

Connecting Labs in the Digital Age

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Speaker Disclosure

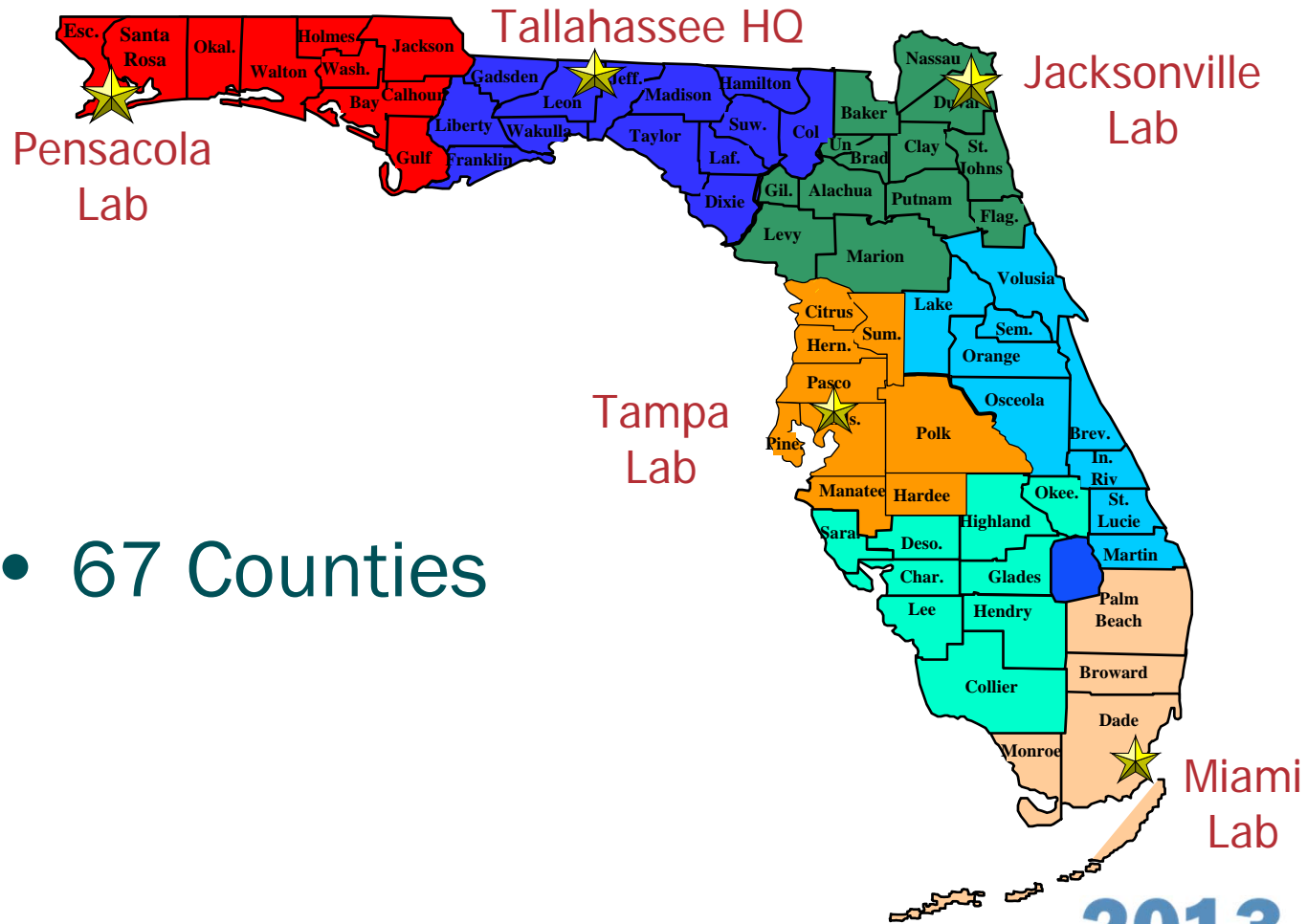
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Phil Lee: Nothing to disclose

Presentation: Connecting Labs in the Digital Age



Bureau of Public Health Laboratories



- 67 Counties



Historical Perspective

- BPHL 10 Years ago
 - All labs using DOS-based LIMS
 - MUMPS - Massachusetts General Hospital Utility Multi-Programming System
 - Established 1966
 - BPHL 1995-2007
 - Limited connectivity within FL DOH only
 - Laboratory Response Network - BT
 - Microsoft Access and Excel
 - No connectivity

