

# *Strategic Issues in Disaster Planning to Deploy Health Information Exchange*



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**INTERNATIONAL DISASTER  
CONFERENCE & EXPO**

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# Strategic Issues in Disaster Planning to Deploy Health Information Exchange

This presentation on HIE for disaster preparedness will address technical, governance and legal issues:

- **Technical:** How to include Health IT in disaster planning to ensure that medical records are available at the point of care following a natural disaster.
- **Legal:** The regulatory and legal constraints on health information exchange that must be addressed in disaster planning for the delivery of medical records to the point of care following a natural disaster.
- **Governance:** Issues of Health IT governance necessary for ensuring that a patient's medical records are available following a natural disaster.

# Technical Issues in HIE Planning

This section of the presentation will address:

- “Pull” approaches to health information exchange such as the patient lookup model being deployed in most states.
- “Push” approaches to health information exchange such as Direct Secure Messaging.
- Patient-centered approaches to health information exchange such as Personal Health Records.
- The use of smart phones and mobile computing devices for accessing health records.



# HIT/HIE is a Disaster Preparedness Foundation

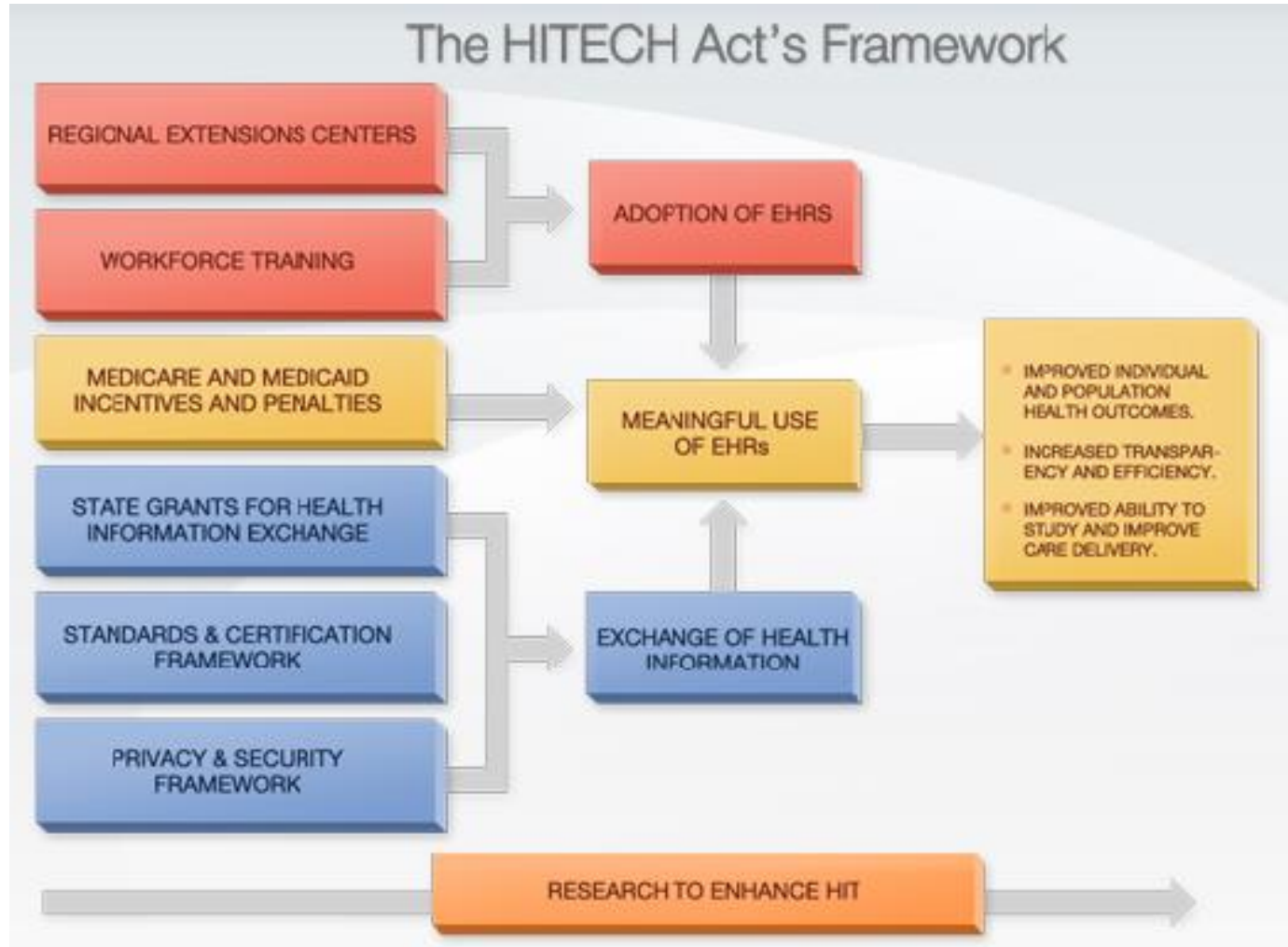
- Health information technology (HIT) is the use of computer hardware and software to privately and securely store, retrieve, and share patient health and medical information.
- Health information exchange (HIE) is the movement of health information electronically across multiple organizations.
- Exchanging health information is important:
  - Make sure that health care providers have access to the most up-to-date information.
  - Make the most informed decisions about patient care that is possible.



