ESF-8 Force Multiplier

Sharing Patient/Person Tracking Information Across Jurisdictions National and Local

Session Objectives

- Describe the emerging data exchange architecture being established to provide patient tracking for emergencies.
- Explain how patient tracking systems and secure message routing can be used for involving multiple jurisdictions and states.
- Examine current capability to support effective patient tracking during emergencies.

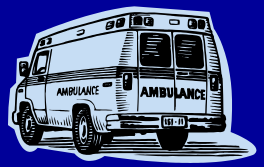
Panel of Presenters

Joe Lamana	ESF #8 Patient Movement Coordinator Assistant Secretary for Preparedness and Response U.S. Department of Health and Human Services
Paul Petersen	Pharmacist Strategic National Stockpile Coordinator State of Tennessee Department of Health
John Donohue	Director of Field Programs Maryland Institute for Emergency Medical Services Systems
Knox Andress	Louisiana Region 7 Hospital Coordinator Louisiana Poison Center
Tim Grapes	Systems Consultant-Standards Department of Homeland Security

Presentation Outline

- Overview of Emergency Patient Tracking
- Joint Patient Assessment and Patient Tracking System
- Interactive Real Time Demonstration
- State of Tennessee
- State of Maryland
- State of Louisiana, Region 7
- Overview of Messaging Standards
- Questions and Discussion

Demonstration



Location 1: Nashville, TN

Location 2: Air Base, TN

Locations 3 & 4: Shreveport, LA & BWI, MD

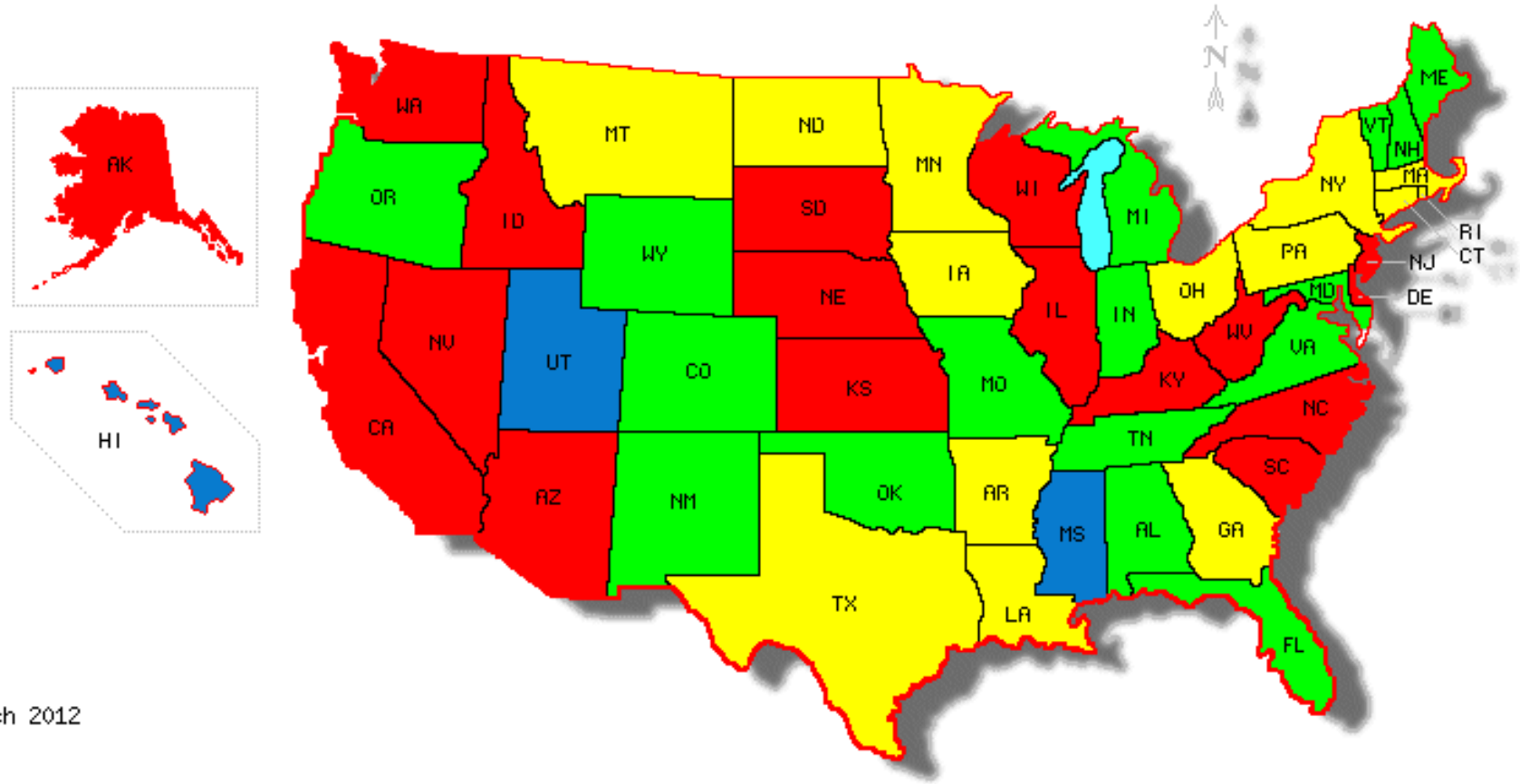
Locations 5 & 6: LA Hospital & MD Hospital

Tracking of Emergency Patients

- Nationally, each state and locality needs some patient tracking capability
- Patient Tracking systems vary across the country
- Large events will likely require multiple system involvement

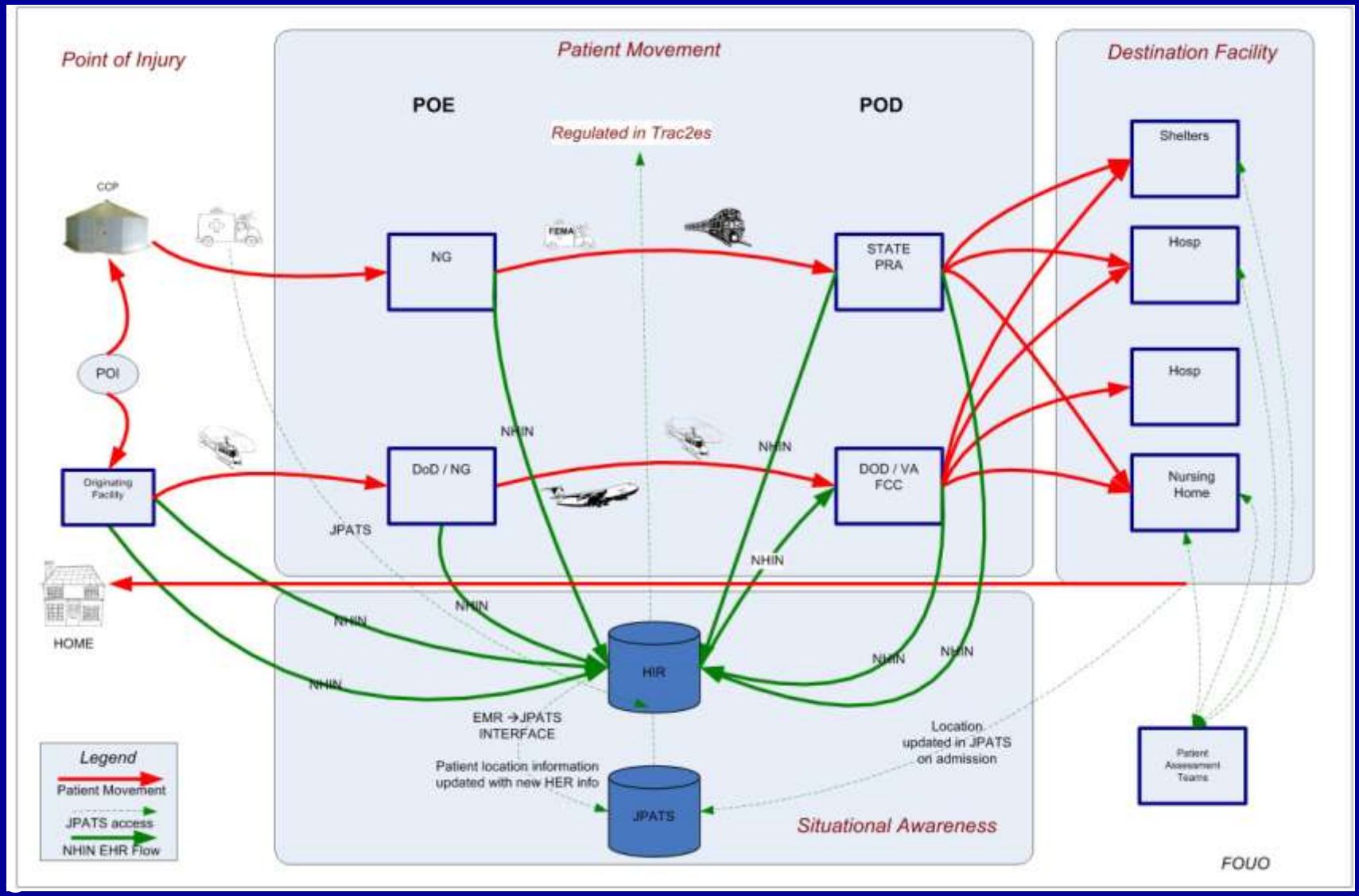
State Patient Tracking Capability

- Commercial Solution
- Home Grown
- JPATS State
- None



NOTES:
as of March 2012

Patient Tracking is easy, Its the process that is complicated!



