



**Connecting  
Healthcare**<sup>®</sup>  
*Engaging Patients*<sup>™</sup>

## **HIE Success - Physician Education Series**

**Health Information Exchange**

Florida and National Landscape

# Your HIE Faculty:

## Walt Culbertson

- President and Founder, Connecting Healthcare®
- Host and Producer, Medical Update Show
- Served as Technical and Operations Lead, HIE Project Manager Florida Health Information Exchange
- Served as the State of Florida - Technical SME for the ONC State Health Policy Consortium, Southeast Regional HIT-HIE Collaboration (SERCH)
  - Developed a framework for facilitating cross-border Health Information Exchange (HIE) for Disaster Preparedness in the Southeast and Gulf States
- Past Executive Director and co-Founder, ePrescribe Florida and President, ePrescribe America



# Physician Technology Adoption

- Good news is that ARRA and HITECH have created opportunities for rapid adoption of Health Information Technology (HIT) such as EHRs and HIE
- Bad news is the requirements, methods and available solutions to receive funding and meet the requirements for doing so (Meaningful Use) have evolved to be complex for providers and vendors alike
- *CONFUSION and FRUSTRATION*



# Local, Regional, State and National

- HIE exists in many forms and at many levels
- Local and regional hospital systems have established capability to exchange patient information with community providers
- Independent vendors provide services to help with exchange of information
- Florida established a state-wide exchange to connect local networks
- A national network was created to connect states and federal government entities



# Types of Health Information Exchange

- There are currently three key forms of health information exchange:
  - Directed Exchange – ability to send and receive secure information electronically between care providers to support coordinated care (DIRECT Standard)
  - Query-based Exchange – ability for providers to find and/or request information on a patient from other providers, often used for unplanned care (CONNECT Standard)
  - Consumer Mediated Exchange – ability for patients to aggregate and control the use of their health information among providers



# National CONNECT Standard

- Connect is a ONC-sponsored open-source software project to provide standards and tools for more sophisticated "pull" or "query" that can be used within a local, state, or regional HIE
- It also forms the technical foundation for the eHealth Exchange (formerly the Nationwide Health Information Network (NwHIN))

**Federal Health  
Architecture**

**CONNECT**

*An open source software solution that supports health information exchange both locally and at the national level*