# **HIT/HIE are Building Blocks That can be Leveraged in the Time of a Disaster**

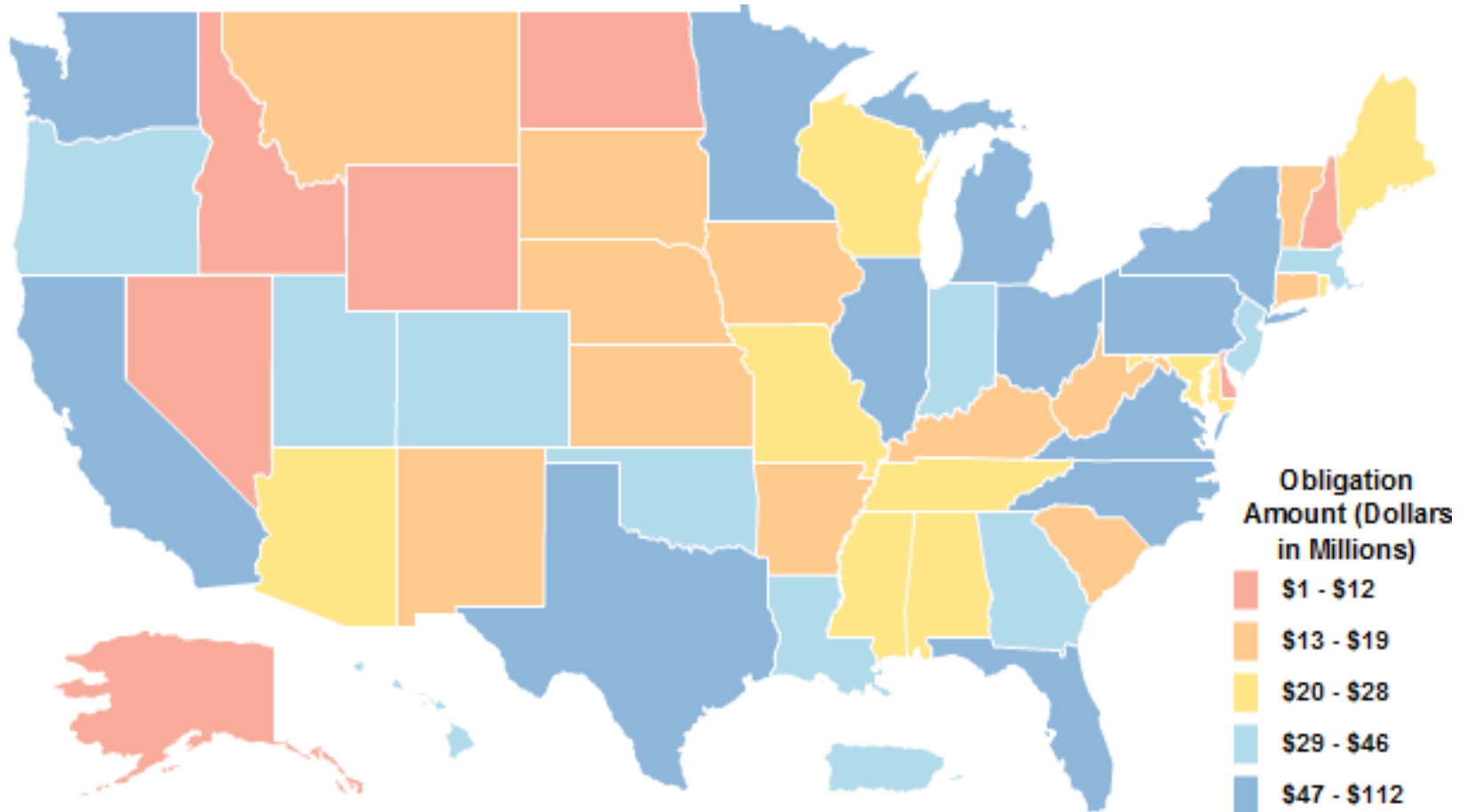
- Signed into law in February 2009, the Health Information Technology for Economic and Clinical Health Act (HITECH) is a component of the American Recovery and Reinvestment Act (P.L. 111-5, Recovery Act).
- This law provided legislation, statutory authorization, and \$2 billion in stimulus funds to the Office of the National Coordinator for Health IT (ONC) to accelerate the development and diffusion of health information technology through a number of grant programs, policy activities, and strategic partnerships.