Information Sharing Issues

- Common Operating Picture
- Multiple platforms and formats
- Timeliness of response
- Corrective actions delayed

System Interoperability

Standard Messages (content)

\+ Message Transport

\+ Security and Consent

Interoperability

Standard Messaging

"What data are we sending?"

- Content and Structure

Health Level Seven International (HL7)

In this discussion, we will explore the Tracking of Emergency Patients (TEP) proposed message standard to exchange data. This is planned to be published by Organization for the Advancement of Structured Information Standards (OASIS).

Message Transport

"How the message is sent"

The Direct Project – This project was added to the Nationwide Health Information Network (NwHIN) in 2010.

NDMS demonstrated using the Direct Project to exchange patient HL7 documents with Guam at HiMSS 2012.

Security and Consent

- "Does the patient consent to us sharing their data?" and
- "Is the receiving system going to protect the record?"

ONC is addressing these issues through Data Use and Reciprocal Support Agreement (DURSA)

Pre-JPATS Patient Movement

- 2004 Hurricane Katrina,
  - 4,000 medically fragile evacuees transported out of New Orleans
- 2008 Hurricane Ike/Gustav
  - 450 patients evacuated

In both cases tracking was sporadic,
we lost track of patients

JPATS Joint Patient Assessment and Tracking System

- Web-Based Application
- MOA between the Defense Department and the Veterans Administration
- 'Giving' JPATS to States
  - MS was first to receive, HI received in August 2011, UT in December 2011
  - State Implementation Guide
  - Many State requests (CA, AK, IL, NV, WV, NJ)

JPATS Functionality

- Step by step registration process
- Design leverages touch screen functionality, bar code scanning, and patient photographs for identification

Common Concerns of States

- States use a variety of Databases
- Cost of purchasing an Operating System and associated hardware
  - The implementation guide will show hardware and software costs
  - Grant funding (e.g., Hospital Preparedness Program)
- Local infrastructure and support concerns

Planned Interoperability

- Offer Federal Solution
- Use Existing Systems/Investments
- Improve Common Operating Picture

Summary

- Many PT systems across the country
- JPATS is the ESF #8 Federal patient tracking system
- Data transfer is easy! We need to make the message standard!
- Can we all share the data?

Landscape of Patient Tracking in TN

TN Use Case Scenarios – Drive Capabilities

- Evacuation
  - Katrina, Gustav
- Catastrophic Event
  - May 2010 Floods
- Large-Scale Outbreak
- Mass Casualty