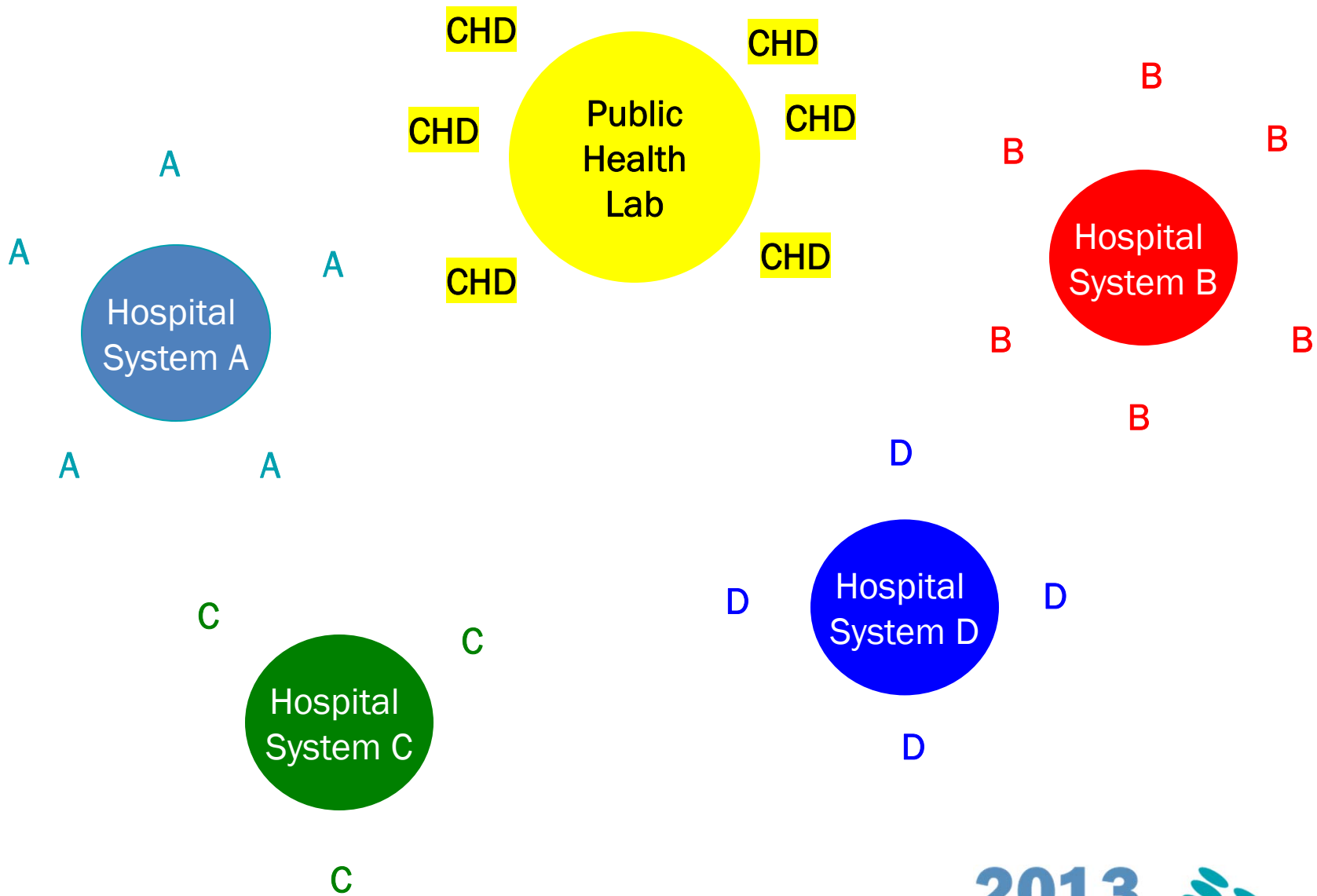


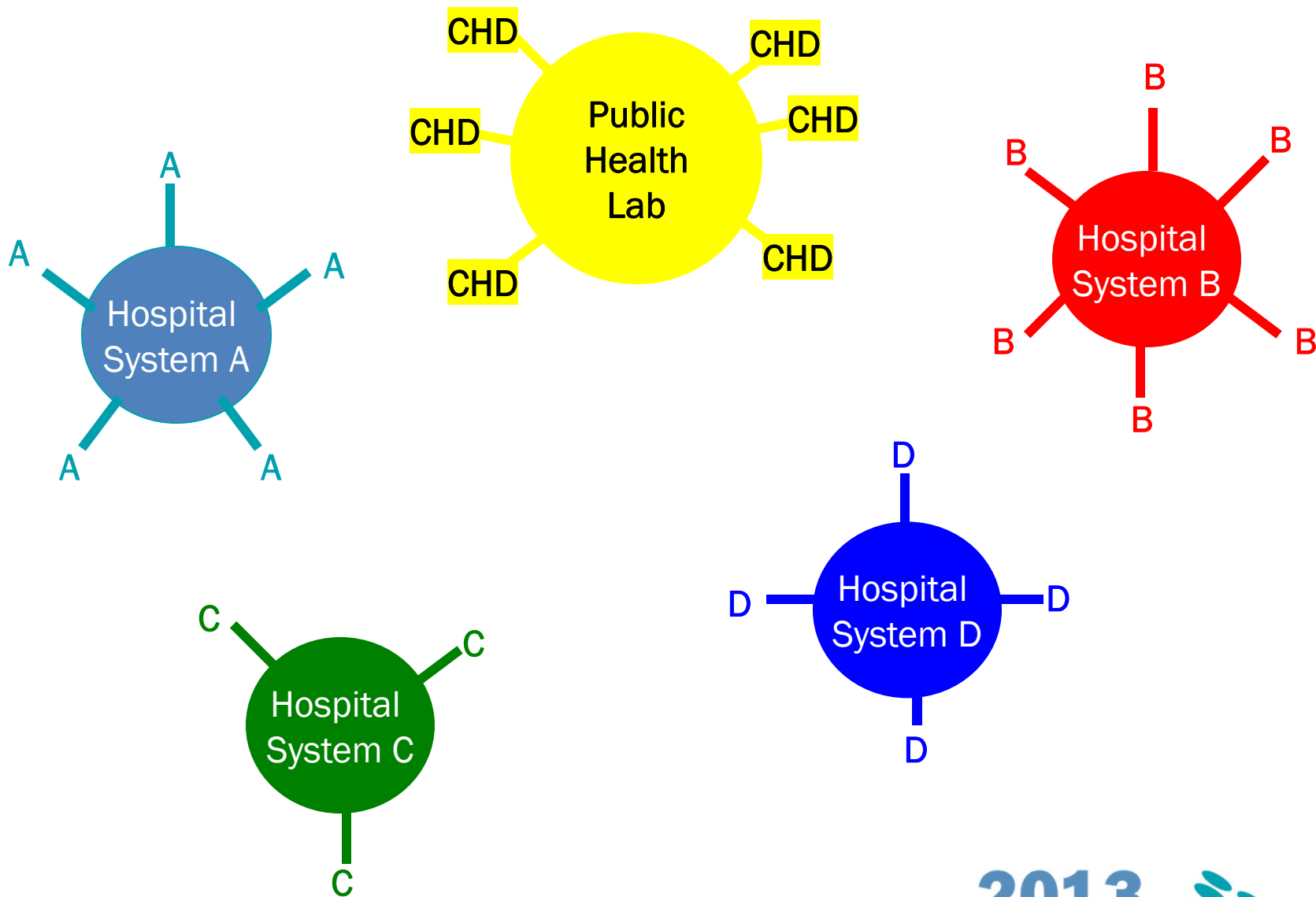
Historical Perspective



- 2001 Anthrax events highlighted need for standardized data exchange
- Need for state health departments to coordinate with sentinel clinical laboratories
 - Developed FL Database
 - > 400 clinical labs, 256 meeting sentinel lab definition
- Clinical laboratories had limited connectivity to their sister organizations
- Laboratory Response Network
 - Results Messenger developed







Public Health Information Network

- National initiative to increase the capacity of public health agencies to electronically exchange data and information across organizations and jurisdictions
 - Clinical care to public health,
 - Public health to public health
 - Public health to other federal agencies
- Promote the use of *standards* and defines functional and technical requirements for public health information exchange
 - Public Health Laboratory Interoperability Project