# Health Information Technology for Economic and Clinical Health Act (HITECH) Framework



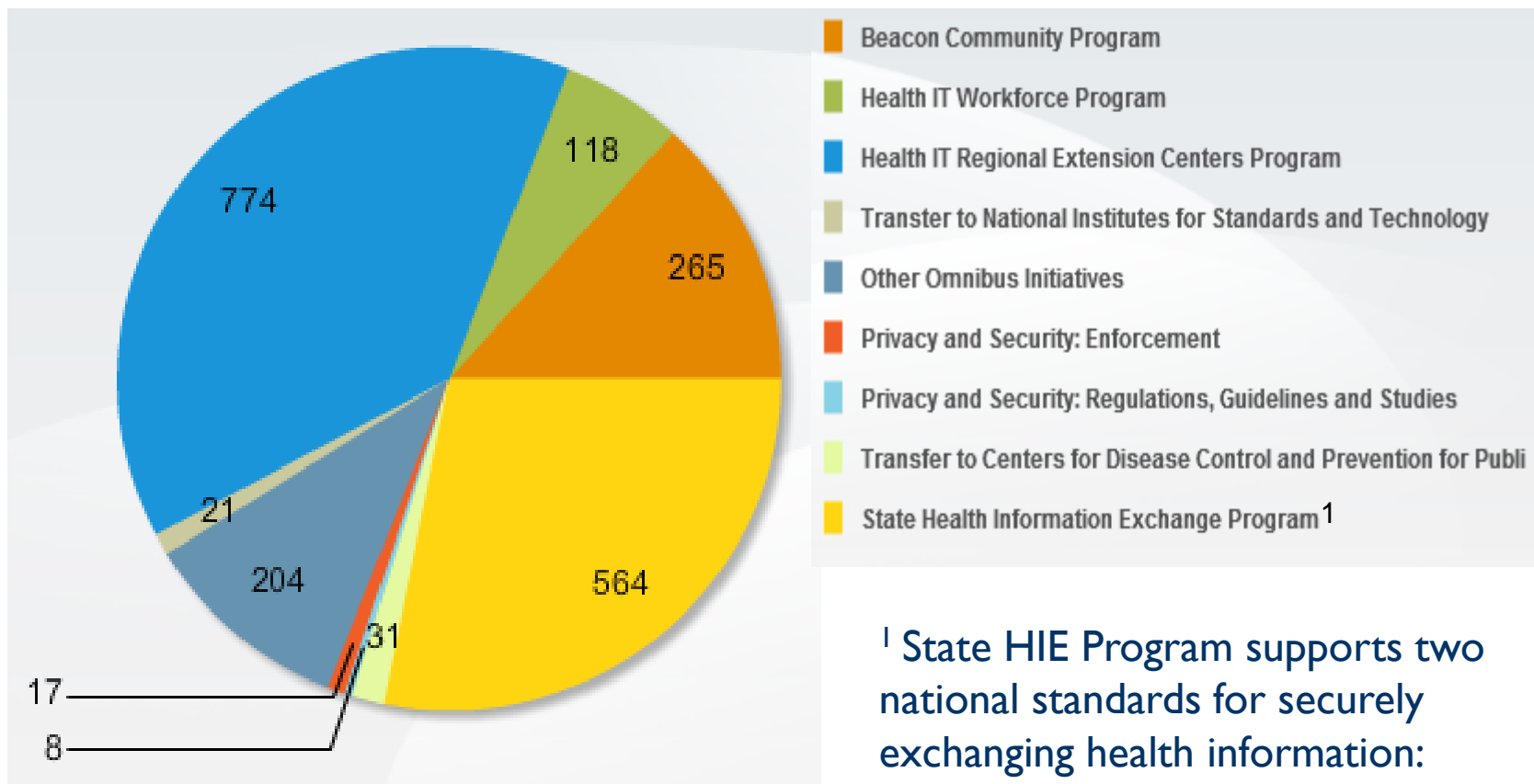
ONC as of 1/2013

# HITECH Funding Distributed by Office of the National Coordinator for HIT (ONC)



ONC as of 1/2013

# Components of the Planned HITECH Funding for 2009-2014



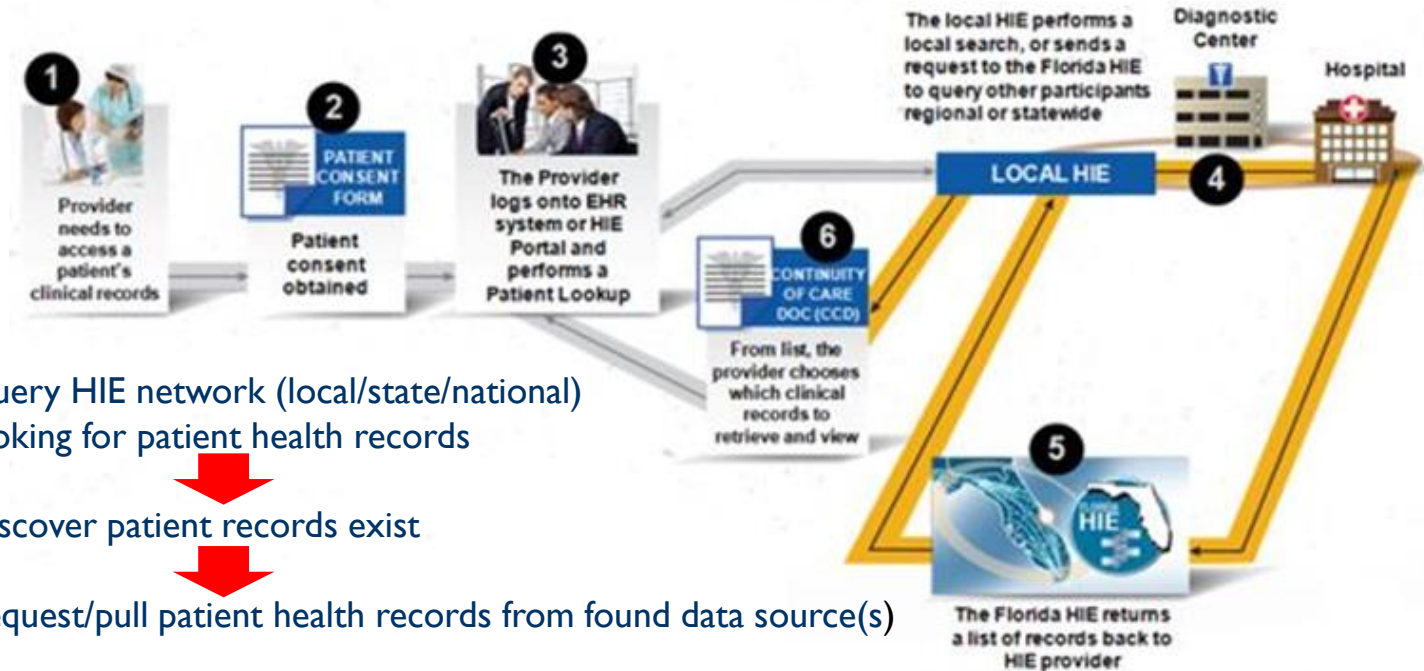
(Dollars in Millions)

ONC as of 1/2013

<sup>1</sup> State HIE Program supports two national standards for securely exchanging health information: *CONNECT and DIRECT*



# Leveraging CONNECT(Query/Pull) in a Disaster



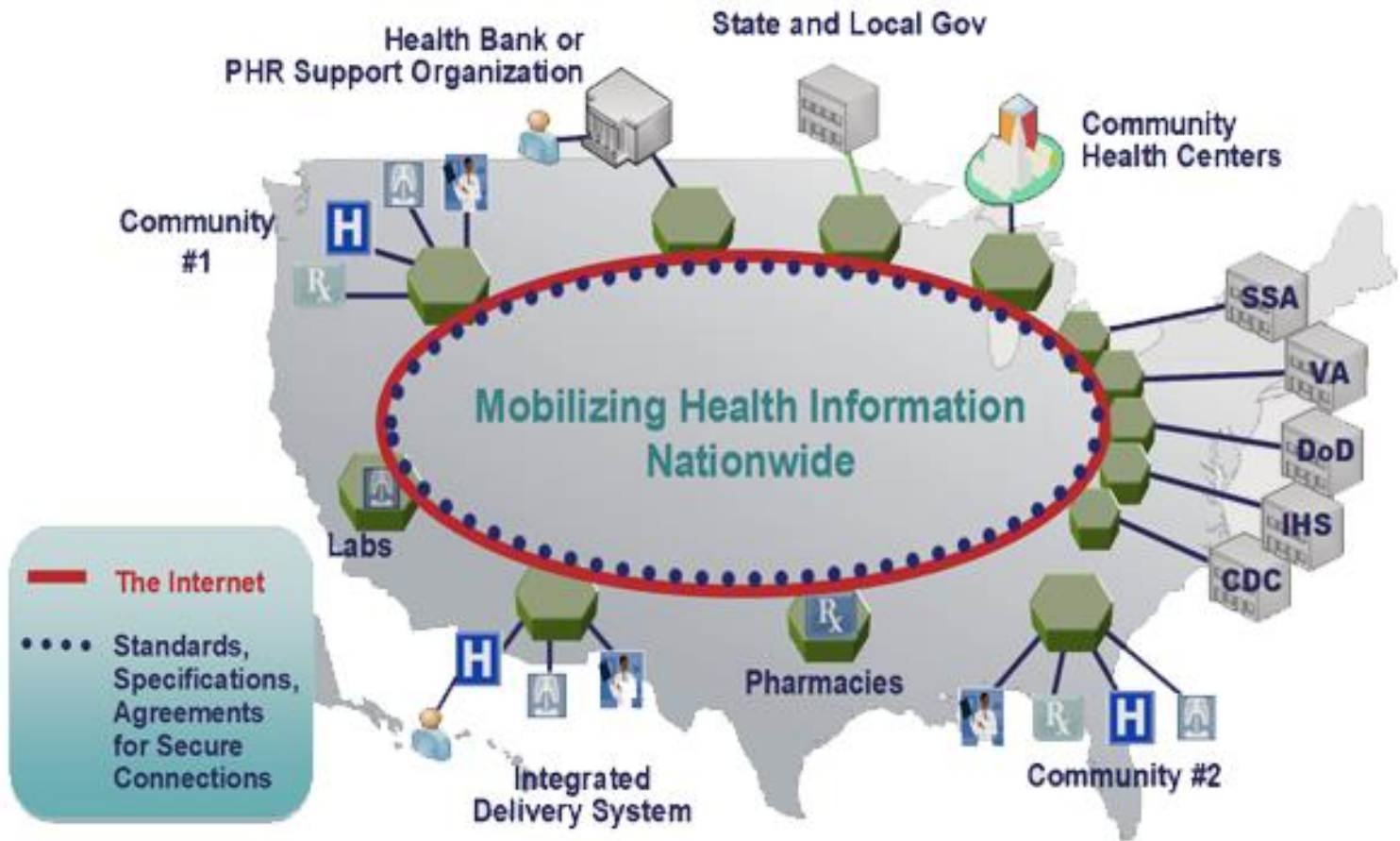
Query HIE network (local/state/national)  
looking for patient health records

Discover patient records exist

Request/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 Agencies, States and Communities



# Leveraging DIRECT Messaging in a Disaster



[b.wells@direct.aclinic.org](mailto: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.

