





PrepLink^(SM): Overview of the Strategic Bio-Defense Emergency Operations and Communications System

Emergency Management Summit February 4, 2008

Presenters & Introductions

Presenters:

	Project Director, PMP - University of Pittsburgh Medical Center,				
	IMITs (Innovative Medical and Information Technology Center)				
Cliff Denholm	Cliff Denholm Program Director - University of Pittsburgh Medical Center				
IKathy Crica	Director, Disaster Management Center - University of Pittsburgh Medical Center				

Overview

- Introduction *Kathy Criss*
 - Regional Background
 - SBEOCS Purpose, Mission, Objectives
 - SBEOCS Components
- PrepLink(SM⁾ Overview
 - What is PrepLink^(SM)? **Becca Nelson**
 - Incident Command within PrepLink^(SM) Kathy Criss
 - PrepLink^(SM) Role-Based Security Cliff Denholm
 - PrepLink^(SM) Deployment & Testing Cliff Denholm

SBEOCS Purpose and Objective

- Purpose: Regional healthcare preparedness
- Objective: Develop an enterprise partnership among the PA National Guard, Western Pennsylvania Emergency Response Groups, Commonwealth of Pennsylvania, and healthcare providers to give situational awareness of public health, healthcare, and supporting entities for healthcare management during disasters.

PA Region 13 - Background

- Pennsylvania Region 13:
- Thirteen county area of Western Pennsylvania
- Covers 9,478 square miles
- Comprised of 712 municipalities, the largest being the City of Pittsburgh.
- Population approximately 3.1million
- Formal mutual aid agreement was ratified by the counties of Allegheny, Armstrong, Beaver, Butler, Cambria, Fayette, Greene, Indiana, Lawrence, Mercer, Somerset, Washington, and Westmoreland and the City of Pittsburgh to create an entity known as Pennsylvania Region 13.

Region 13 & MMRS (Metropolitan Medical Response System)

•Purpose:

Working for and making progress in preparing the medical community in the eventuality of a natural or man made disaster that would stress the medical system.

Goal:

Improve communications between hospitals, EMS, and health departments.

•The MMRS Operations Committee is updating the policies and procedures for the Region 13 ESF 8, the health and medical position in the emergency operations center.

SBEOCS Mission Statement

Create a healthcare Common Operating Picture that supports daily use and addresses the full spectrum of potential threats, crises and emergencies (natural and man-made) that incorporate all aspects of healthcare disaster management, planning, response, recovery, and communications.

Problem Statement

Care in a Mass Casualty Situation is complex.

- Healthcare communication between EOC, healthcare network, families, medical staff, personnel and first responders, is decentralized and difficult.
- <u>Coordination of assets</u> (bed availability, pharmaceuticals, supplies, etc.) during mass casualty incidents is problematic.
- Information for the general public lacks accuracy and timeliness.
- <u>Education programs</u> for First Responder Training are not consolidated or centrally available.

Problem Response

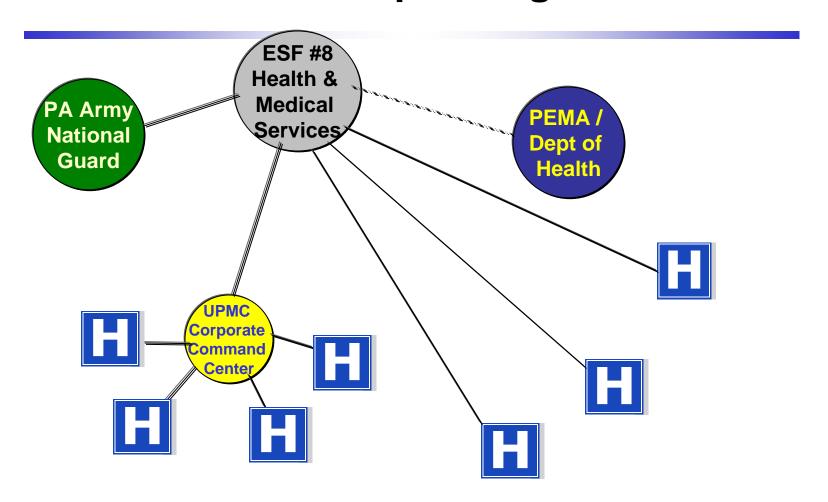
Creation of tools and systems to address each issue