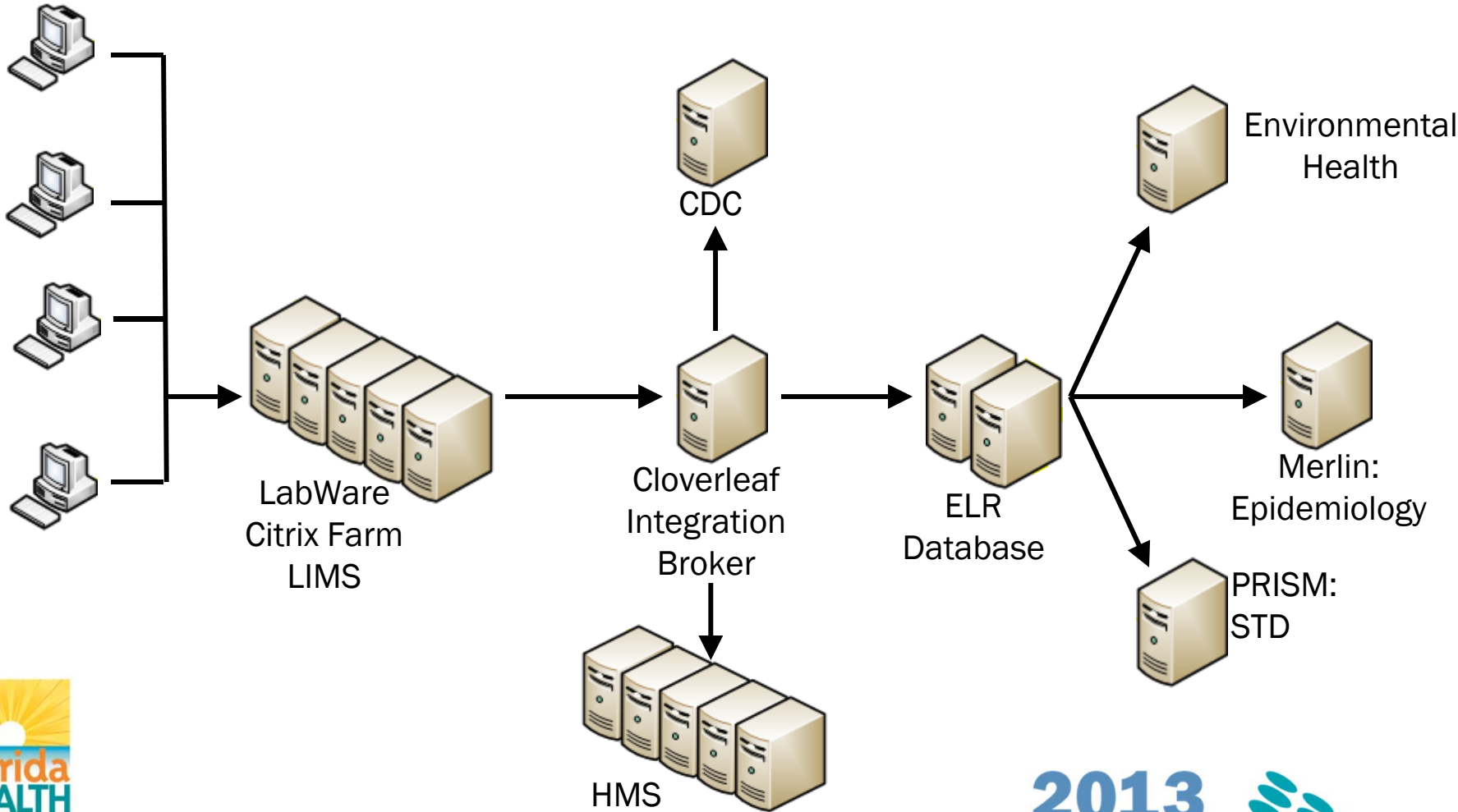


HL7

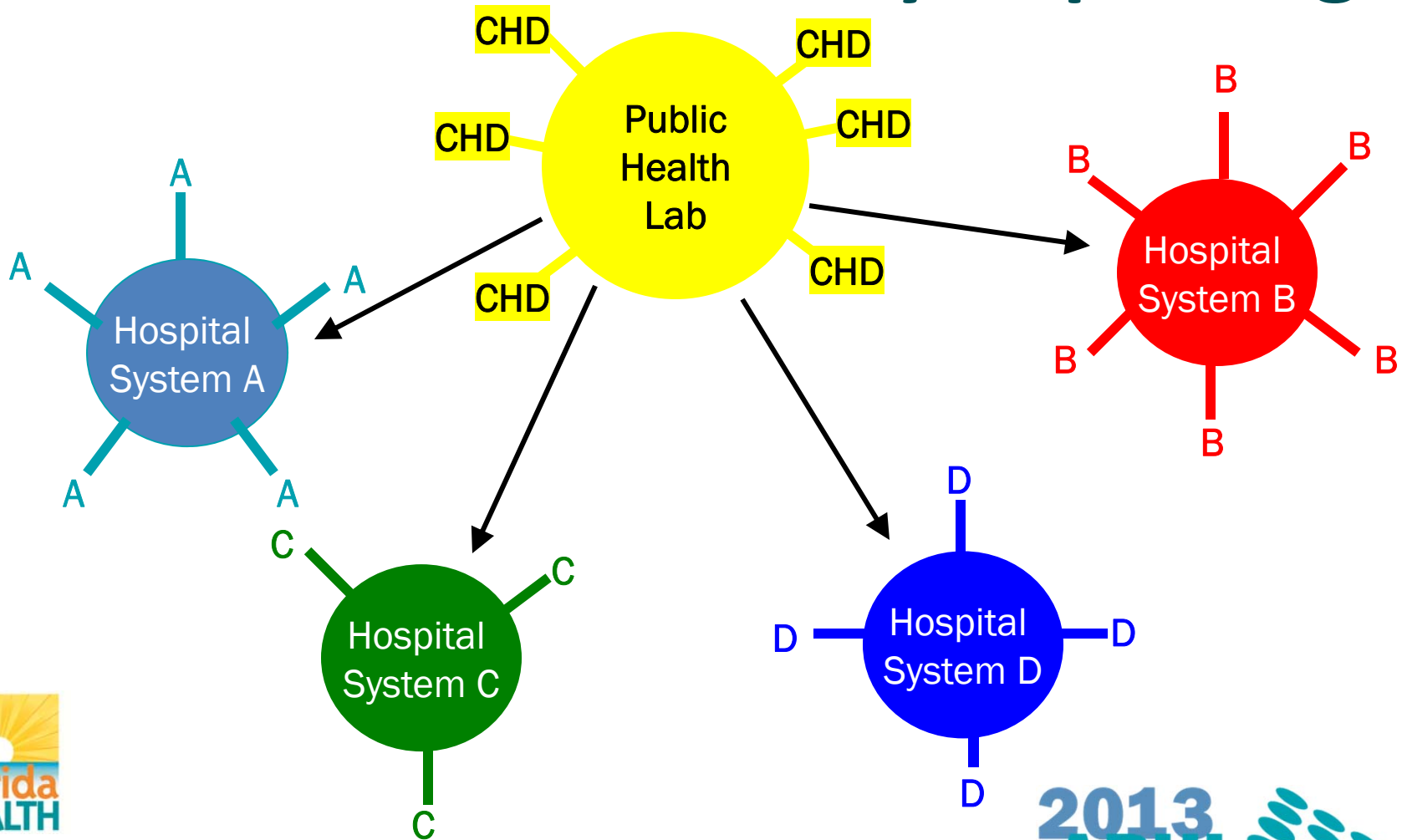
- Health Level 7
- Nationally accredited and recognized standard of electronic data exchange in healthcare environments
 - Unambiguously identifies specific tests and results
 - LOINC and SNOMED
- Allows communication between separate and different types of information systems
- Describes the order and structure of data fields for sharing test results