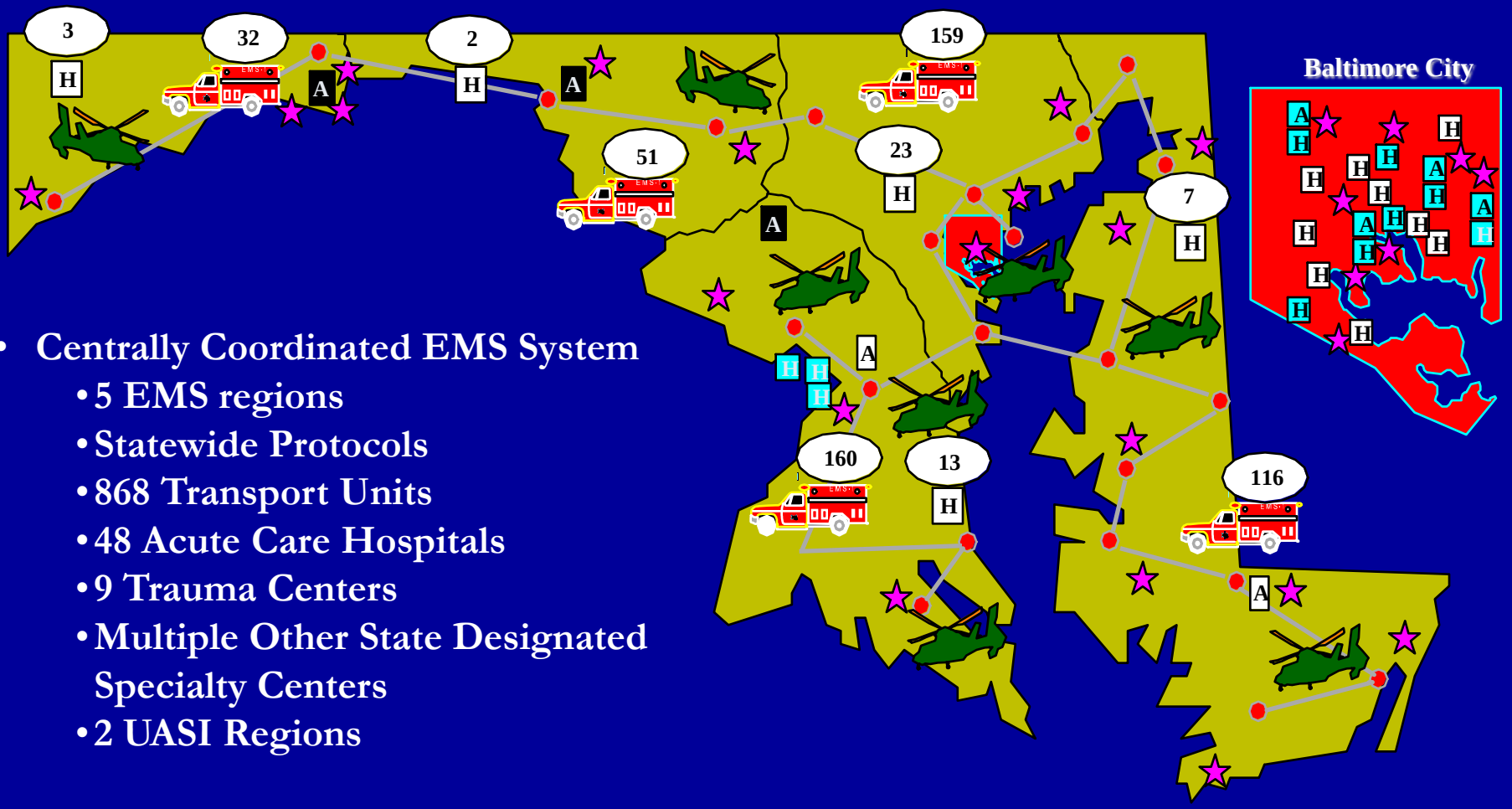
Opryland Flooding 2010

TENNESSEE

TNCRN

COUNTERMEASURE RESPONSE NETWORK

Maryland EMS System

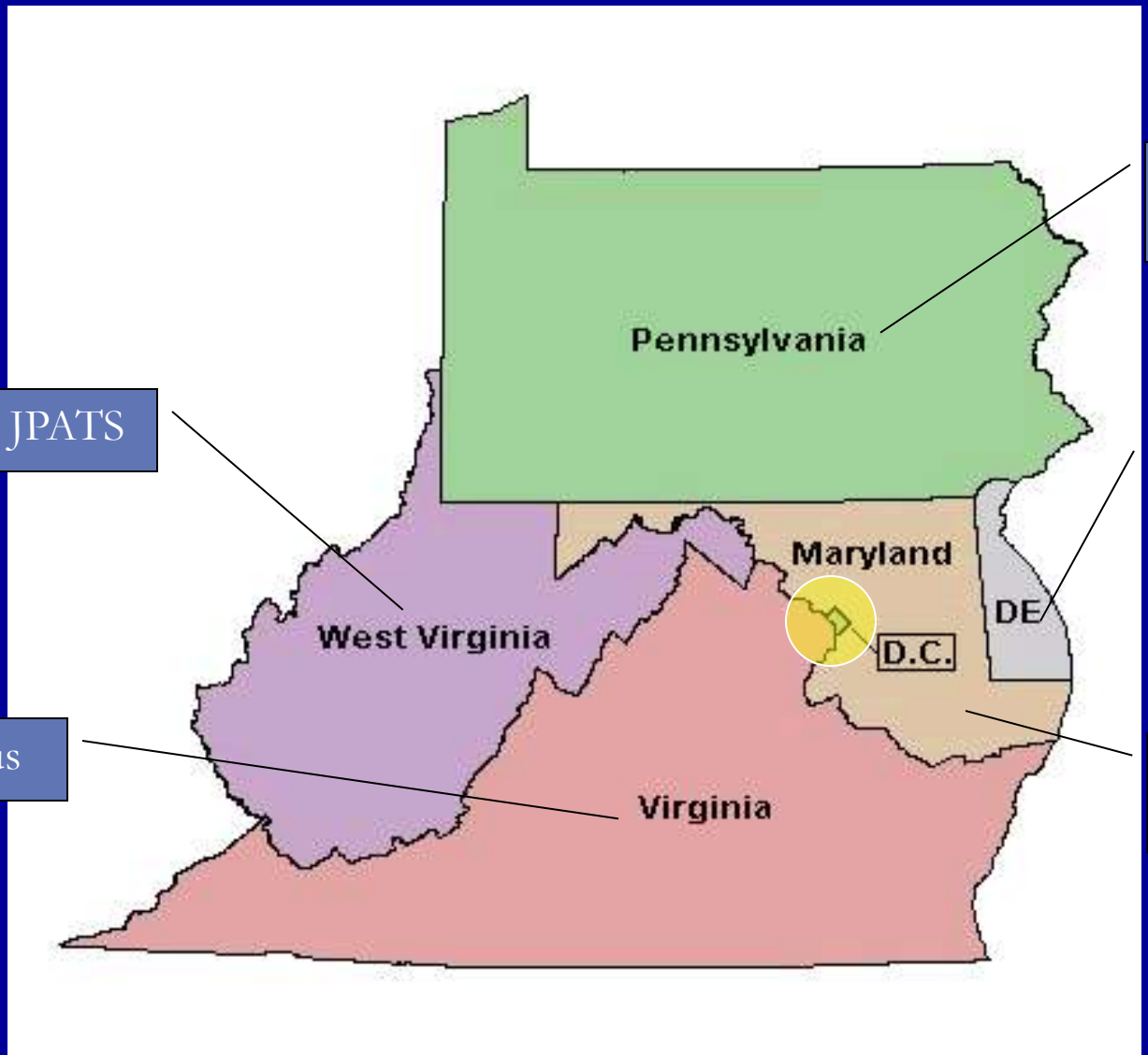


- Centrally Coordinated EMS System
  - 5 EMS regions
  - Statewide Protocols
  - 868 Transport Units
  - 48 Acute Care Hospitals
  - 9 Trauma Centers
  - Multiple Other State Designated Specialty Centers
  - 2 UASI Regions

Maryland EMS System

- Statewide EMS Communication System
- System Communication / Emergency Medical Resource Center (SYSCOM/EMRC)
- Dispatch Maryland State Police Medevac
- Coordinate between EMS and Hospitals
- Repository for Patient Tracking

Maryland Neighborhood



Home Grown

JPATS

None

Various

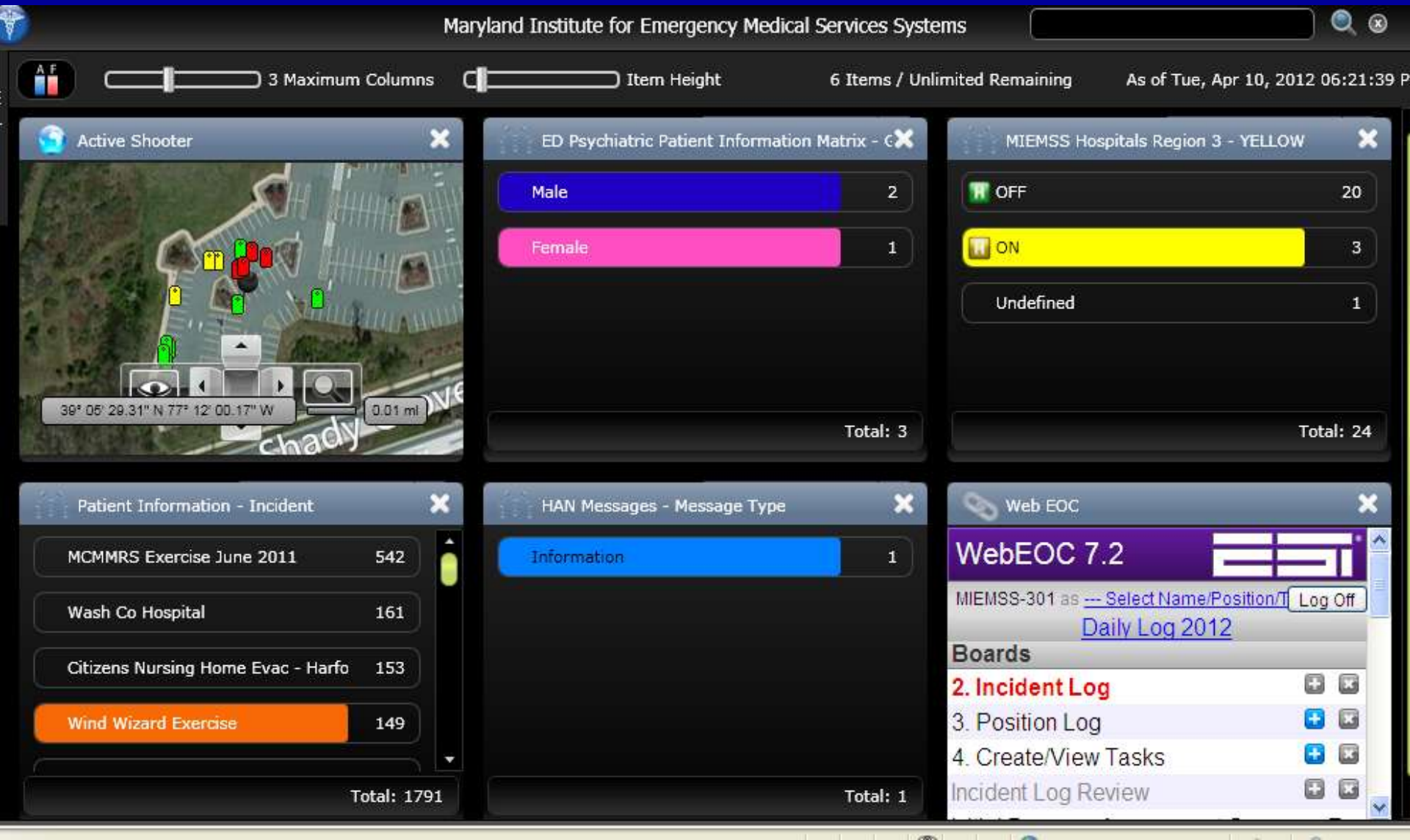
HC Standard

National Capital Region

- Cooperative Project

- One Vendor
- Three Instances
- Common Workspace
- Linked to Electronic Patient Care Reports
- Interfaces with Hospitals' Systems in DC and Va

MD Health & Medical Dashboard



Patient Tracking is ONE Component

Facility Resource Emergency Database

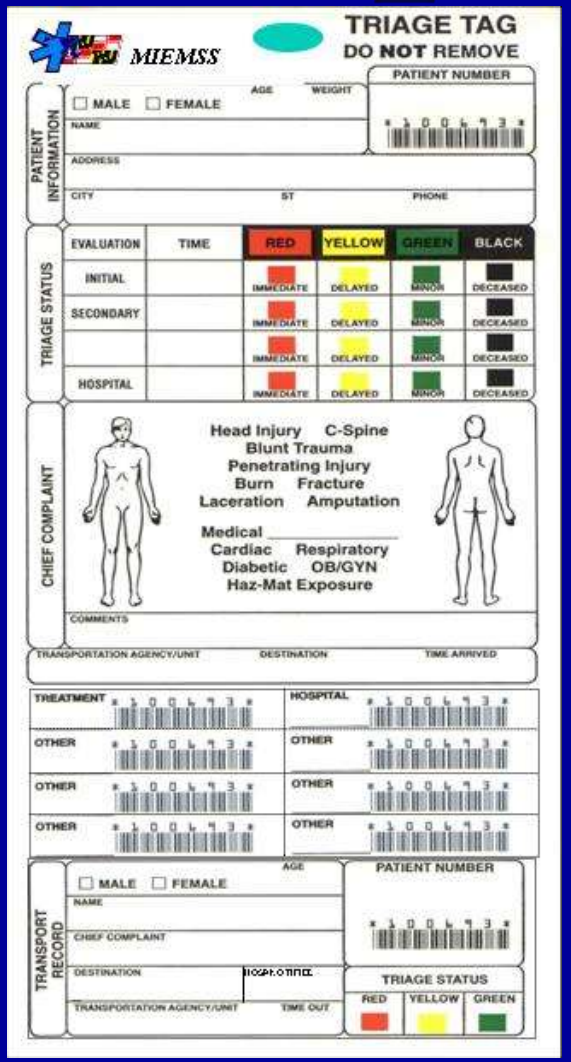
- Alerting (pop-ups and text)
- Resource Availability
- File Sharing
- HAvBED