**Initial Goal:** Support the health-related missions of federal agencies

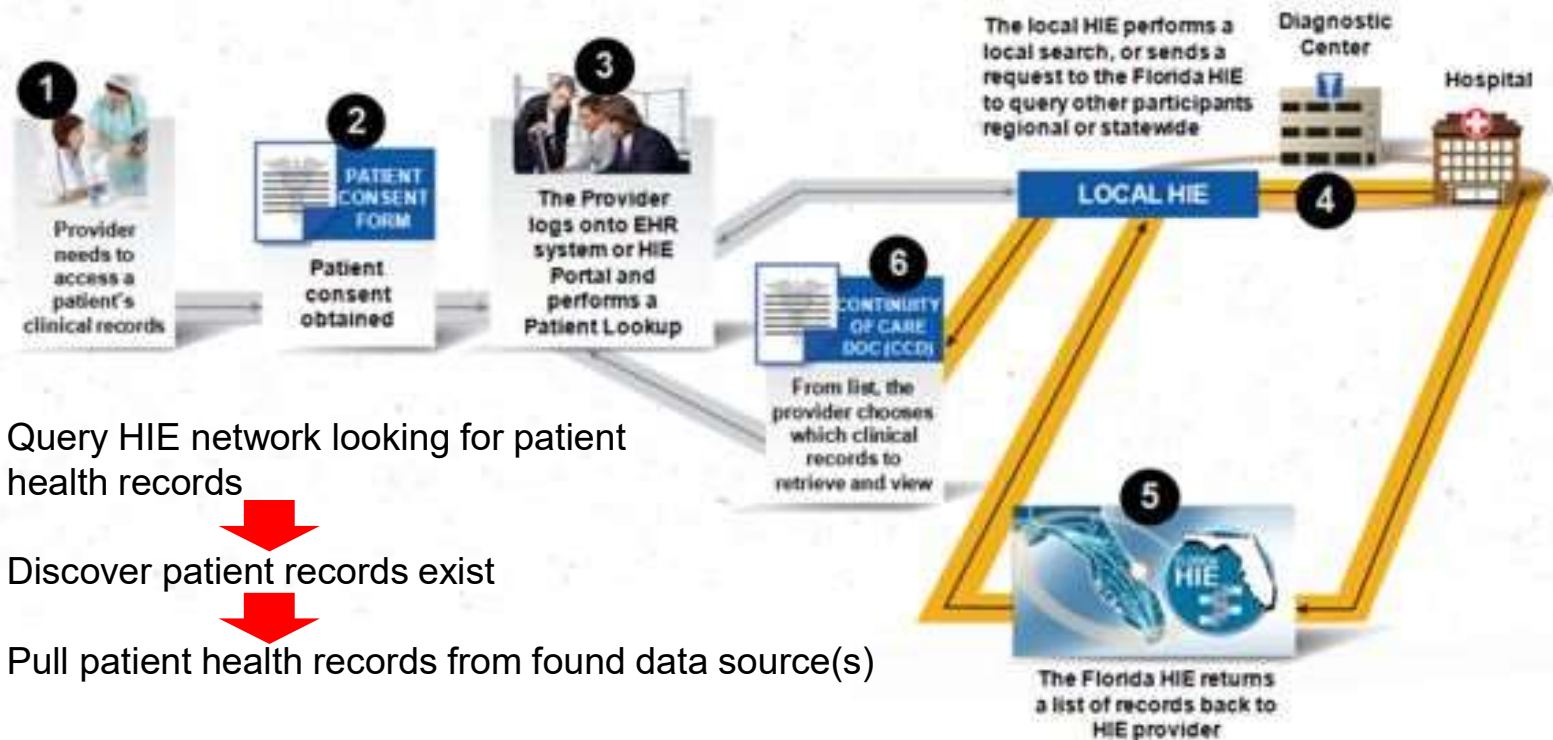
**Current Goal:** Provide open-source software solutions to all organizations to assist health information exchanges and share data using nationally recognized interoperability standards

**Managing Partner:** Department of Health & Human Services

**Lead Partners:** Department of Health & Human Services, Department of Defense and Department of Veterans Affairs



# Leveraging CONNECT(Query/Pull)



Query HIE network looking for patient health records

Discover patient records exist

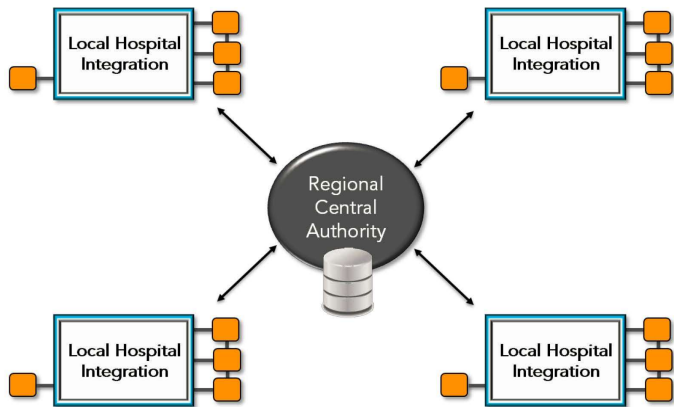
Pull patient health records from found data source(s)

- **Standards-based.** Free, open-source software solution, developed by more than 20 federal agencies.
- **Not Simple.** Potentially expensive custom EHR interfaces are generally needed to support EHR/HIE integration with CONNECT.
- **Evolving.** Many State implementations just starting to come online.
- **Limited.** Defined document types.