LIMS integration



Electronic Laboratory Reporting

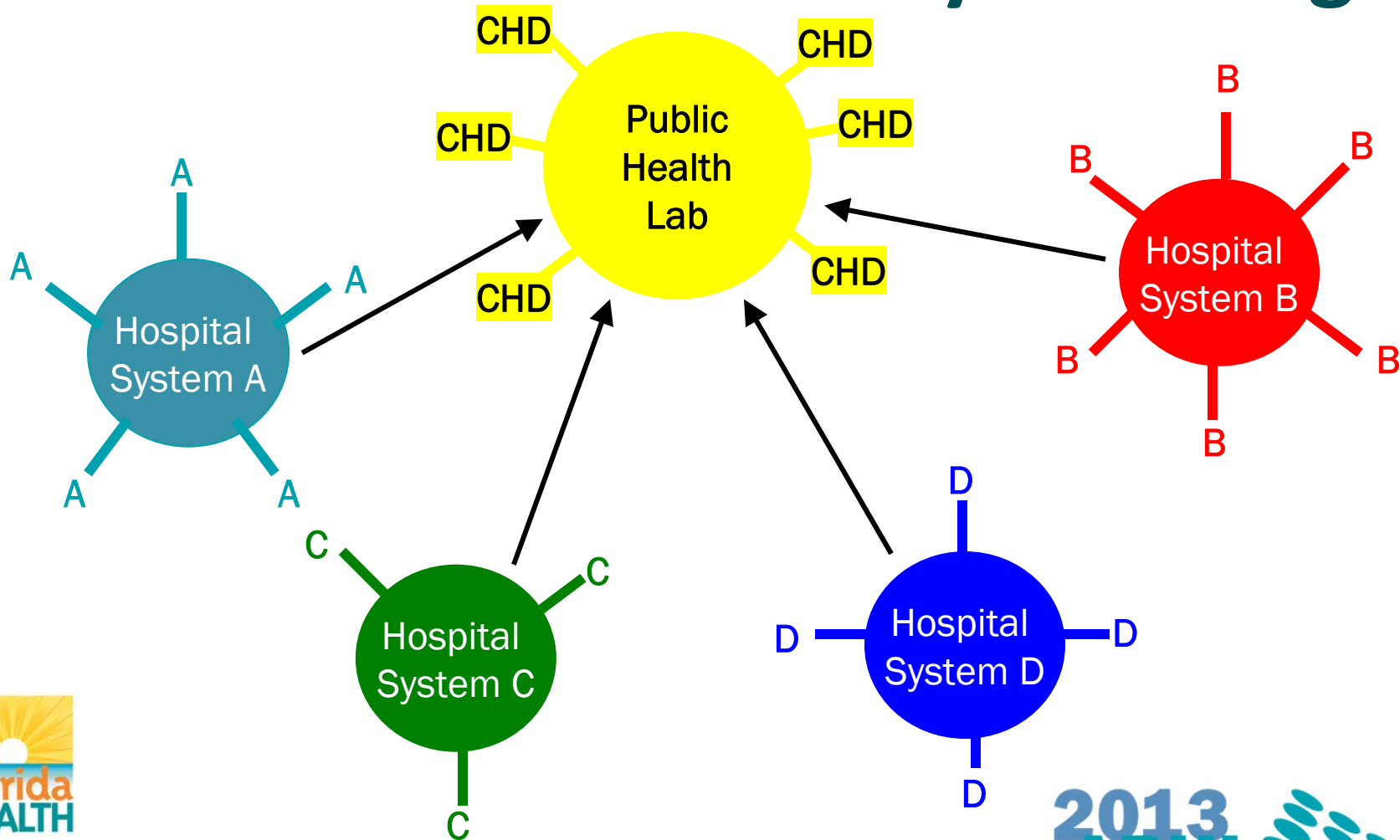


Benefits of ELR

- Results go out electronically within an hour after release
 - Reduces turnaround time
- Eliminates need to mail/fax reports to program offices (TB, STD, etc...)
- Providers can ‘opt-out’ from receiving paper results
 - “Greener” operation