County and Hospital Alert Tracking System

- ED and Specialty Diversion Status
- Facility and Historical Reports of Activity

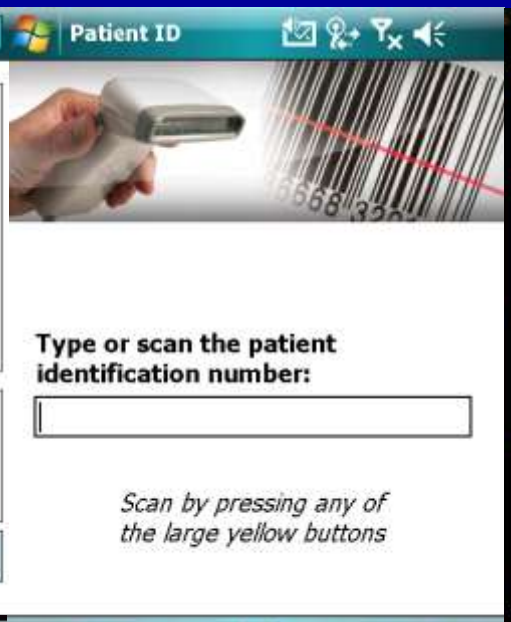
Funded by Hospital Preparedness Program

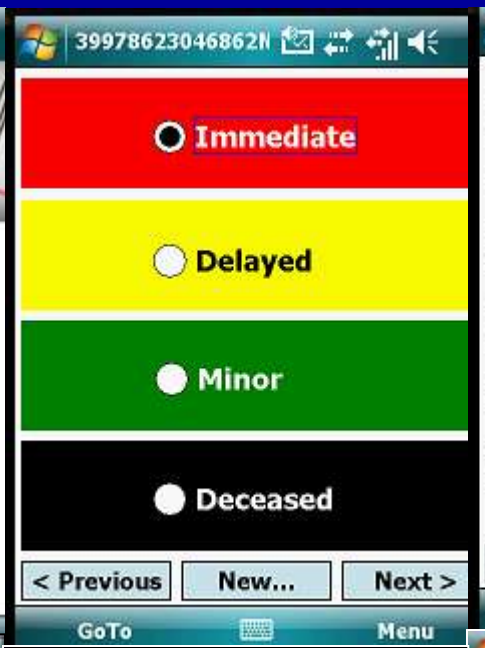
Patient Tracking

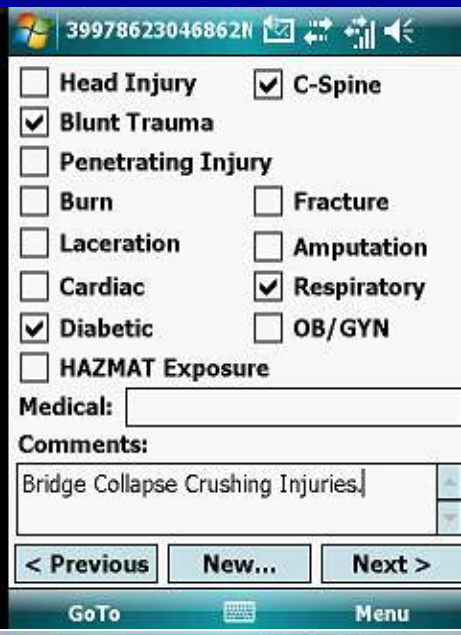


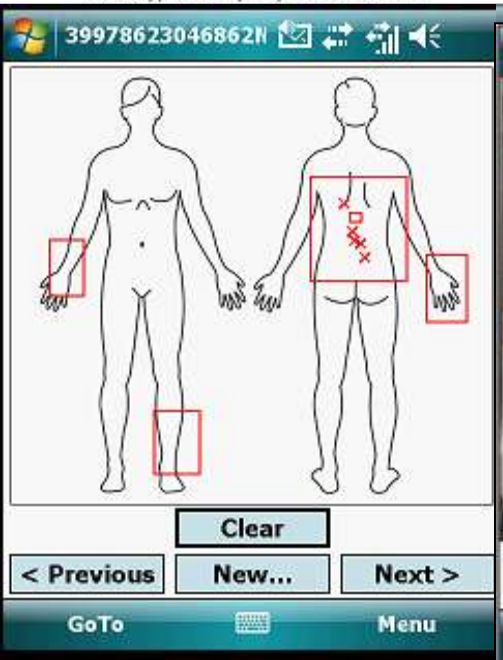
Funded by Urban Area Security Initiative and some Hospital Preparedness Program Funds