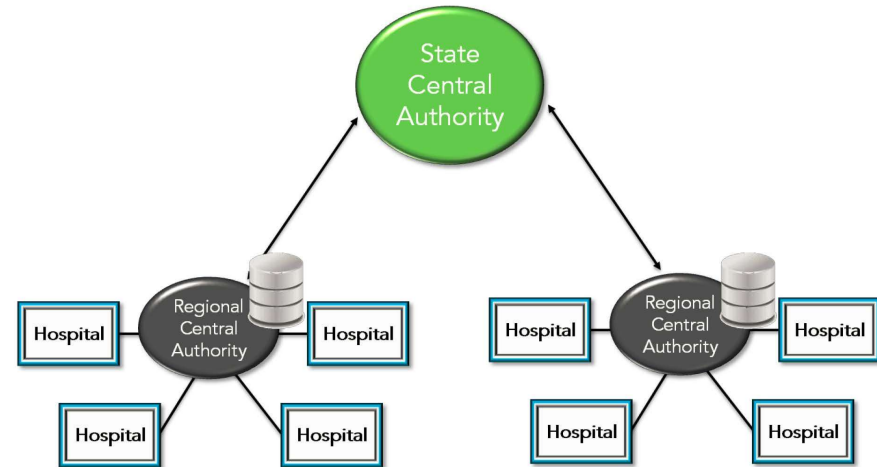


# CONNECTing with Different Models

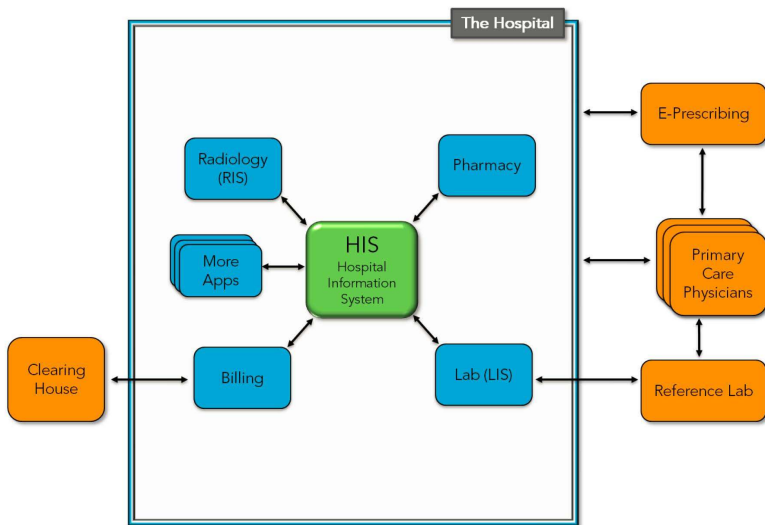
## Centralized Model



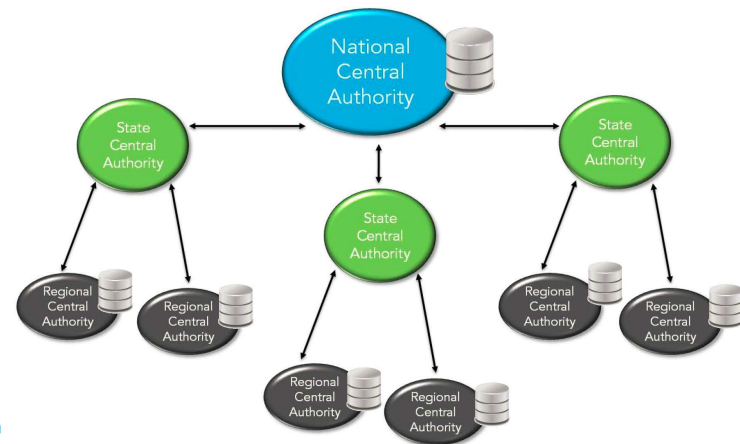
## Federated Model



## Private Model



## Hybrid Model





# National DIRECT Standard

- A set of standards and services that with a policy framework enable simple, directed, routed, scalable transport over the Internet to be used for secure and meaningful health information exchange between known participants
- DIRECT functions like regular e-mail with additional security measures to ensure that messages are only accessible to the intended recipient, per the protection regulations of the Health Insurance Portability and Accountability Act (HIPAA)
- For Stage 2 Meaningful Use, electronic health record (EHR) vendors are required to either (a) certify their transitions-of-care modules or complete EHR product offerings to include DIRECT to meet certification requirements, or (b) work with a third party STA to provide DIRECT services
  - Security/Trust Agents (STAs) are commonly referred to as Health Information Service Providers (HISPs)