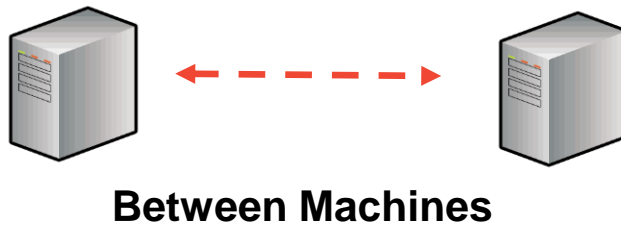


[h.elthie@direct.ahospital.org](mailto:h.elthie@direct.ahospital.org)

- **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.

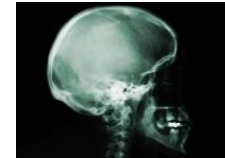
# Power of DIRECT in a Disaster - Flexibility

## Communication Pathways



## 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**

# Florida Disaster Preparedness Use Care

- Florida emergency planners and first responder organizations use DSM for coordination and planning.
- Dislocated patient presents in neighboring county or state emergency department.
- Rendering provider or facility sends Direct message to patient's health plan or Florida care provider.
- Clinical information is returned via direct message in structured or unstructured format.

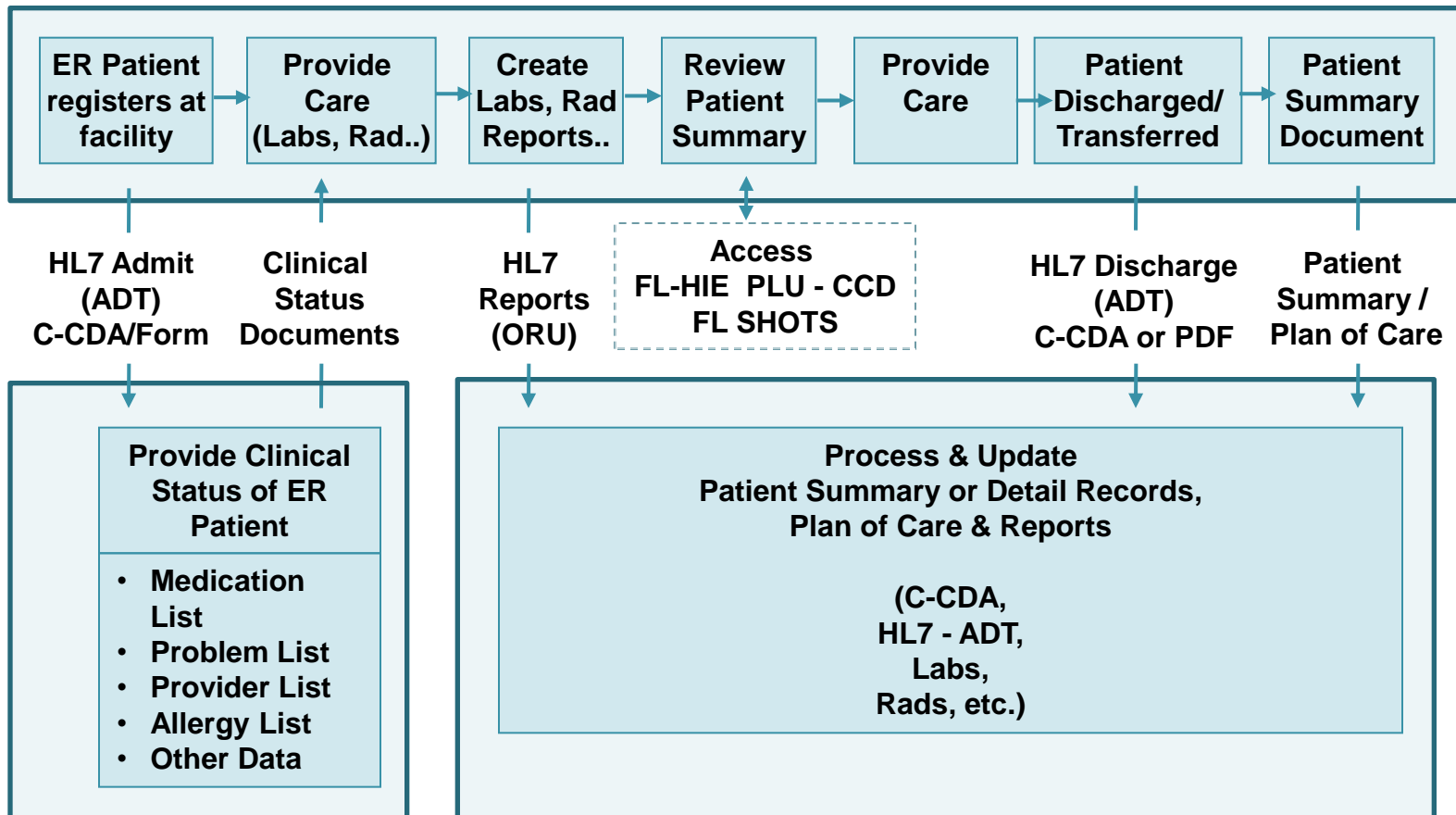


# DIRECT Use Case: Acute Care Emergency Treatment

**Acute Care Facility**

**Direct Message Flow**

**Health Data Sources**



- Providers
- Health Plans
- Pharmacies/Labs
- Others (PHRs?)



# Call to Action

- Find out where your State is in its HIE implementation including it's DIRECT compliant messaging service.
  - What other states is your state connected too?
- Establish outreach campaign to encourage obtaining a Direct Secure Messaging account in your state.
  - Providers, hospitals, pharmacies, labs, health plans, first responders, ESF8 and other state disaster preparedness resources who need to securely obtain and share patient health information.
- *Identify and engage health data sources such as providers (EHRs), hospitals, health plans, pharmacies, labs and others.*
- Encourage patient PHR adoption and use.
  - Health plans and others provide these to members.



# Legal Issues in HIE Planning

This section of the presentation will address:

- Types of privacy provisions incorporated into the data use agreements between health information exchange service vendors (personal health records, electronic health records, claims and other data sources) will provide the protections necessary for safe transmissions.
- How the regulatory requirements of HIPAA and business associate contractual provisions will apply to protect the transmission of ePHI.
- How to protect against data disclosures using business associate agreements (BAAs) for secure health information exchange.