- Healthcare communication PrepLink^(SM) was created to provide situational awareness, hospital incident management, patient tracking, document management, health care mass communications AND a direct tie to PA National Guard, Regional EOC & other entities.
- <u>Coordination of assets</u> PrepLink^(SM) also contains asset management tools such as: Emergency Vehicle Tracking (Helicopters) via GIS Environment, Healthcare Assets, Hospital and Bed Status
- Information for the general public PrepLink contains a public portal to communicate disaster preparedness information and to disseminate information to the public during a disaster.
- Education programs Creation of a Community Preparedness Schoolhouse, Conference & tools.

PrepLink^(SM): Situational Awareness

- Incident Status
- Bed Status
- Patient Status
- Patient Tracking
- Staffing Resources
- Transportation Status
- Hospital Facility Status
- Location Detail
- Equipment
- Asset Inventory
- Pharmaceutical Inventory

Vision: Common Operating Picture



What is PrepLink^(SM)?

- PrepLink^(SM) is an Internet-based system that provides the tools to enable real-time, healthcare-related, emergency communication and situational awareness for:
 - Healthcare Facilities and Personnel
 - Emergency Operation Centers, ESF8
 - Emergency Services
 - Public Health Agencies
 - The General Public

www.preplink.org

Strategic Biodefense Emergency Operations and Communication System (SBEOCS)

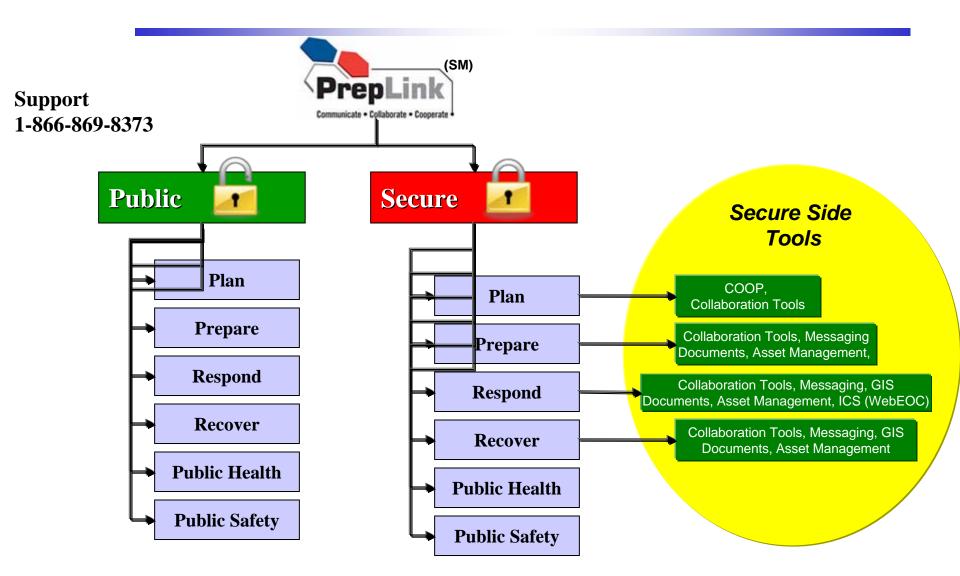
	Components					
PrepLink ^(SM)	Awareness/ Command	 Provide command and control functionality Manage and track healthcare resources, i.e., bed availability, staffing Enable operational mutual aid for ESF #8 health and medical services Provide templates, checklists, and procedures for emergency use Provide situational awareness (Common Operating Picture) for participating response entities 				
	Mass Communications	 Manage contact information Support response availability, notification and deployment Provide data quality and integrity of contact information through daily us 				
	Web Portal	 Provide educational information to the public for preparedness activities and emergency guidelines to the public during an incident Web conferencing capabilities and content management solutions Secure collaboration tools for expert development of on-the-fly guideline and response actions Complete knowledge of healthcare asset management capabilities 				