Hand-Held Input Screens

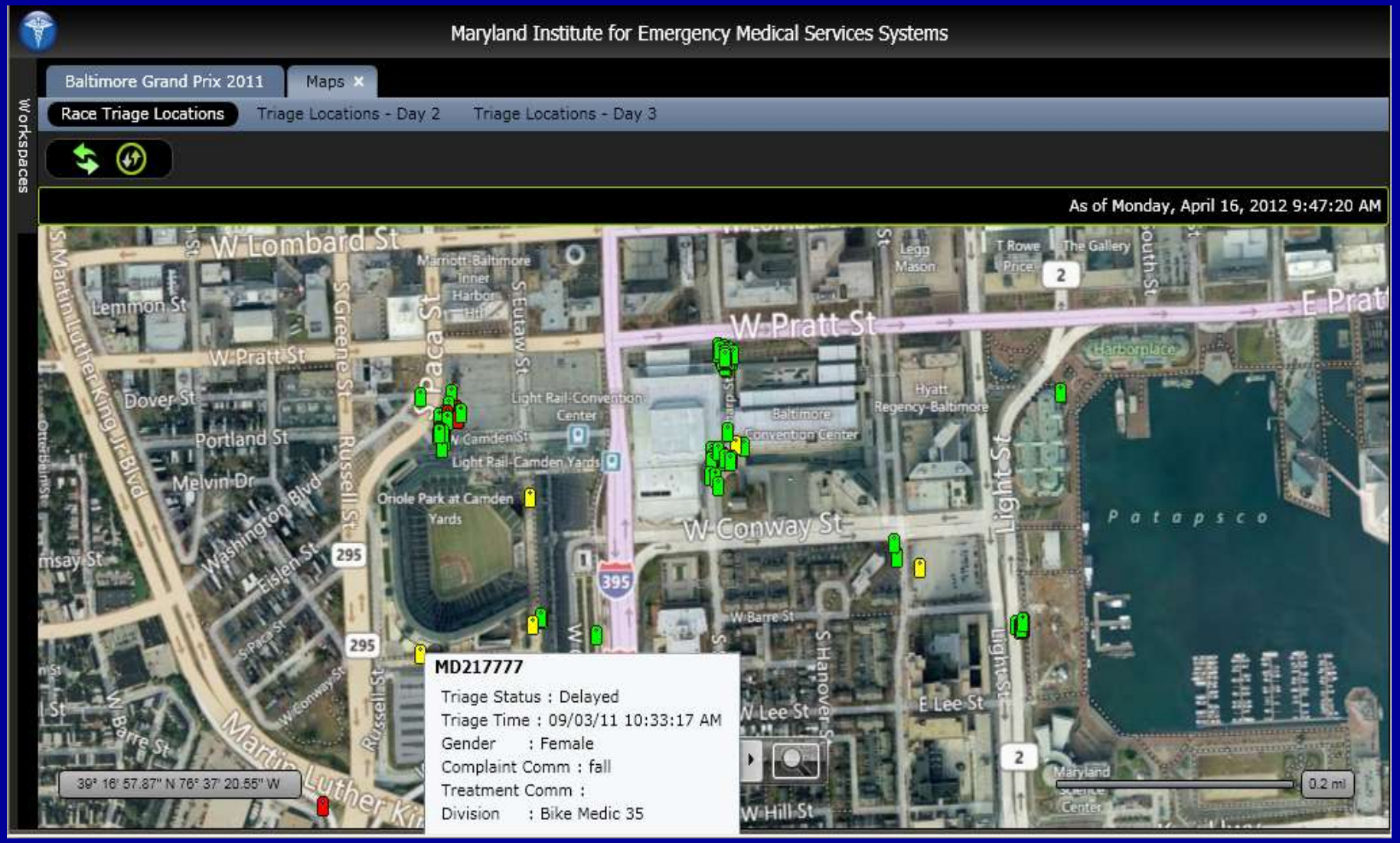




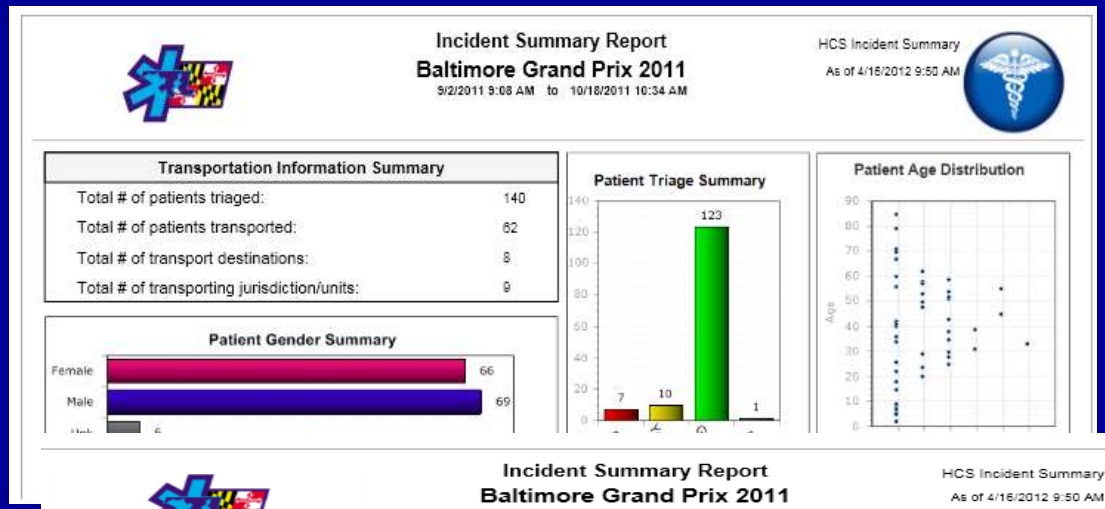


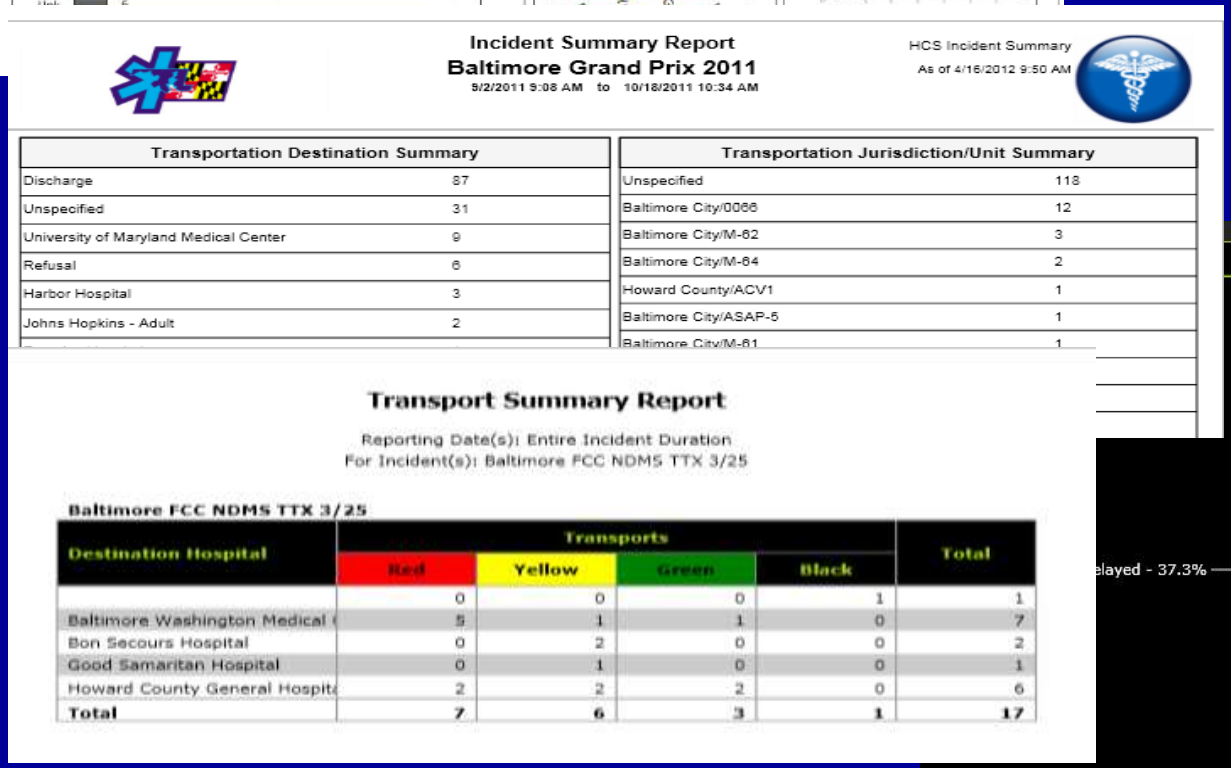


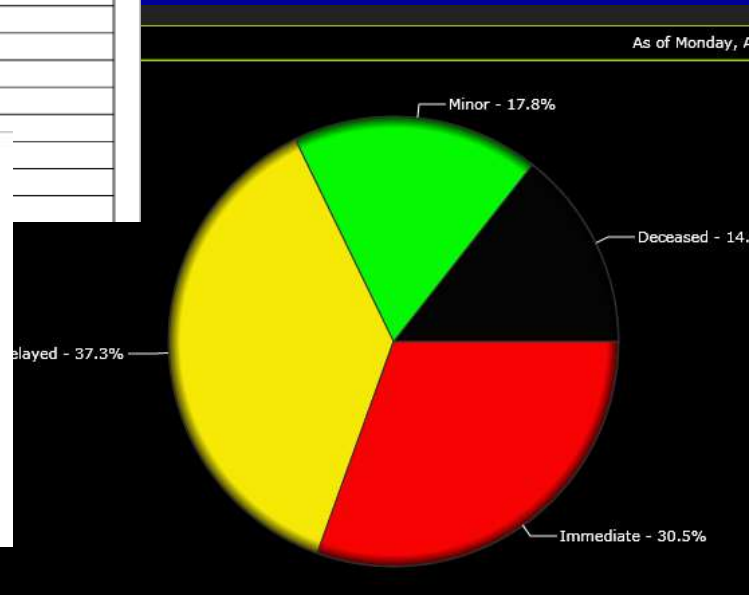
Mapping Function



Dynamic Charts and Reports







01/01/2003

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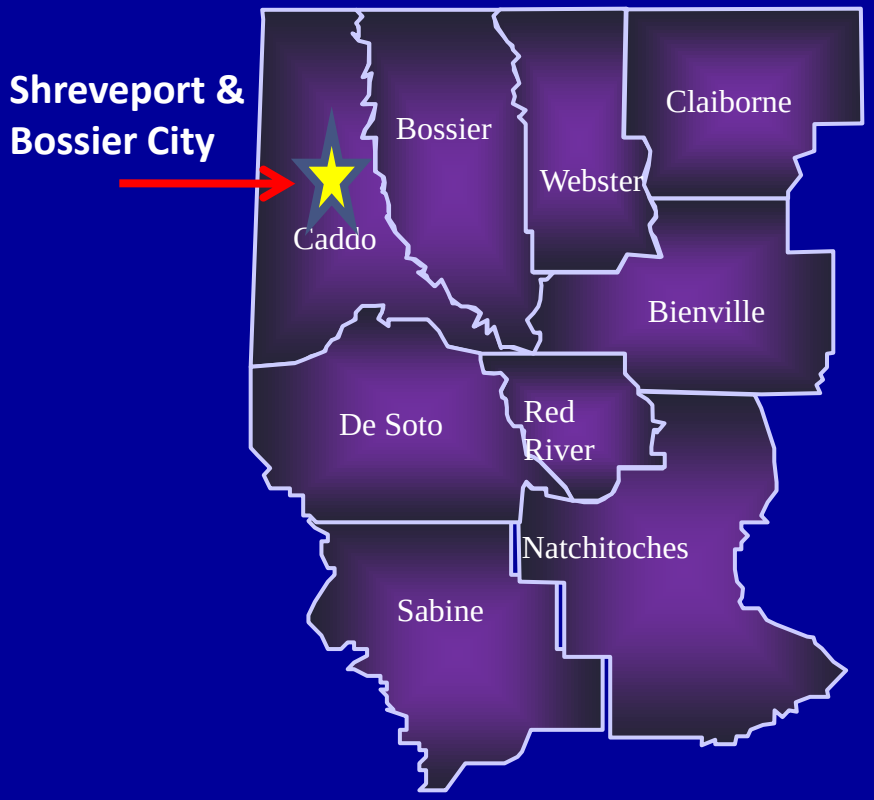
Louisiana Region 7
26 Hospitals in 9 Parishes



- Parishes: 9 in NW Louisiana
- Bordered by *Texas* (West) and *Arkansas* (North)
- Regional Pop: 544,249 (Census 2010)

Current Louisiana Region 7 Tracking Apps

- **Patient Tracking Systems**
  - *Caddo Parish and Bossier Parish* (funded via Shreveport MMRS via the Caddo-Bossier Office of Homeland Security and Emergency Preparedness)
  - *Parishes of Bienville; Claiborne; De Soto; Natchitoches; Red River; Sabine; Webster*; (funded via HHS/ASPR/HPP)
- ***"At-Risk-Registry"***
  - Louisiana Department of Health and Hospitals