# Perceived Barriers

An important step in working on legal issues in data exchange is in identifying and addressing perceived barriers:

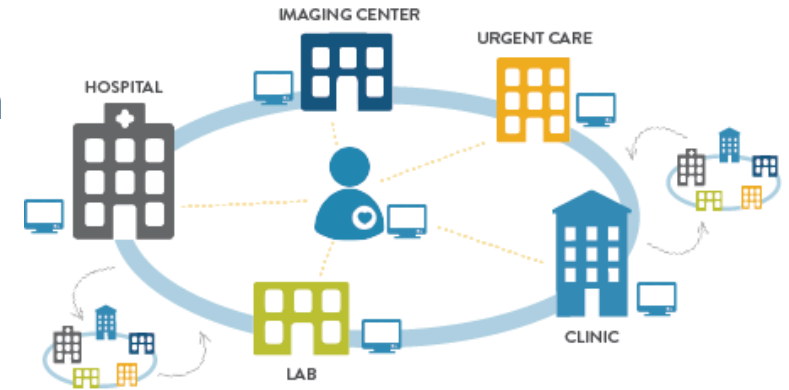
- Sensitivity and security of data
- Harmonizing policies and procedures
- Patient engagement
- Interoperability of systems
- Consequences of failure:
  - Legal
  - Reputational
  - Political
  - Financial



# Katrina Guidance

“Treatment” includes:

- (A) Sharing information with other providers for treatment of a patient with whom the provider has a relationship;
- (B) Linking patients to available providers in the areas where the patients have relocated;
- (C) Coordinating with emergency relief workers and others who can help patients find appropriate health care services.



# No Wheel Re-Invention!

## Power in a Template and Encrypted E-Mail

- Mutual Aid Memorandum of Understanding
- DURSA (Data Use and Reciprocal Support Agreement)
- EMAC (Emergency Management Assistance Compact)
- **Default to HIPAA**
  - Protected Health Information (PHI) can be used for treatment, payment and healthcare operations
  - Must have a need to know the information (treatment or payment relationship with patient)
  - Must use the minimal information necessary for the task at hand and provisions for emergency mode access

# HIE Implementations Moving Legal Issues Forward

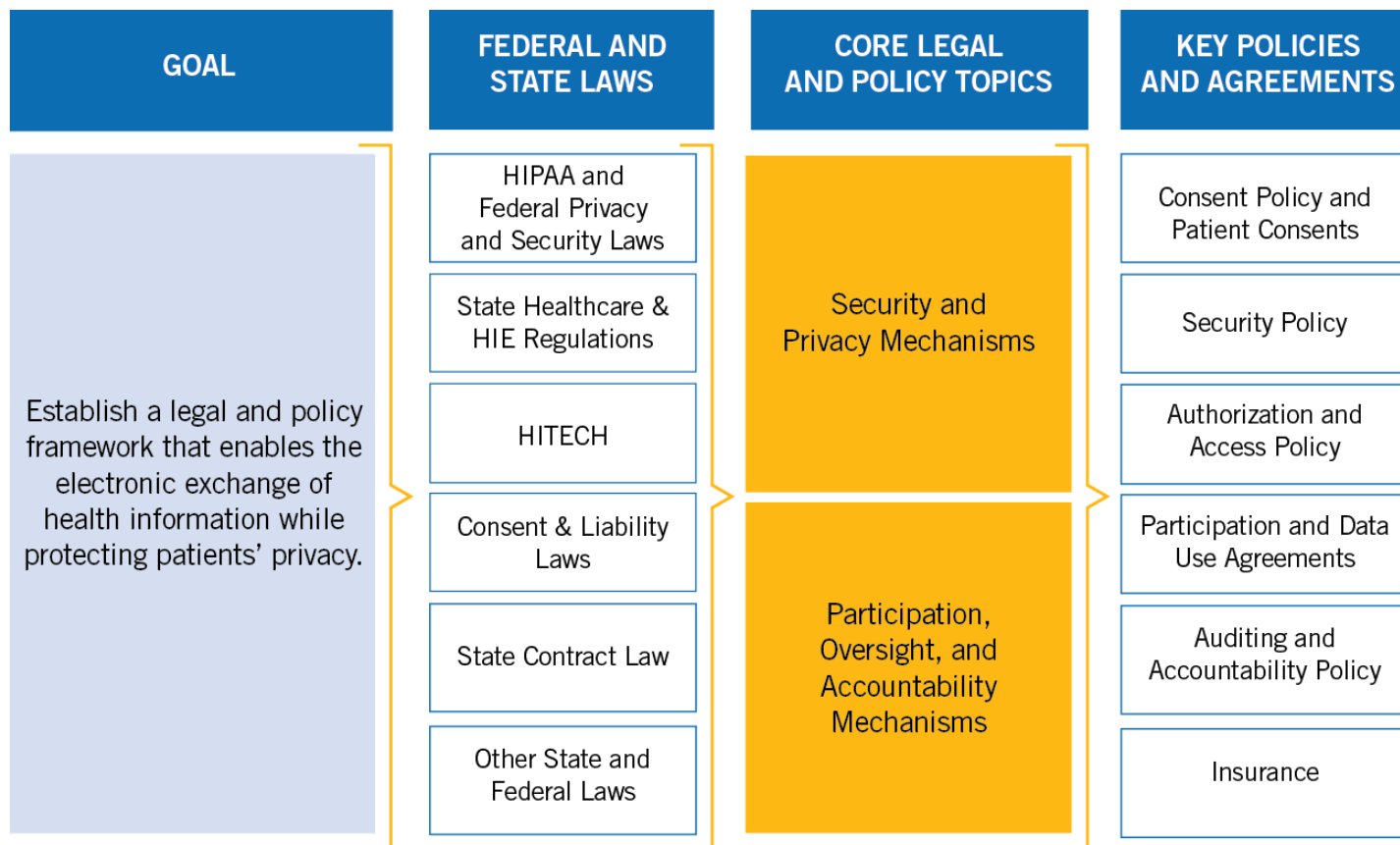
Emerging State HIE's working on the data sharing issues:

- **DIRECT Push** of health information works perfect with HIPAA. Both sides of exchange must know each other and are responsible for stewardship of the data they send/receive.
- **CONNECT Query/Pull** more problematic:
  - Various state approaches for patients to Opt-in or Opt-out of health information to be accessed through the network.
  - Confidentiality of Alcohol and Drug Abuse Patient Records Regulation (42 CFR Part 2).
  - State laws that have additional patient protections (e.g., for patients with mental health conditions) or have additional data safeguarding requirements (e.g., for communicable diseases).

# It's An Emergency!

## Prioritizing Patient Access to Their Records for Treatment

- §164.510 Uses and disclosures requiring an opportunity for the individual to agree or to object.



# SERCH Broke Through Perceived Barriers

Privacy and security protections, however, do not necessarily impede the appropriate exchange of information in a declared disaster.



- SERCH recognized that even during disasters, patient privacy and control was important.
- Learned from the past and used existing structures, with enhancements and innovations.