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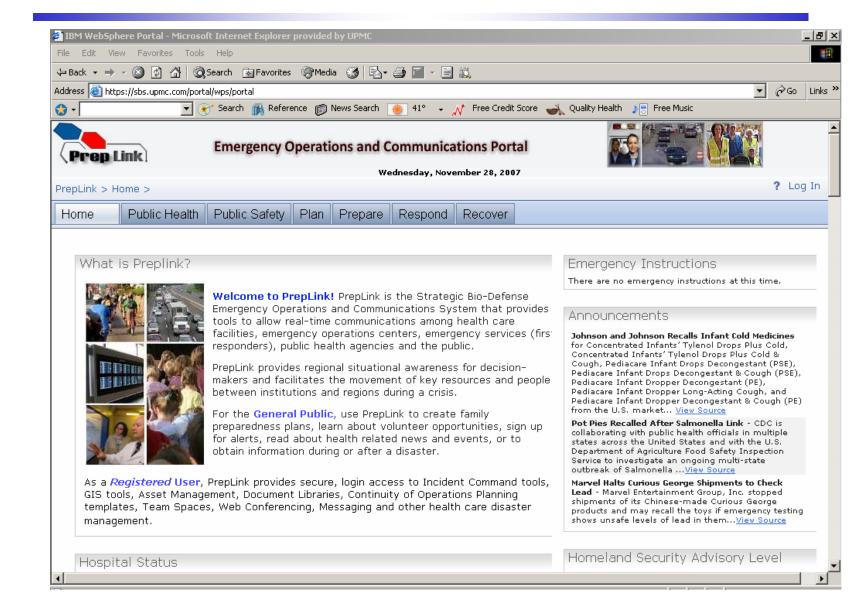
PrepLink^(SM) System Requirements

- Not become a replacement of systems but rather a HEALTHCARE information integration concept.
- Be easily implemented
- Promote interoperability
- Be scaleable and adaptable
- Accept a variety of interfaces and data feeds
- Support plug and play technology
- Be easily integrated to disparate incident command systems
- Support Continuity of Operations Planning (COOP)
- Support National Guard Common Operating Picture (COP)

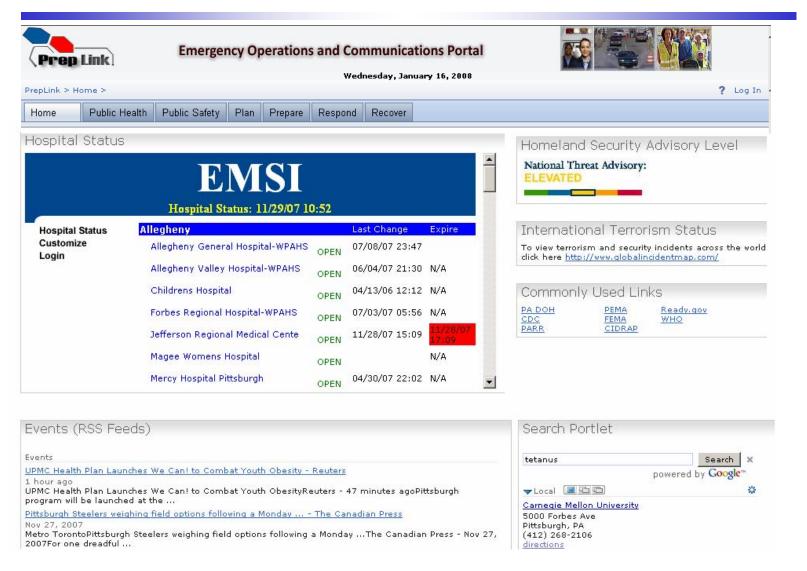
Site Layout



PrepLink^(SM) Public Home



Public Site (Continued)