Electronic Laboratory Ordering

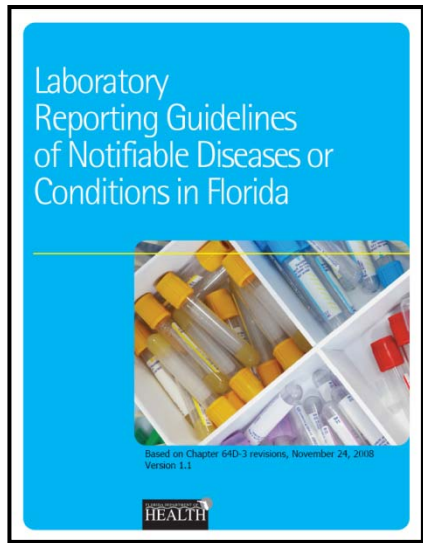


Benefits of ELO

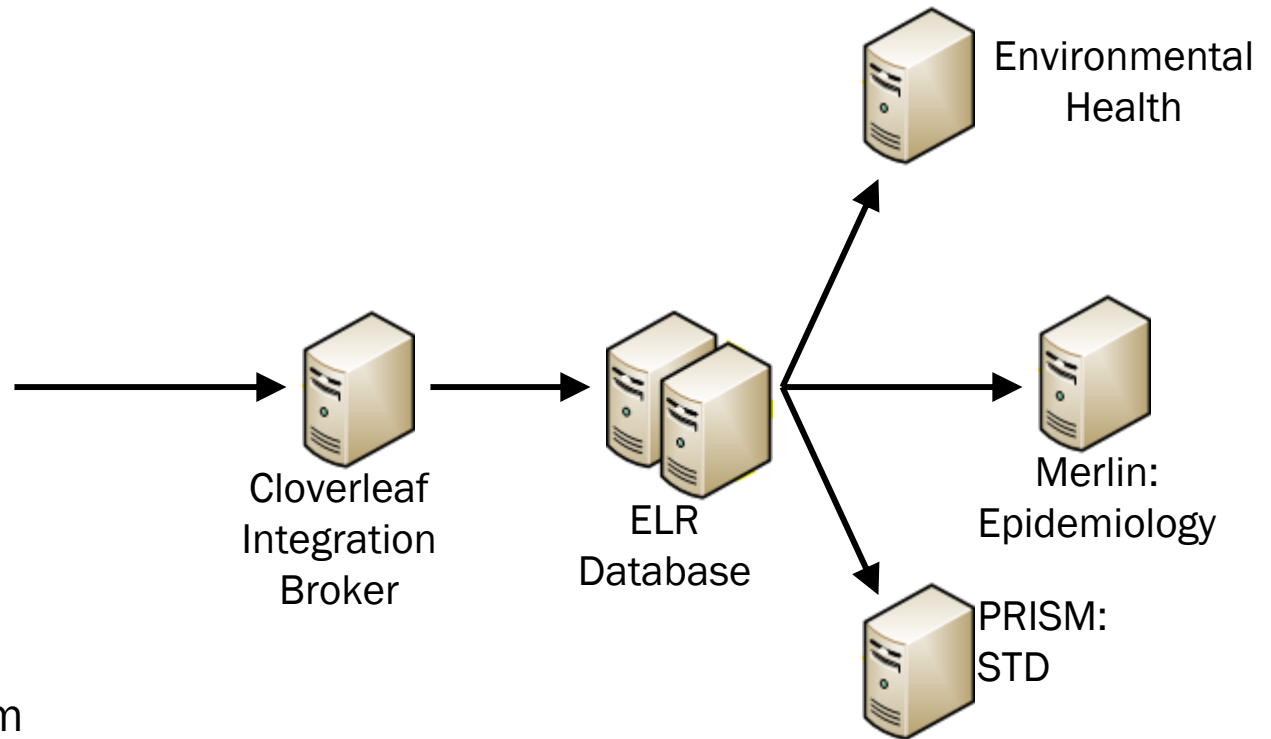
- Reduces accessioning errors
 - Correct test ordered
- Eliminates patient demographic entry errors
 - Barcoded sample linked to ELO
- Reduces turnaround time
 - Expedites triage of samples
- Eliminates need for paper requisitions
 - “Greener”