# Strategic HIE Planning for Disasters

This presentation on Health Information Exchange for disaster preparedness addresses the need for local and state-level governance for disaster planning:

- Integrate HIE into emergency planning for disaster response and recovery - before a disaster occurs.
- Organize relevant stakeholders needed to plan for the emergency medical response.



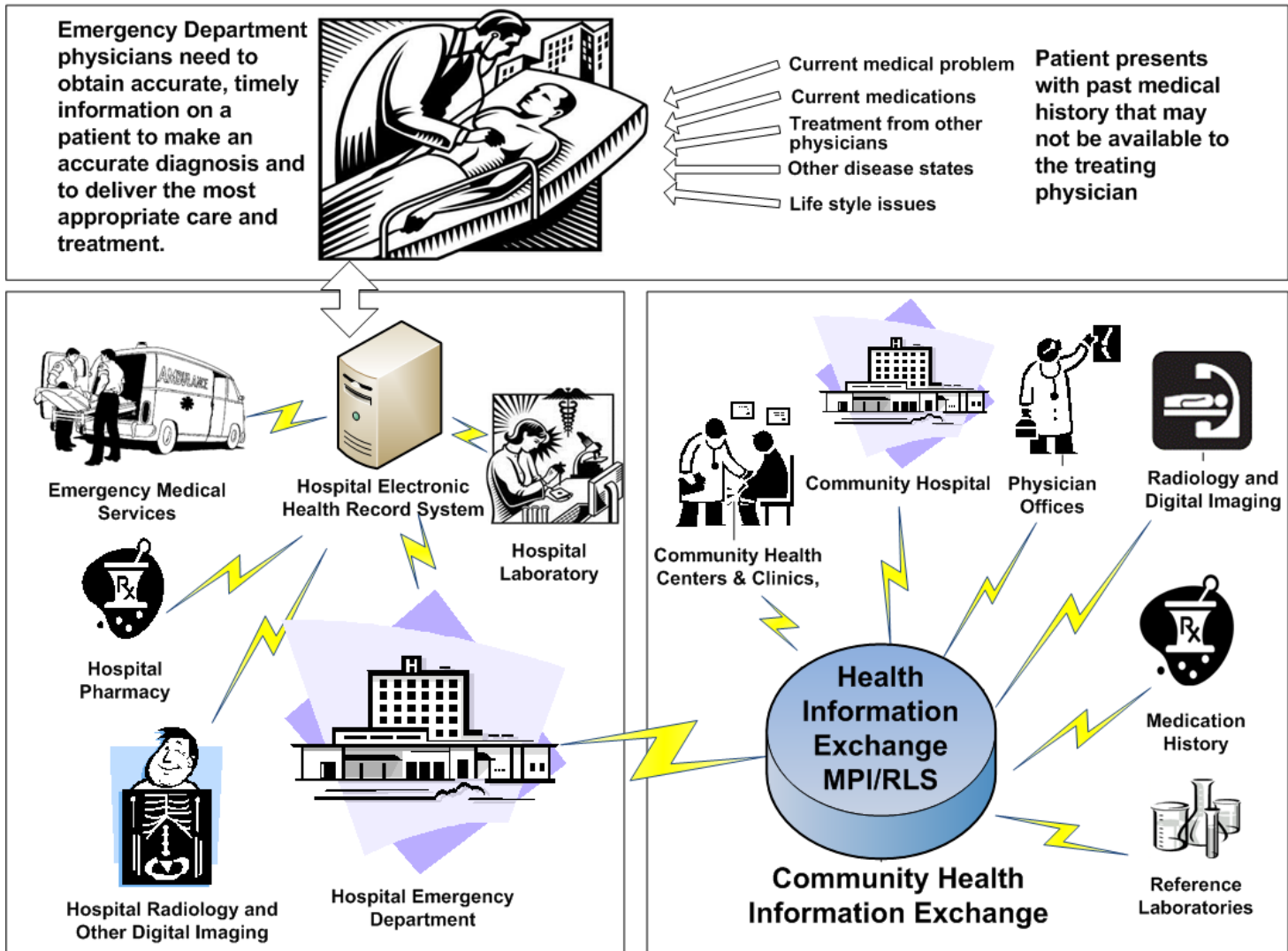
- Locate relevant medical data sources that will be accessible following a disaster.
- Oversee the mechanisms of data exchange for the delivery of medical records to the point of care following a disaster.



# HIE for Patient Care

The perfect medical record world of HIE.

## Health Information Exchange Emergency Room Use Case



# The Challenge of Natural Disasters

When natural disasters strike, vital medical services can be disrupted and crippled.



St. John's Mercy Hospital in Joplin, Missouri

# The Challenge at the Point of Care

After a natural disaster, people flee their homes. Their medical problems remain but their medical records don't.