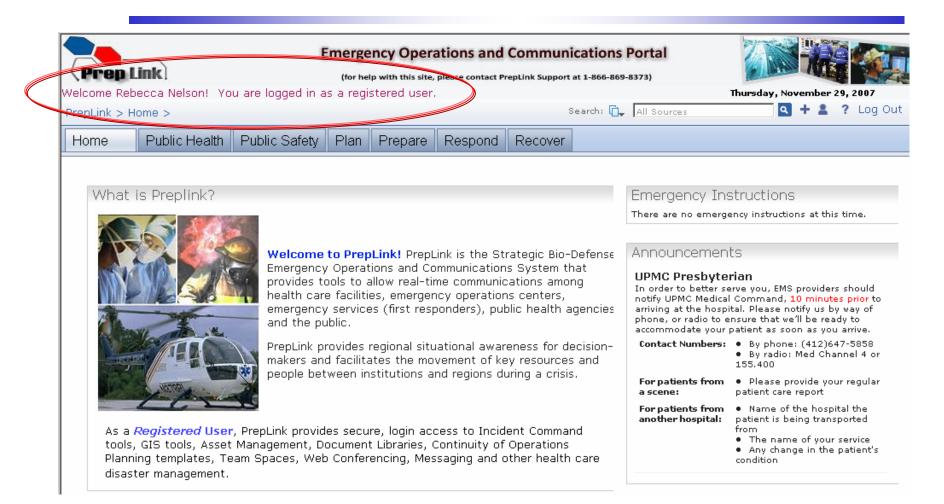
Why have a Public Site?

- **LOCAL** Pulls together federal and state level information and simplifies it on a local level.
- MULTIMODAL Site can provide video, text, sound. In addition public users can receive emails and SMS text messages.
- ALL INCLUSIVE Good resource (one stop shop for disaster news)
- HEALTHCARE FOCUS Real-time hospital status information for families, patients and the general public
- Physician Vetted Search Search feature only draws from physician vetted internet sites

PrepLink(SM) Links To These and Other Sites:

- PA DOH (http://www.dsf.health.state.pa.us)
- Dept. of Homeland Security (www.dhs.gov)
- Global Incident Map.com (www.globalincidentmap.com)
- Center for Disease Control (www.cdc.gov)
- Pittsburgh Regional Business Coalition (www.pittsburghcoalitionforsecurity.org)
 - PARR Private Assets for Region Responders
 - BECON Business Emergency Communication Network
- PEMA (http://www.pema.state.pa.us/)
- FEMA (www.fema.gov)
- Center for Infectious Disease Research and Policy (CIDRAP) (www.pandemicpractices.org)
- Ready (www.ready.gov)
- World Health Organization (WHO) (www.who.int)

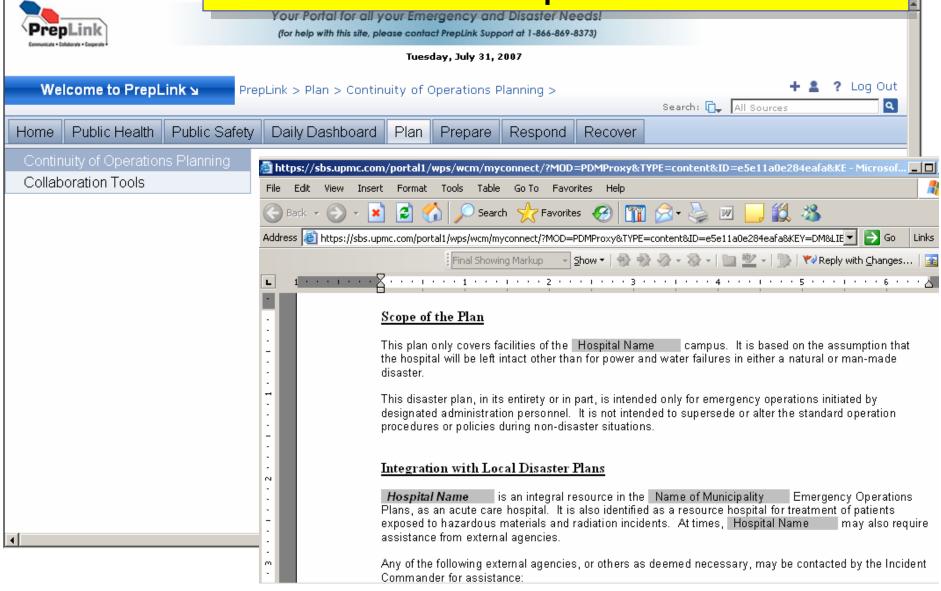
PrepLink^(SM) Secure Site



Secure Site Tools

- Continuity of Operations Planning
- Collaboration Tools
 - Web Meetings
 - Team Spaces
- Messaging
- Document Management
- Asset Management
- Incident Command (WebEOC)
- GIS

