SDOs, DCCs, Standardization efforts, and others
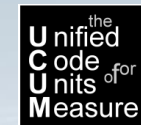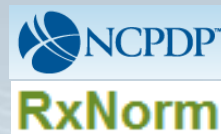
Core National Standards for EHRs

Interoperability Stack	Building Blocks			
Vocabulary & Code Sets	SNOMED-CT	LOINC	ICD-10	RxNorm
Content Structure	Consolidated CDA Care Summaries	Quality Reporting	Lab Results IG Lab Results	HL7 v.2.5.1 Public Health Reporting
Transport		SMTP-Direct Based Exchange	SOAP-Secure Web Services	
Security		X.509 - Digital Certificates	SAML	
Services	Certificate Authority	DNS, LDAP- Certificate Discovery	UDDI-Certificate & Service Discovery	Provider Directories

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PH Partner Organizations

- **AIRA**   American Immunization Registry Association
- **AMIA**   American Medical Informatics Association
- **APHL**   Association of Public Health Laboratories
- **ASTHO**   Association of State and Territorial Health Officials
- **CSTE**   Council of State and Territorial Epidemiologists
- **JPHIT**   Joint Public Health Informatics Taskforce
- **NACCHO**   National Association of County & City Health Officials
- **NAHDO**   National Association of Health Data Organizations
- **NAPHSIS**   National Association for Public Health Statistics and Information Systems
- **PHDSC**   Public Health Data Standards Consortium
- **PHII**   Public Health Informatics Institute

Challenges for PH Data Standards Adoption

- Need standards-based data collection and reporting from clinical systems to PH systems
- Minimal local/state/federal participation in standards development activities
- Funding limitations to test standards that have been developed and to support EHR initiatives that include PH requirements
- Not recognized in "meaningful use" often translates to minimal or no vendor engagement to support EHR development to support PH programs
- Not all the data needed by public health comes from a single data source or resides in an EHR
- Not all the data is in electronic format (whether in an un-structured or structured/codified state)
- Requires long term commitment – not a quick fix

Part 3 – NCVHS Recommendations to HHS Secretary on Public Health Information Systems and Informatics Standards

NCVHS Hearing on Public Health Information Systems and Standards - November, 2013

- First hearing to focus on the state of public health information systems and standards

- Engaged public health data standards organizations, public health agencies, national public health associations, and information system developers

- Intended to create awareness on the need to advance public health information systems across the nation

- Provided an overview of the state of affairs, a series of themes and observations, and a core set of initial recommendations to the HHS Secretary

See: http://www.ncvhs.hhs.gov/140616lt.pdf

NCVHS Hearing on Public Health Information Systems and Standards – Themes

- Nationwide public health information infrastructure needs significant attention and sustained investment

- Opportunity to identify/optimize common infrastructure, data analytic capabilities to avoid costly duplication

- Need to establish appropriate incentives for the adoption and implementation of PH standards

- Need to improve the level of maturity and adoptability of standards for public health applications

- Need to increase workforce informatics competencies, level of PH participation in standards development activities

NCVHS Hearing on Public Health Information Systems and Standards - Recommendations

- Recommendation 1: HHS should pursue the development and implementation of a new *National Public Health Information Infrastructure Strategic Initiative*

  - Advance and bring to par public health information systems with rapidly evolving clinical information systems

  - Strongly support the advancement of public health information policy, technology, informatics standards, workforce development and availability of other relevant resources

NCVHS Hearing on Public Health Information Systems and Standards - Recommendations

- Recommendation 2: HHS should establish a *Public Health Information Infrastructure Dedicated Fund*, jointly governed by CDC and a PH collaborative organization
  - Fund improvements in information infrastructure capabilities
  - Support public health informatics standards adoption/use
  - Analyze public health programs to identify standards gaps
  - Make standards experts available to public health programs
  - Provide cost-effective standards training to public health
  - Develop a roadmap for moving Public Health information systems to a sharable, service-based environment

NCVHS Hearing on Public Health Information Systems and Standards - Recommendations

- Recommendation 2.1: HHS should leverage the Public Health Information Infrastructure Dedicated Trust Fund to provide sustained funding for:

    – Continuous quality improvement for PH information systems

    – Promote, develop, sustain informatics skills of PH workforce

    – Standards development and adoption

NCVHS Hearing on Public Health Information Systems and Standards - Recommendations

- Recommendation 3: HHS should work with public health community to establish a *National Public Health Informatics Standards Collaboration Initiative* to accelerate adoption and use of standards in public health programs
  - Work towards harmonization and linkages of demographics data in public health databases
  - Establish pilot programs to demonstrate value of bi-directional information exchanges between PH and health care organizations
  - Support core group of public health professionals to actively participate in standards development work
  - Create opportunities to advance the adoption and use of population health tools, resources

NCVHS Hearing on Public Health Information Systems and Standards - Recommendations

- Recommendation 4: HHS should leverage different policy programs and initiatives (such as ACA, MU) to:
  - Align incentives for key components of public health reporting
  - Stimulate vendor engagement in adopting/using standards
  - Ensure public health data requirements are incorporated into standards and clinical information systems, as appropriate
  - Identify, document and share examples that showcase the benefits and value of adopting and using public health standards

NCVHS Hearing on Public Health Information Systems and Standards - Recommendations

- Recommendation 5: HHS in partnership with the public health community should develop a new *National Strategy for Public Health Informatics Capacity Building* to increase the number of informatics-savvy, skilled professionals in the public health workforce

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Part 4 – Open Discussion on Relationship to DACNDHS

Thank You!

"We have lots of information technology. We just don't have any information."

Contact

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"Someday, all this will be infrastructure."

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http://www.ncvhs.hhs.gov/