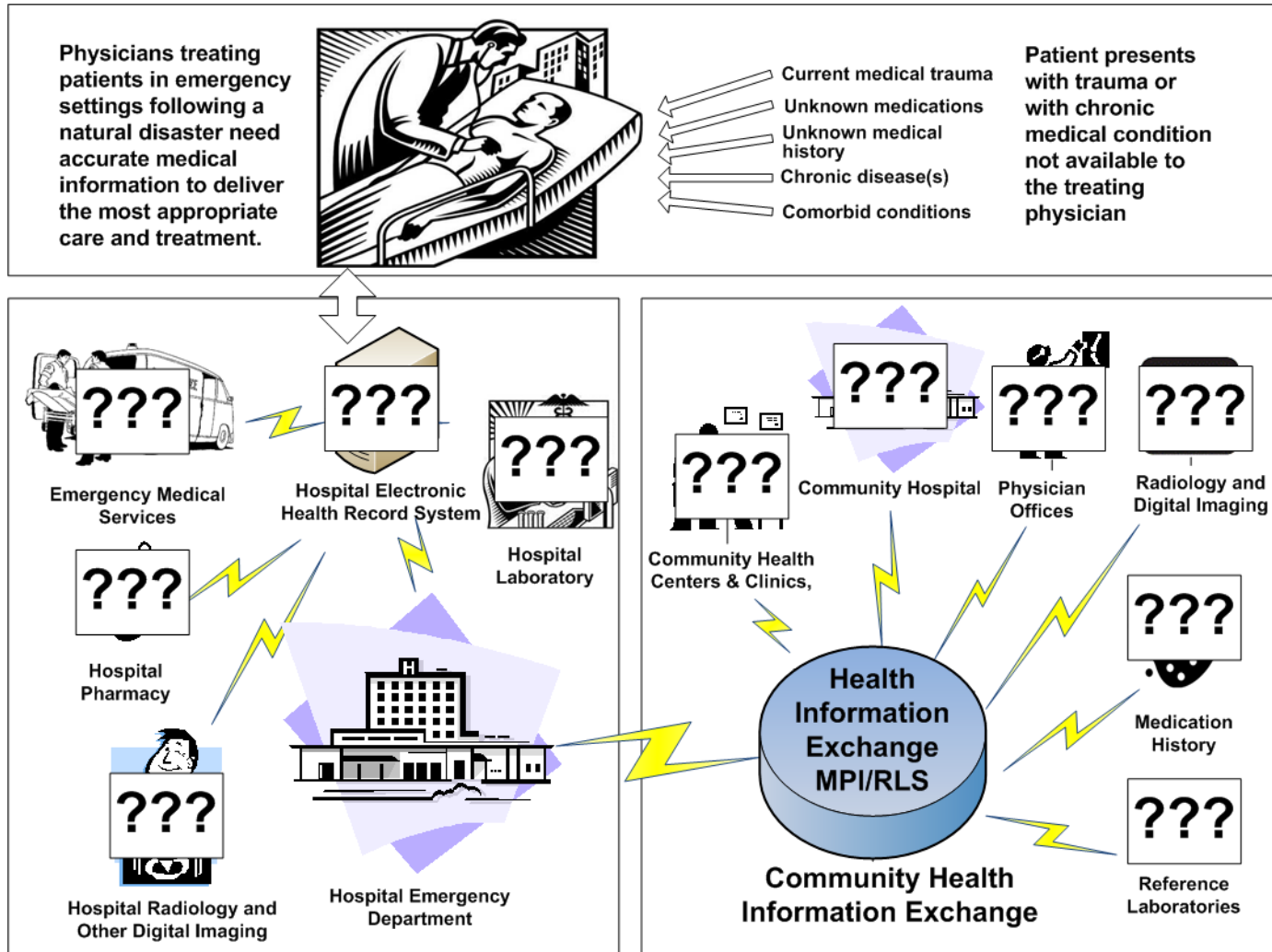


Katrina evacuees in the Houston Astrodome, Texas

# HIE Following a Natural Disaster

The real medical record world after a natural disaster.

## Natural Disaster Emergency Use Case



# Strategic Planning for Disaster Planning

What is required to ensure access to medical records after a natural disaster strikes?

- Strategic planning must occur **before** the disaster:
  - Build relationships among stakeholders.
  - Create partnerships with health care data sources.
  - Coordinate action steps among partners.
  - Establish procedures to locate and access patient records.



# Role of Governance for HIE Planning

The governing body for disaster planning is best conducted by a neutral convening body with the authority to convene diverse stakeholders that must often act as a mediator between state interests and the private health care sector:

- Lead and coordinate consensus-based efforts to develop a plan to make medical records available after a disaster.
- Represent the interests of both private enterprise and state government agencies.
- Implement a road map for interoperability and data exchange among private and public health care stakeholders.



# Planning for Health Information Exchange

HIE disaster planning requires its governing body to engage the health care community as a trusted group representing diverse health care stakeholders, who can articulate and mediate different stakeholder needs, including:



- Diverse or competing interests of exchange partners.
- Dissimilar data requirements.
- Unique needs among providers for the practice of medicine.
- Different technical capabilities.
- Consensus for the rules of exchange among participants.

# Strategic Planning Activities for HIE

Strategic disaster planning for HIE entails many other responsibilities for the governance body:

- Developing HIE policies and procedures for data sharing and among exchange participants after the disaster.
- Facilitating agreements on the exchange of medical records among providers, hospitals, health IT vendors, health plans and public health.
- Maintaining accountability among participants for proper data stewardship.





# Health Data Partners



# Who Leads HIE in Disaster Planning?

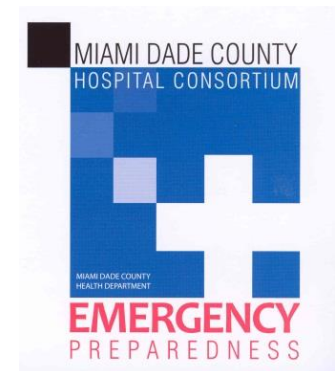
Which organization should take the lead in disaster planning for HIE?

- The State-Designated Entity for Health Information Exchange – Responsible for convening stakeholders and statewide policies for data-sharing.



- The Health and Medical Services Emergency Support Function 8 - Responsible for health care disaster planning and response.

- Local groups that partner with the ESF 8 responsible for disaster planning with health care stakeholders.



# The State-Designated Entity for HIE

The State-Designated Entities were established by the American Renewal and Recovery Act of 2009 to create governance models that could sustain state-level HIE by:

- Ensuring stakeholder buy-in, trust and collaboration.
- Establishing goals and objectives based on consensus among health care stakeholders.
- Coordinating HIE efforts with Medicaid and public health.
- Ensuring oversight of the state-level HIE by enforcing accountability among participants.

Why not plan for HIE activity after disasters?



LOUISIANA HEALTH  
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# ESF-8 Role in Disaster Preparedness

The Health and Medical Services Emergency Support Function #8 agencies are responsible for health care disaster planning, response, recovery and post-disaster evaluation working within the National Response Framework. They provide disaster assistance in many core functional areas that could include HIE:

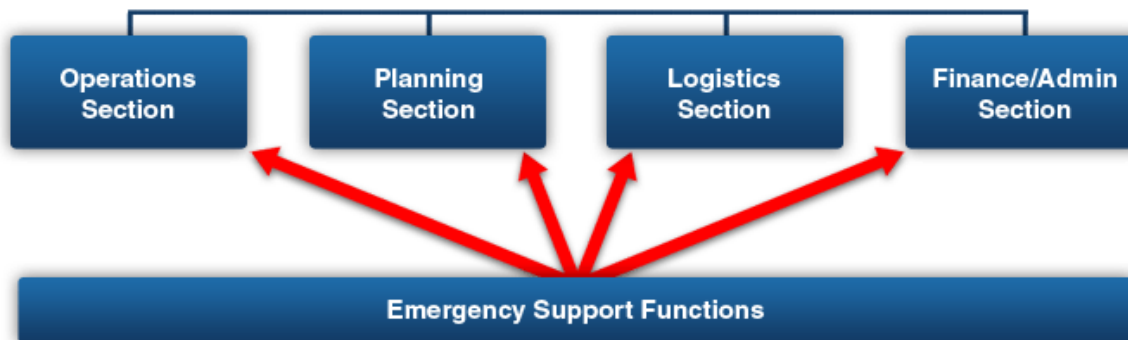
- Health surveillance and assessment
- Coordinating medical personnel
- Supplying medical equipment
- Managing patient evacuation
- Supporting patient care
- Providing public health and medical information