Continuity of Operations Planning Templates





Your Portal for all your Emergency and D

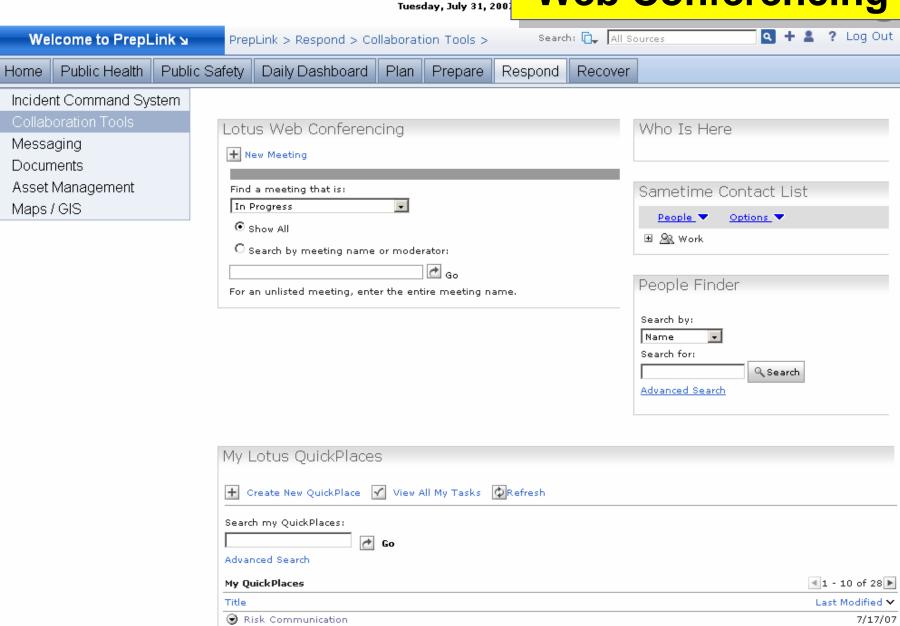
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Web Conferencing