# DIRECT Messaging – Push Information



b.wells@direct.aclinic.org

Direct Project specifies a simple, secure, scalable, standards-based way for participants to send encrypted health information directly to known, trusted recipients over the Internet.



h.elthie@direct.ahospital.org

- **Standards-based.** Built on Internet standards for secure e-mail communication wrapped around special governance and policies.
- **Simple.** Connects healthcare stakeholders through universal addressing using simple push of information in any format.
- **Secure.** Users can easily verify messages are complete and not tampered with in travel.
- **Scalable.** Enables Internet scale with no central network authority.
- **Flexible.** Any message payload.

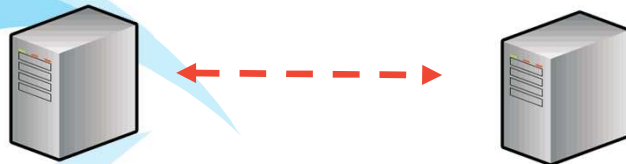


# DIRECT Messaging Flexibility

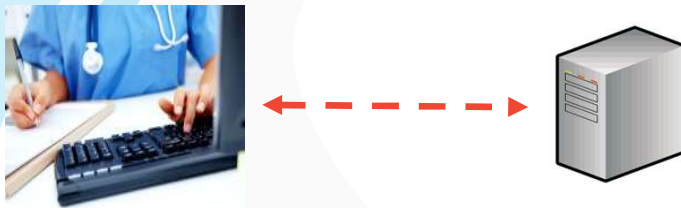
## Communication Pathways



Between People



Between Machines



Between People & Machines

## Communication Content

I've attached the study of Mr. Author. Thanks for seeing him.



Readable by People

```
EVN|A28|20060501140008|||000338475^Author^Arthur^^^^^
^Regional
MPI&2.16.840.1.113883.19.201&ISO^L|20060501140008<cr>
PID|||000197245^^^NationalPN&2.16.840.1.113883.19.3&ISO^PN
~4532^^
```

Readable by Machines

I've attached an x-ray and electronic record for Mr. Author



```
EVN|A28|20060501140008|||000338475^Author^Arthur^^^^^
^RegionalMPI&2.16.840.1.113883.19.201&ISO^L|20060501140008<cr>
```

Readable by People and/or Machines



# State Health Information Exchange

The Florida HIE



# Florida HIE Background

- 2009: Florida Agency for Health Care Administration (AHCA) applies for Cooperative Agreement funding with Office of the National Coordinator for Health IT (ONC)
- 2010: Florida receives state cooperative agreement award and contracts with Harris Corp to build infrastructure
- 2011: Direct Secure messaging Service and Patient Look-Up Service deployed
- 2012: State to state Direct connections established (HISP)
- 2013: Cooperative Agreement terminated in September, collection of fees begins, Event Notification Service deployed



# Florida State HIE Services

- Florida Health Information Exchange (FL-HIE)
  - Patient Look-Up (PLU)
  - Direct Messaging (DM)
  - Event Notification Service (ENS)
- Vendor created solutions using the FL-HIE
  - Hybrid PLU and DM Service
  - Others to come?



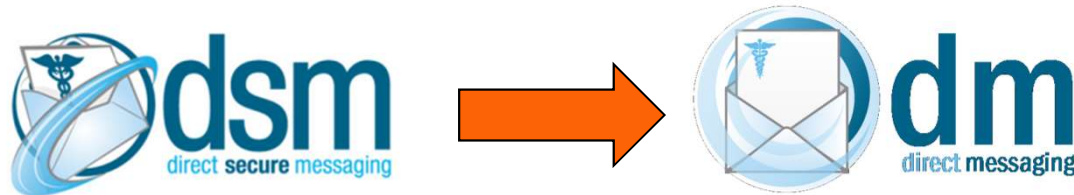
# FL-HIE Patient Look-Up



- Connects local, regional and national HIE services through a **federated** model using the national standard (CONNECT) for patient record query and retrieval (network of networks)
  - No centralized state database or patient index
  - Each PLU participant (node) maintains its own records
  - Each participant is required to have safeguards in place
  - Each participant is responsible for vetting user access
- Allows users to search participating health care organizations for individual patient records (with the patient's consent)