Notifiable Diseases

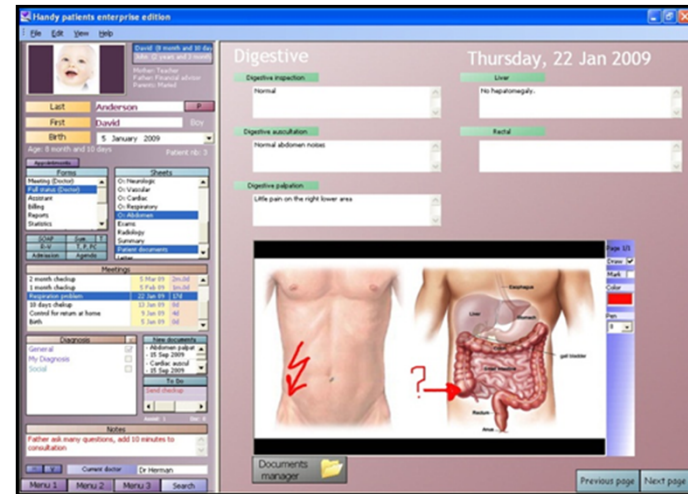


Electronic Reporting from
Hospital and Commercial Labs



Electronic Health Records

- Electronic record of health-related information on an individual that is created, gathered, managed, and consulted by authorized health care providers from across more than one health care organization.

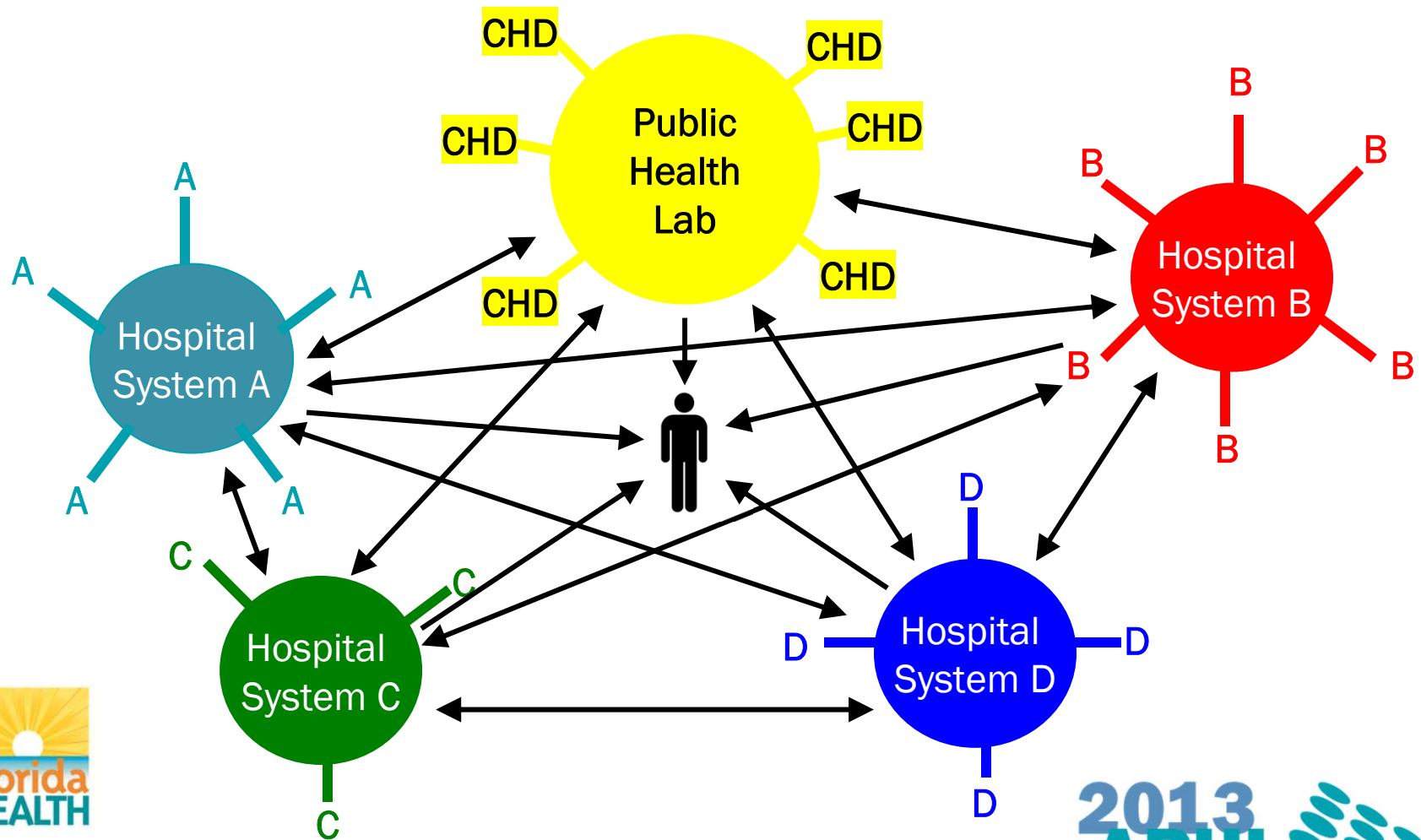


EHR 2014 Mandate

- 2009 HITECH Act
 - Health Information Technology for Economic and Clinical Health
 - Set Meaningful Use of interoperable EHR adoption as a critical national goal
 - Measurable improvement in quality of health care
 - “...more coordination of patient care, reduced medical errors, elimination of duplicate screenings and tests and **greater patient engagement in their own care,**”
HHS Secretary Kathleen Sebelius, August 23, 2012
 - January 1st, 2015, health care providers subject to financial penalties for not using EHR