# ESF-8 Opportunity for HIE Planning

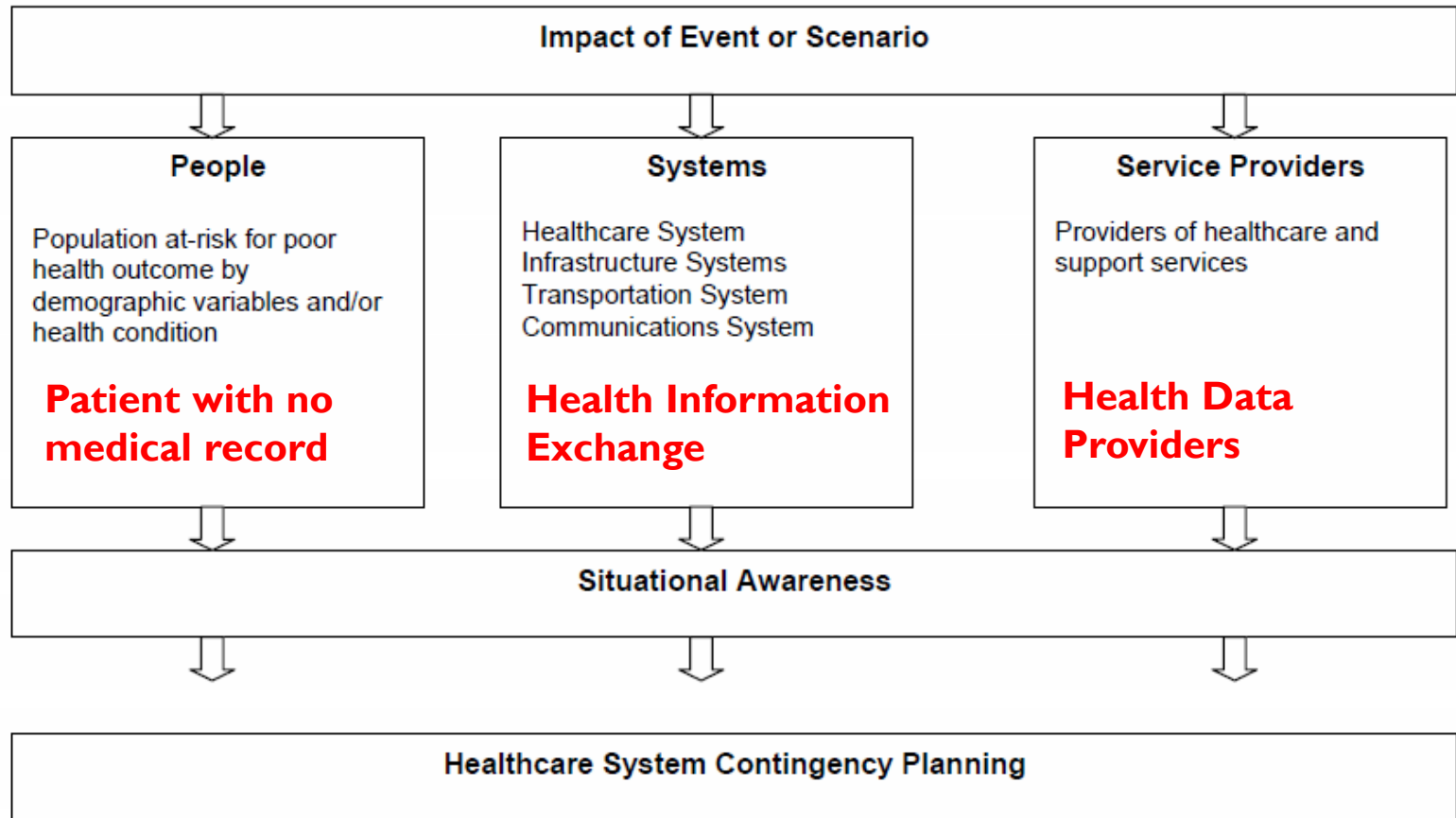
Operationally, the ESF-8 agencies depend on their situational awareness, which combines knowledge of the current situation and potential future impacts. Situational analysis could easily include awareness of HIE needs:

- Understanding the incident.
- Defining the area of operations.
- Understanding the disaster area health care system.
- Forecasting and validating resource needs.
- Identifying infrastructure impacts on medical systems.



# Situational Awareness for HIE Planning

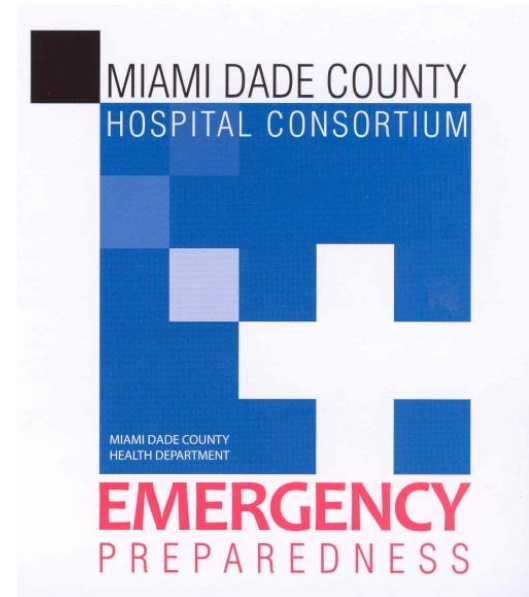
Using Florida's state-level model of ESF-8 Situational Awareness it is clear that introducing HIE into the strategic planning for disasters is a logical fit.



# Local Coalitions Engaged in Disaster Planning

Local coalitions might be the best solution for disaster planning because they are closer to the health care stakeholders who would be partners in the exchange of data.

- A good example of this type of collaborative is the Miami-Dade County Healthcare Coalition, which was organized as an EsF-8 partner for the specific purpose of emergency preparedness planning and response.
- The MDCHC membership includes:
  - Thirty-four hospitals
  - Healthcare facilities
  - Florida Department of Health
  - Office of Emergency Management
  - County police and fire departments



# Miami-Dade Healthcare Coalition Partnership

The Miami-Dade Healthcare Coalition ensures that members are prepared to respond during a disaster.

Members are expected to:

- Participate in planning activities to share key resources in times of emergencies
- Provide assistance in community-wide emergency response in Miami-Dade County

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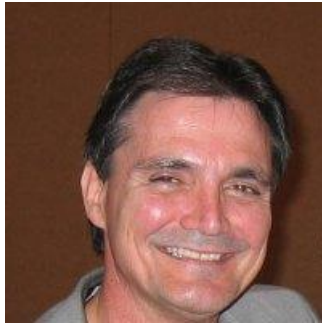
# Conclusions and Recommendations

Health care planning for natural disasters is critical. The health IT infrastructure is **now** capable of ensuring that disaster victims can receive appropriate care based on their medical records. What is needed is coordinated planning:

- ESF-8 agencies and State-Designated Entities should join forces to create state-level governing boards to oversee HIE for disaster-preparedness across and between states.
- Groups like the Miami-Dade Health Care Coalition and ESF-8 agencies should form local governance bodies to engage health care stakeholders in HIE disaster planning.
- Governance bodies at all levels must reach out to health care data sources to participate in data-sharing.
- Governance bodies should coordinate data-sharing agreements that ensure technical solutions work.



# Questions?



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