# FL-HIE Direct Messaging



- DM is a secure email service that can be used via an online portal or through Trust services for Health Information Service Providers (HISPs) using the national DIRECT standard for secure messaging
  - DM is a new pay-for service that replaces the now discontinued free DSM service
  - DM provides an online portal for providers without an electronic health record (EHR) system providing the capability to electronically exchange protected health information





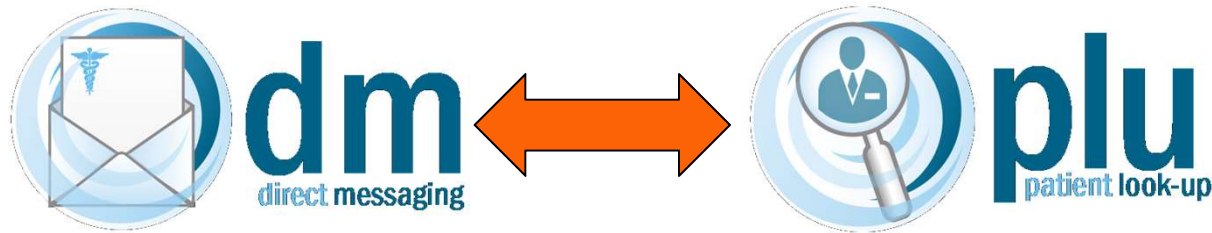
# Event Notification Service



- Provides health plans with an electronic notice of their members' hospital admissions, discharges, transfers (ADTs) and emergency department visits
  - Alerts delivered to health plans via DM
  - Safeguards prevent self-pay information from being provided
  - Speeds up the existing process for notifying health plans of patient treatment at participating hospitals
- Health plans can use the information to ensure appropriate follow up care coordination
- Hospitals receiving Low Income Pool (LIP) funding are now required to participate



# Hybrid Patient Look-Up



- Hybrid service provides access to PLU via Direct Messaging (DM) without being connected as a PLU participant node
  - Offered by Pensacola based Strategic Health Intelligence (SHI)
  - Prescribing providers establish accounts
  - PLU policies, including patient consent and auditing policies, apply to Hybrid PLU
- Allows individual providers the ability to obtain information about patient treatment from Florida PLU participating nodes