Electronic Health Records



Challenges

- Stakeholder cooperation
 - Public health and private sector
- Numerous different systems
- ELO Provider errors – eliminated by EHR use?
- Volume of data
- Privacy
- Security
- Cost!



Solutions

- Laboratory Efficiencies Initiative
 - Created to help laboratories maintain their public health testing services despite decreased funding
 - Sharing of testing services across states
 - Application of informatics
- Increased Public Health-Private sector partnerships
 - Shared resources
 - Outsourcing
 - Private sector labs performing analyses of public health importance



Transforming to a Sustainable Public Health Laboratory System

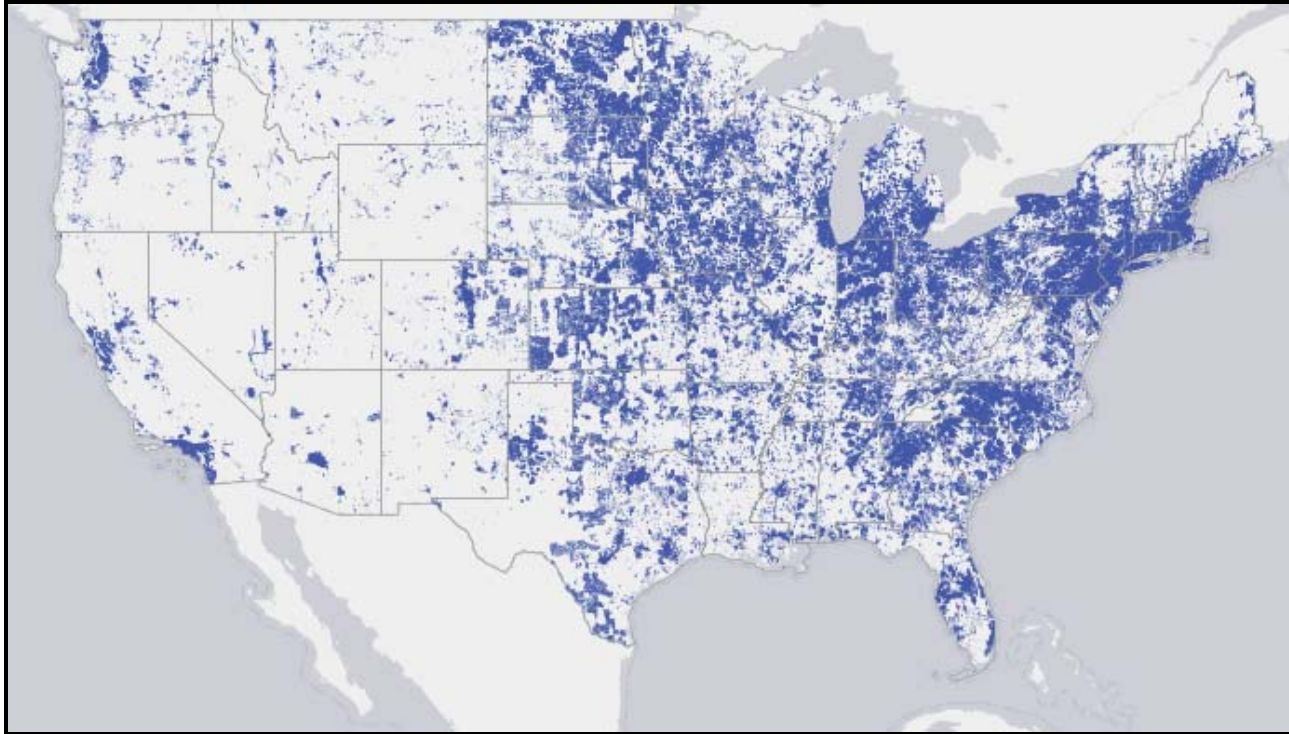


Future

- Expansion of PHIN?
 - Exchange public health data with Nationwide Health Information Network
 - Integrate healthcare and public health to advance population health
 - Syndromic surveillance
 - Laboratory test orders
 - BioSense, ESSENCE
 - National Notifiable Diseases Surveillance System
 - National Electronic Disease Surveillance System
- Reduction in databases
 - Everything linked to EHR?
 - Patient-centric vs. specimen-centric
 - Populations



Essential Connections



National Broadband Map: <http://www.broadbandmap.gov>



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