Louisiana Region 7 Tracking Partners

- Caddo Parish – Bossier Parish, Office of Homeland Security and Emergency Preparedness
- Shreveport Fire Department
  - EMS
  - Communications
- Bossier City Fire Department
  - EMS
  - Communications
- Louisiana Region 7 Hospitals (Tier 1 and Tier 2)

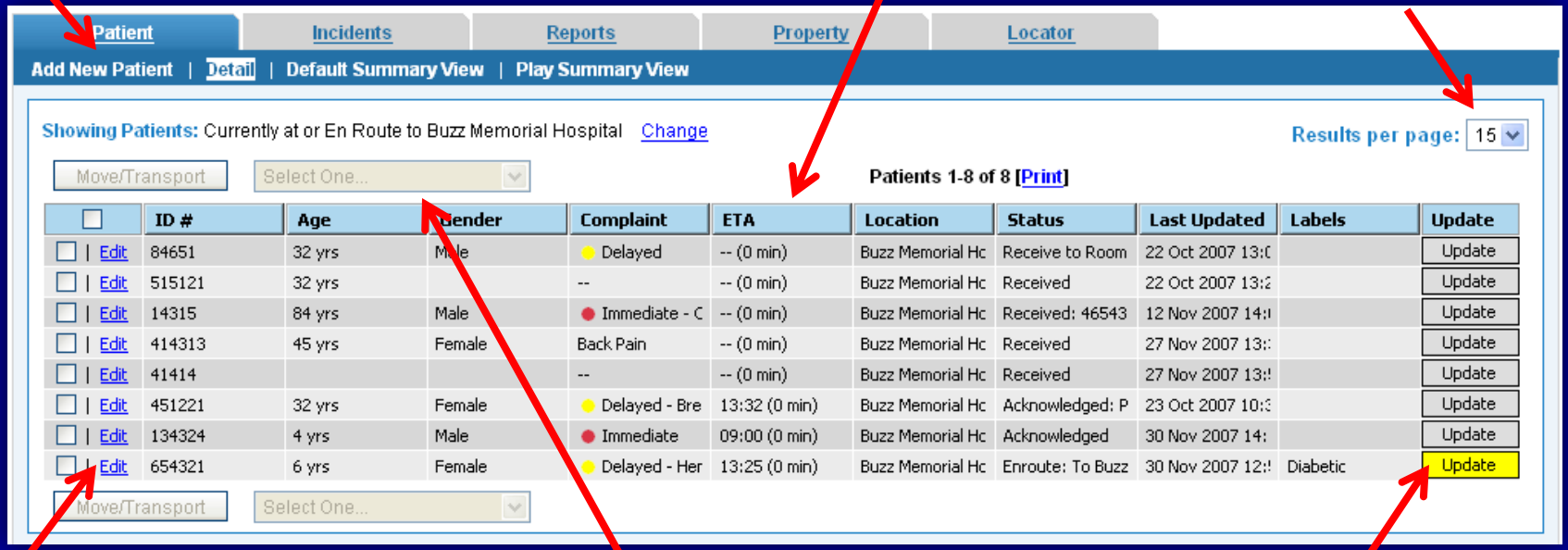
Hospital Preparedness
Louisiana Region 7

Software Overview:

Add self-presenting patient

Click on column heading to sort

Number of patients to show per page



Edit demographics, treatment, history, etc

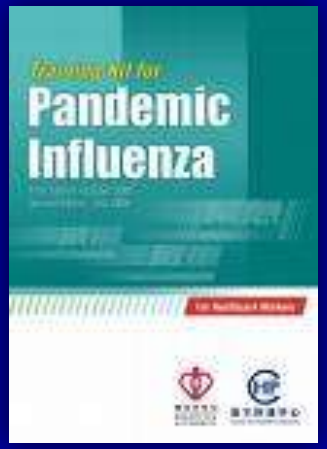
Add labels, remove patients, run reports, etc

Acknowledge, receive, or discharge patients

Use Cases Drive Capabilities

Hospital Preparedness
Louisiana Region 7

- Public Health
  - Pandemic Influenza
  - Mass Prophylaxis
- Large Gatherings
  - Sporting Events
  - Regional Festivities
- Emergency Management
  - Mass Casualty Incidents
  - HazMat Victim Tracking
  - Evacuee Tracking
- Everyday use



Region 7 Use Cases

- ***Prehospital-to-hospital***
  - Hurricane sheltering
    - Hurricane "Gustav" (2008)
    - Hurricane "Ike"(2008)
  - MCI exercises –
    - "Airport MCI FSEs" (2006 – 2011)
    - "NLE NDMS" (2010 & 2011)
    - "Triage Tuesdays" (2011 - 2012)
  - Community events/mass gatherings –
    - Barksdale Air Force Base - Air Shows (2011 & 2012)
  - Pandemic/H1N1
    - "ILI" symptom hospital surveillance (2009)

- ***Hospital-to-hospital***
  - Hospital evacuation
    - Willis-Knighton Extended Care Center - Patient Evacuation (2011)

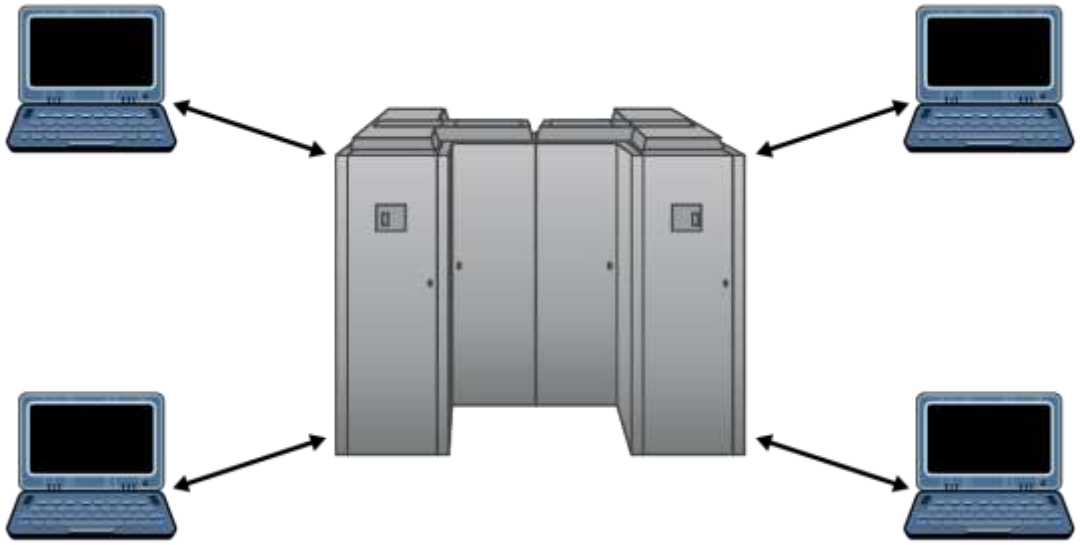
EMS

The Information-Sharing Challenge

- Ineffective Communication Risks Lives
- There is No Silver Bullet
- 60,000 Public Safety Agencies in the US
- Different Procurement, Budget, and Asset Lifecycles

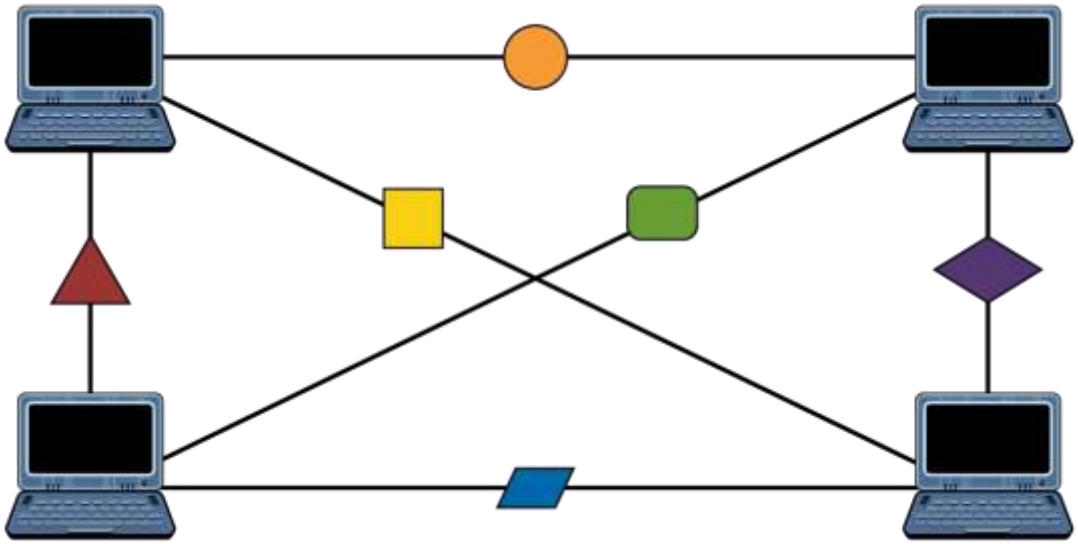
Interoperability Approach: Single System