# Local Health Information Exchange

## Florida Examples

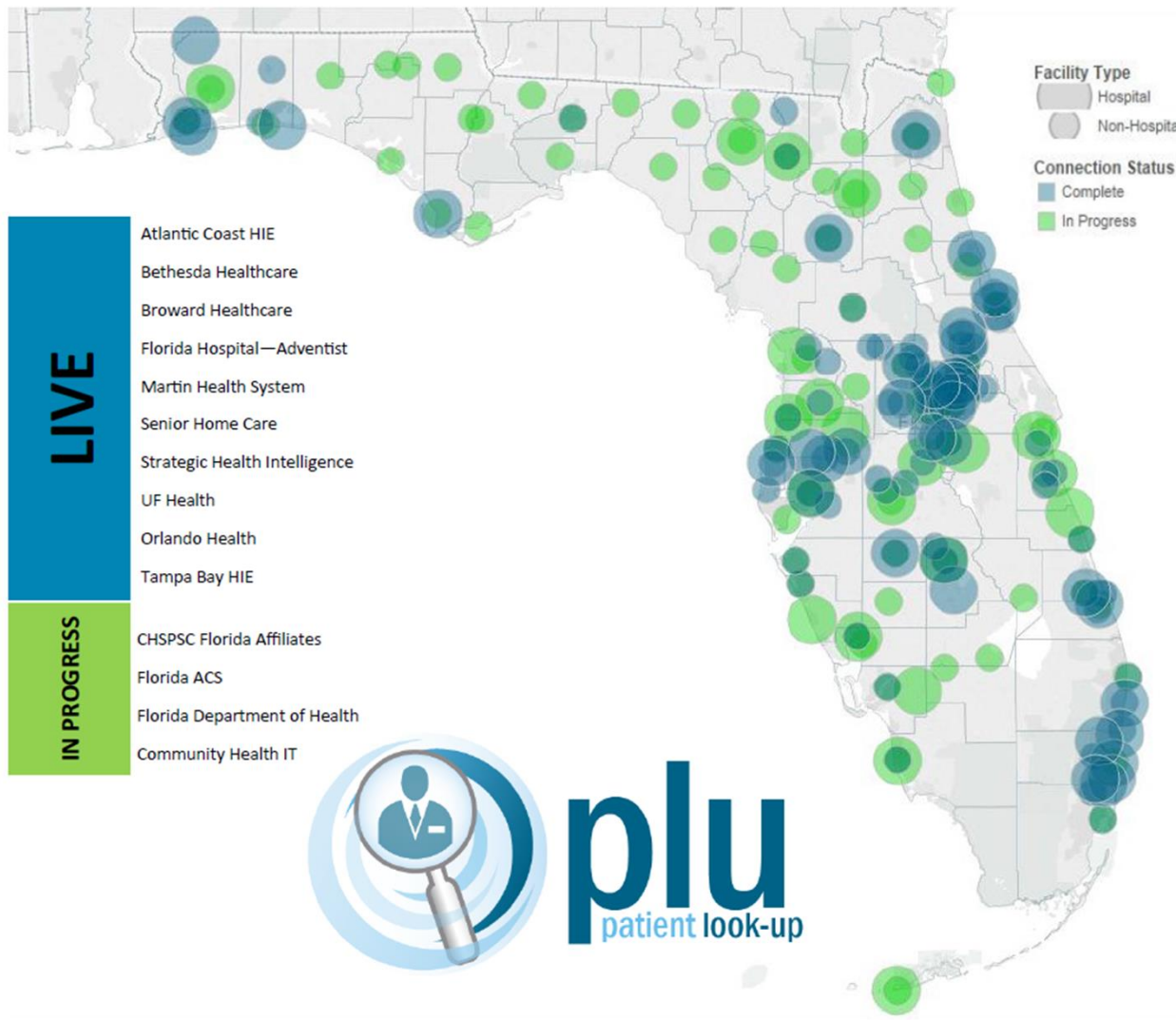


# Florida Communities Connected

- As represented by the Florida Health Information Exchange Patient Lookup Connection map, many forms of HIE exist in the state of Florida
- Some HIEs are private hospital systems that have built local or national proprietary infrastructure to connect their facilities and in some cases local area providers
  - Examples include Florida Hospital (Adventist) and UF Health
- Some HIEs are Regional Health Information Organizations (RHIOs) that serve to facilitate local health information exchange between many diverse stakeholders
  - Examples include HIE Networks, Atlantic Coast HIE, TB RHIO
- Some HIEs have built specific capability to support health information exchange regionally or statewide
  - Examples include Community Health IT and Strategic Health