- A single system cannot meet all needs



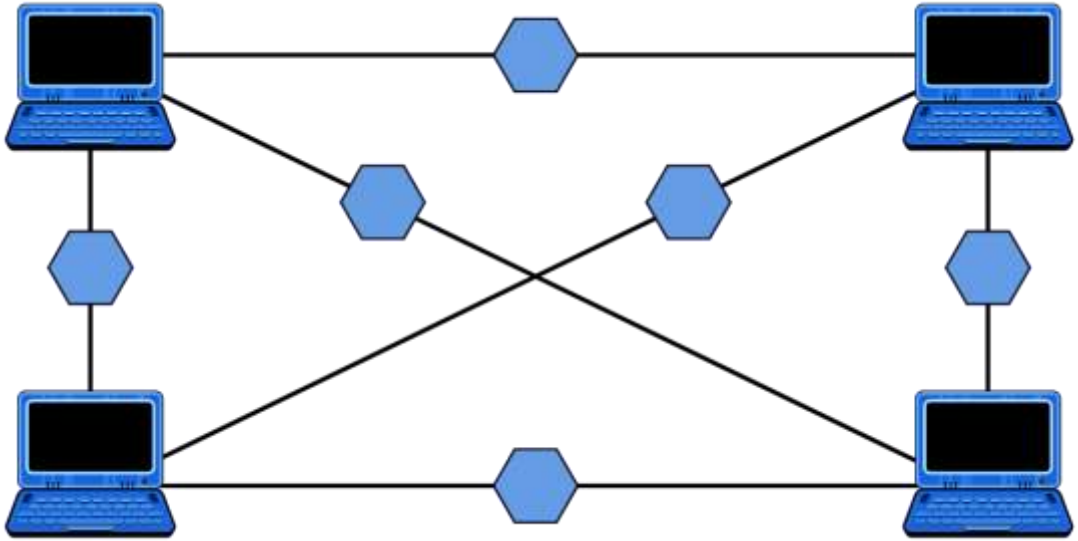
Interoperability Approach: Custom Interface

- Cost prohibitive to build custom interfaces between every system



Interoperability Approach:
Interoperability Through Standards

- **One common interface for different systems to share Patient information**



What is the Tracking of Emergency Patients (TEP) Standard?

An Open, Public Standard for Data Exchange

- One of the Emergency Data Exchange Language suite of exchange standards
- Healthcare Practitioner-Driven: federal, state, local
- Co-sponsored publication – OASIS and HL7
- HHS may offer incentives for implementation

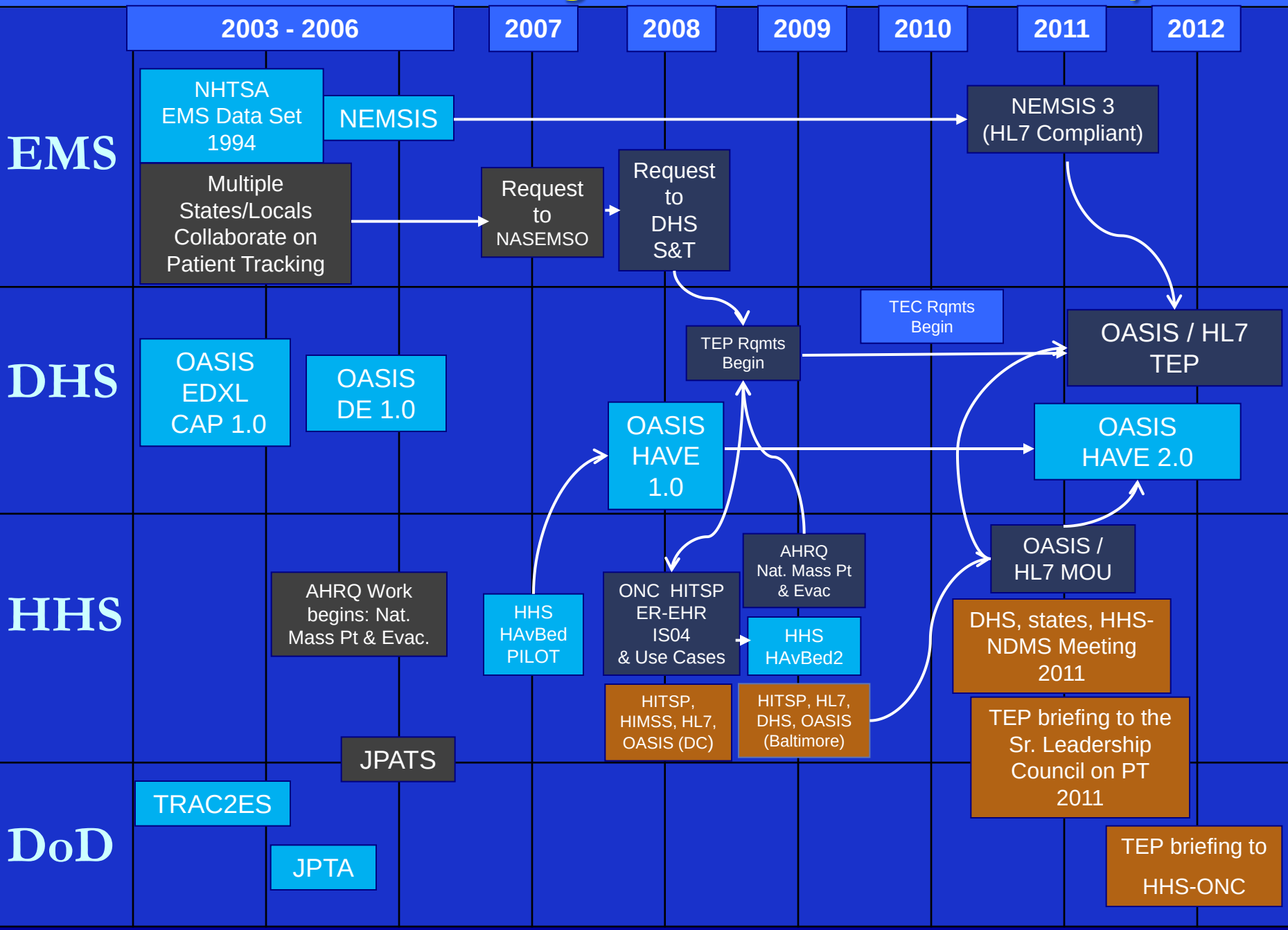
Purpose of TEP

- Tracks Patient Movement and Status
- Supports Hospital Evacuations
- Provides Common Operating Picture
- Facilitates Collaboration and Coordination