# FL HIE Network of Networks PLU Participants as of April 2016





Health<sup>e</sup>Way™

National Health Information Exchange

eHealth Exchange

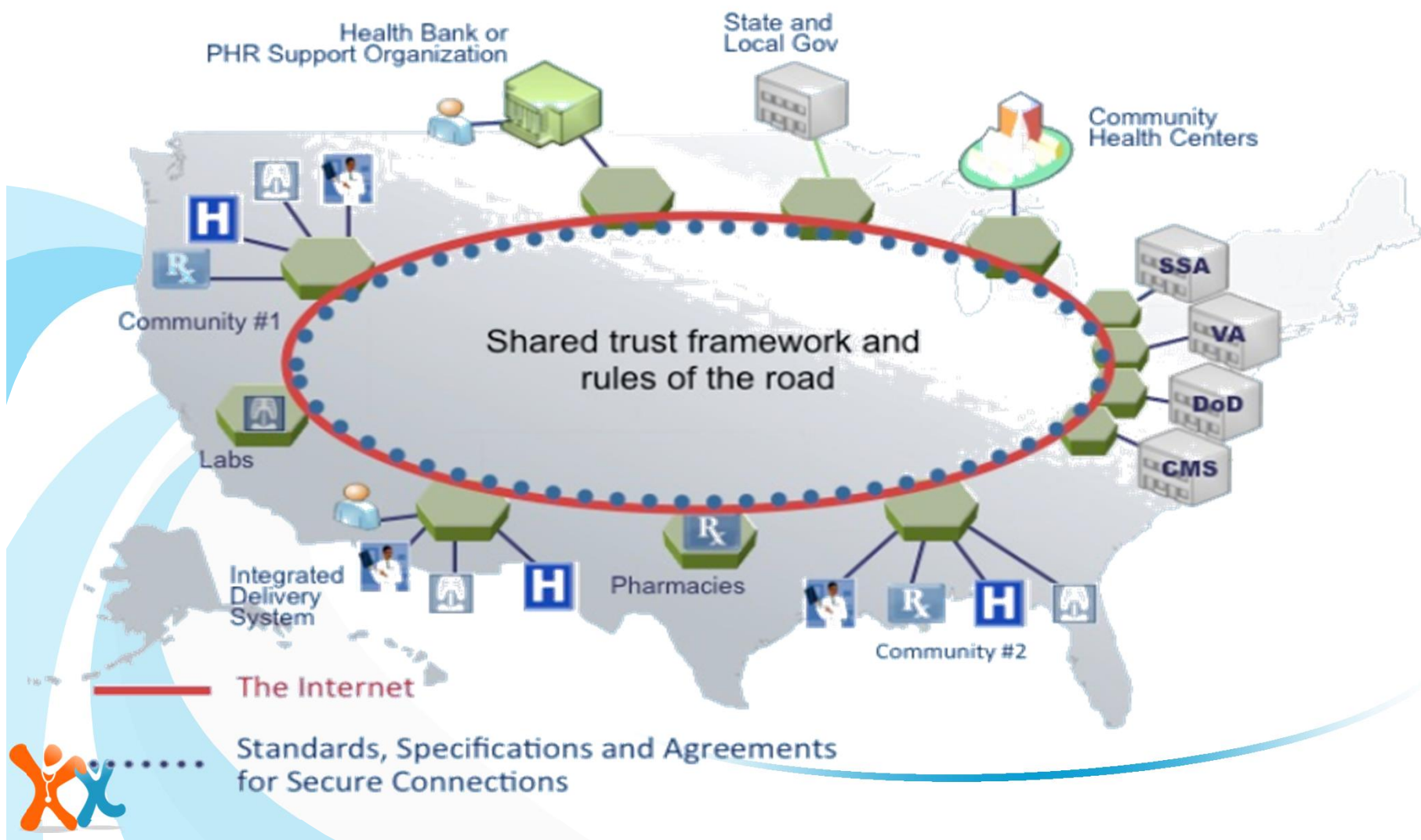
# National HIE – eHealth Exchange

- Healthway is a non-profit, public-private collaborative that operationally supports the eHealth Exchange
  - Formerly referred to as the Nationwide Health Information Network Exchange (NHIN)
- The eHealth Exchange (“Exchange”) is a group of federal agencies and non-federal organizations that came together under a common mission and purpose to improve patient care, streamline disability benefit claims, and improve public health reporting through secure, trusted, and interoperable health information exchange
- Participating organizations mutually agree to support a common set of standards such as CONNECT and specifications that enable the establishment of a secure, trusted, and interoperable connection among all participating Exchange organizations for the standardized flow of information



# National HIE – eHealth Exchange

## eHealth Exchange







# Have Questions?

Visit our Website,  
send us an email,  
or give us a call!

(904) 435-3456 

(904) 435-3457 

Questions@ 

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