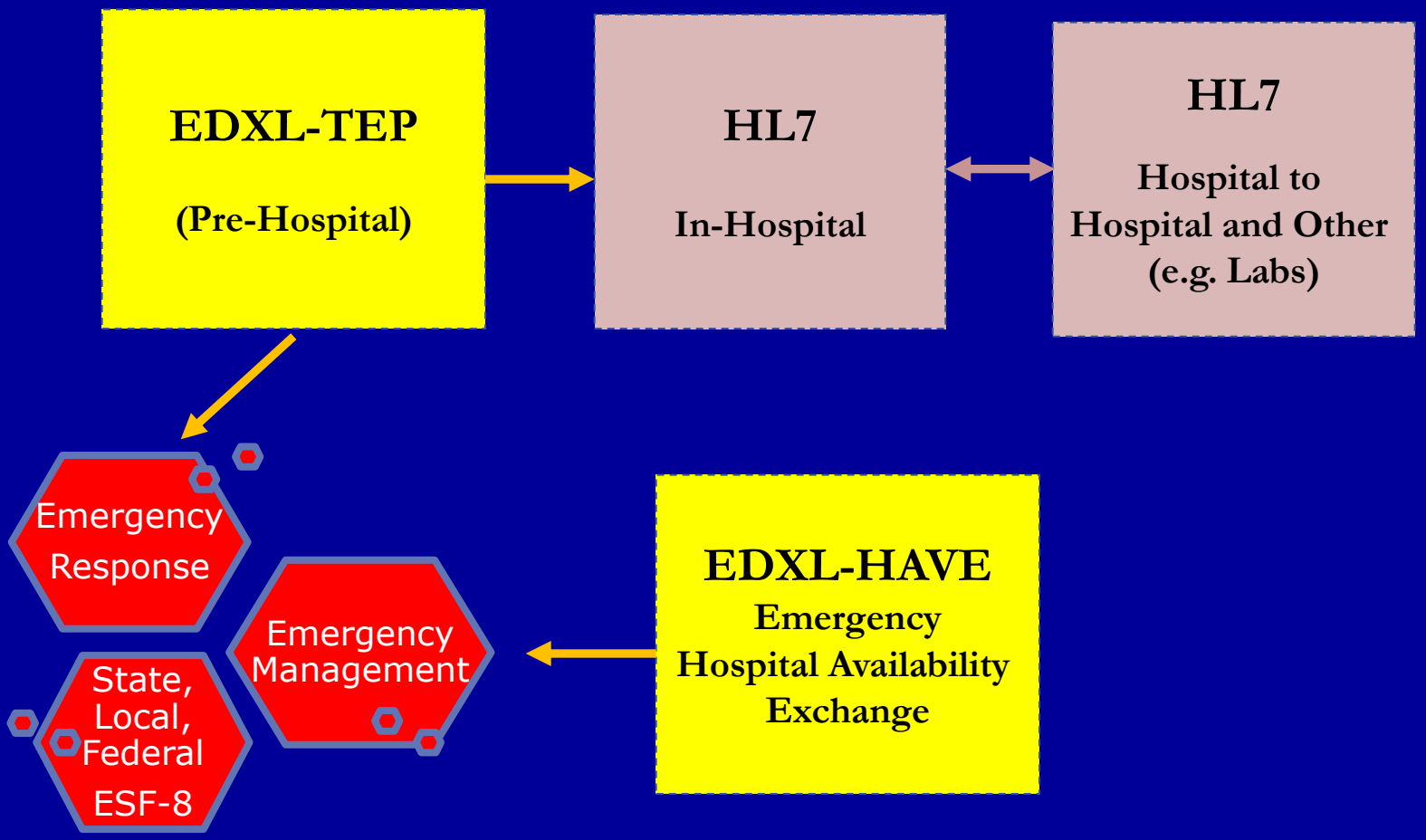
Benefits of TEP

- Low-cost approach - Build once – reuse over and over again
- Leverage and enhance your current system and infrastructure
- Scalable from local to the national level as needed

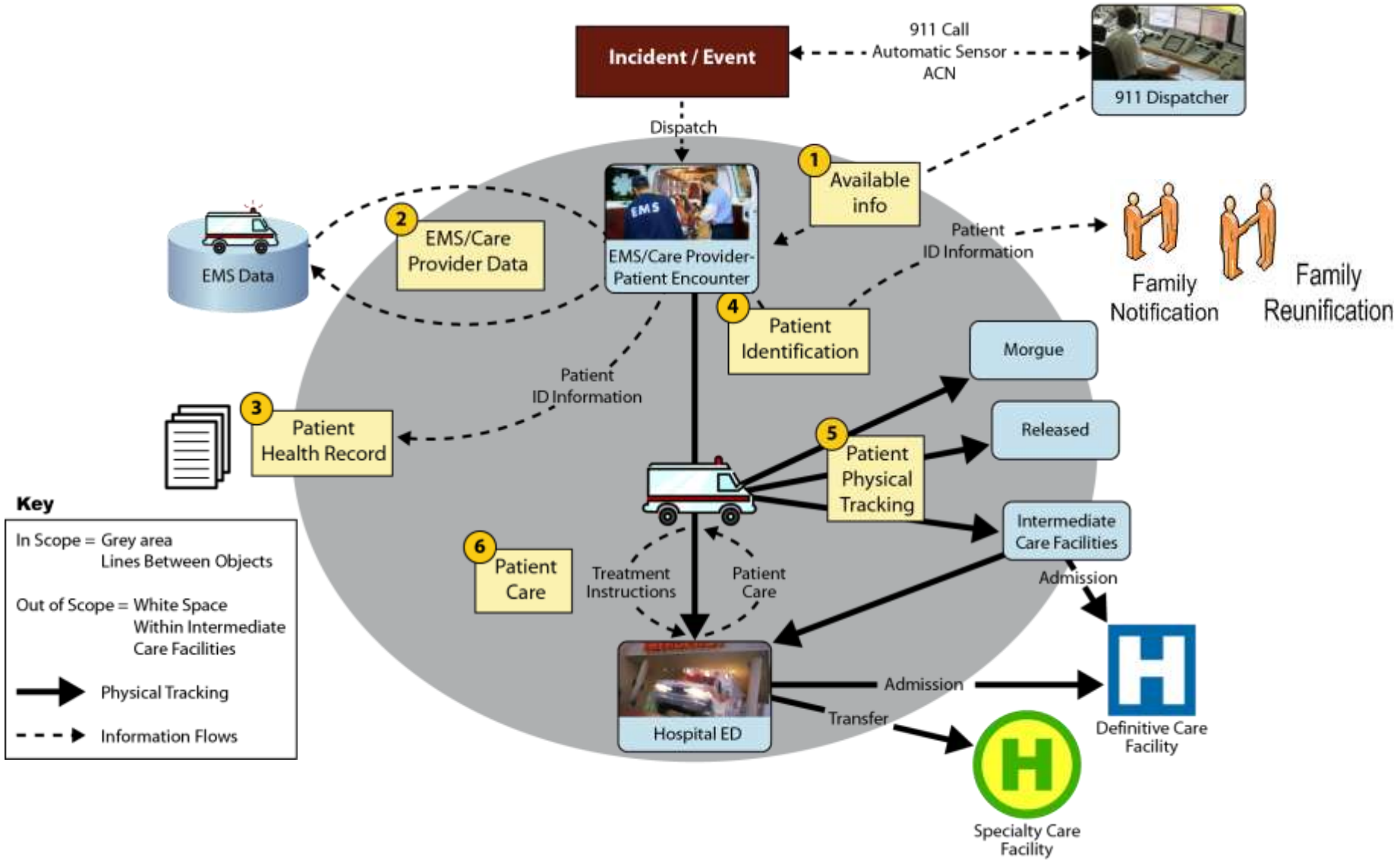
Patient Tracking Collaboration History



TEP Context - Continuum of Patient Movement

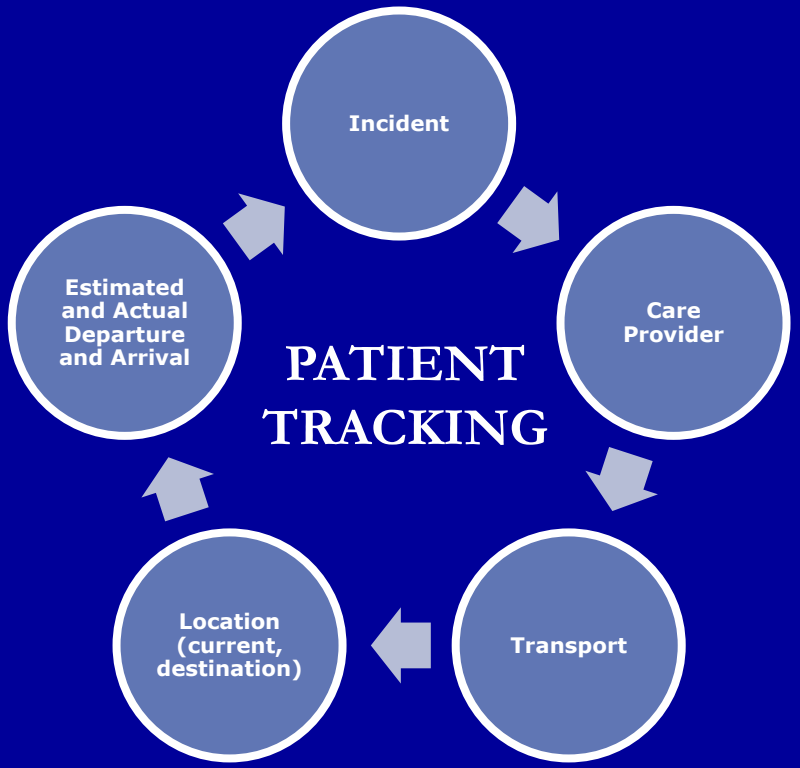


Tracking of Emergency Patients Scope



AHRQ & TEP
Standard Core Elements

PATIENT INFO
Patient unique Identifier
Gender
Age / DOB
Name
Evacuation Status
Special Transportation Needs
Special Medical Needs
Security / Supervision Needs
Special Communication Needs
Family Unification Code



PATIENT CONDITION
Current Disposition
Contam. / Rad. / Contag.
Chief Complaint
(Vitals e.g. pulse rate)

TEP Implementation

- Does Not address all data exchange components
  - Not a message routing solution
  - Can be used over different "transport" mechanisms
- One Interface – Map TEP to your Data
- Must Implement Security
- TEST with your partners
- Implementation Guide and day to day use

Carolina
MedCare

www.KatrinaDestruction.com

What's Next?

- Continue to Address Interoperability
  - Define Transport, Message and Security
- Publish National Patient Tracking Standards
  - Continued OASIS and HL7 Collaboration
- Publish Implementation Guides
- Support States in Development of Patient Tracking Systems
- Conduct Large-Scale Tests
  - Standard, Transport, and Implementation

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