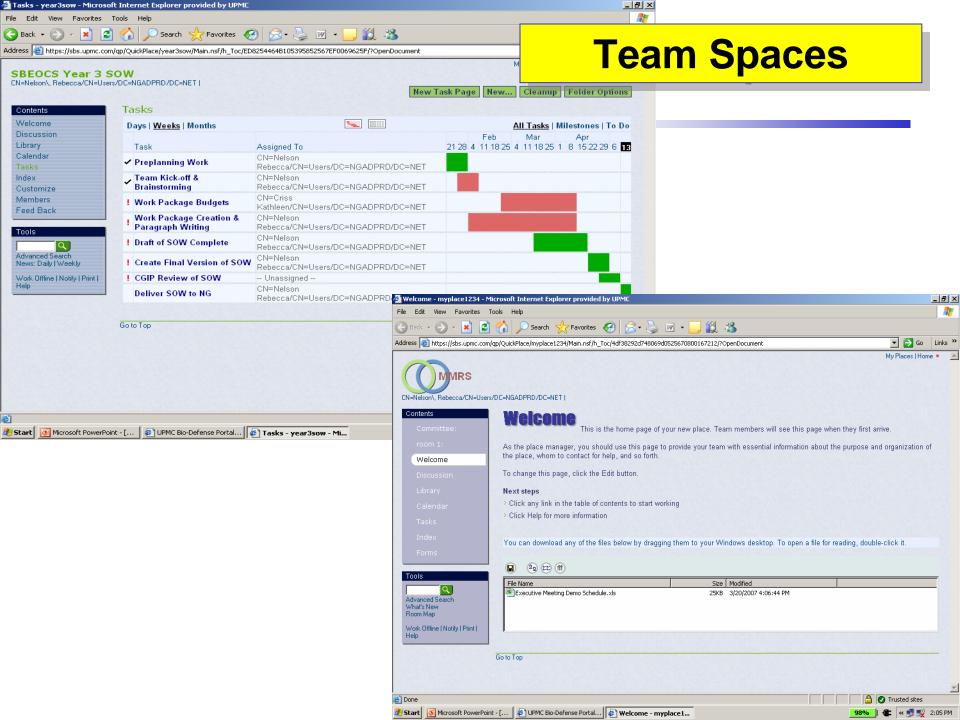
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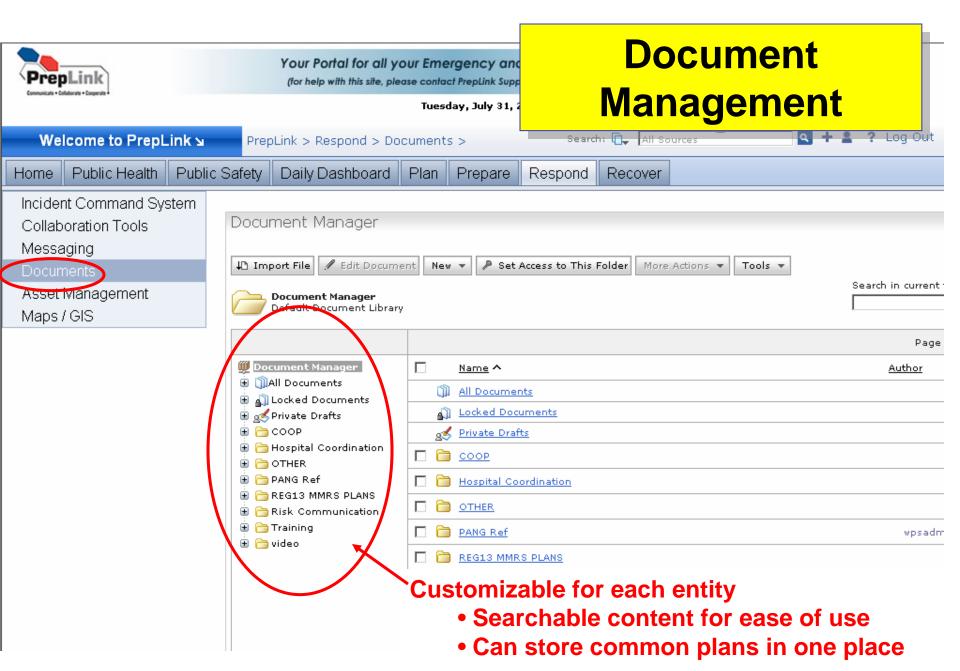
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WPIC

CONTRACTOR
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Asset Management

MMRS

Collaboration Tools

Messaging

Documents

Documents - UPMC

Asset Management









Asset Management 2.0.0 Admin



Search Results - "ventilator"

Resource ID: 1053325

Source: NIMS120

Kind: Equipment

STATUS: AVAILABLE

(N/A)

Discipline: Medical and Public Health Owned by: UPMC Horizon Greenville[b]

Category: Health and medical Type: Ventilator

Description: VENTILATOR - RESPIRONICS model: ESPRIT External Ref : BIOITSDBDEV ctl#:23831, SN:VS3007479



Request Now

BROWSE Components / Attributes

Resource ID: 1053419

Source: NIMS120

Kind: Equipment

STATUS: AVAILABLE (N/A)

Discipline: Medical and Public Health Owned by : UPMC Presbyterian[b]

Category: Health and medical Type: Ventilator

Description: VENTILATOR - SIEMENS MEDICAL SYSTEMS INC model: SERVO-I 64 87 800

External Ref : BIOITSDBDEV ctl#:130576, SN:20755

AVAILABLE



Request Now

🚵 BROWSE Components / Attributes

Resource ID: Source: NIMS120 1053409

Kind: Equipment

STATUS: AVAILABLE

(N/A)

Discipline: Medical and Public Health Owned by : UPMC Presbyterian[b]

Category: Health and medical Type: Ventilator

Description: VENTILATOR - SIEMENS MEDICAL SYSTEMS INC model: SERVO-I 64 87 800

External Ref : BIOITSDBDEV ctl#:130573, SN:20752

AVAILABLE

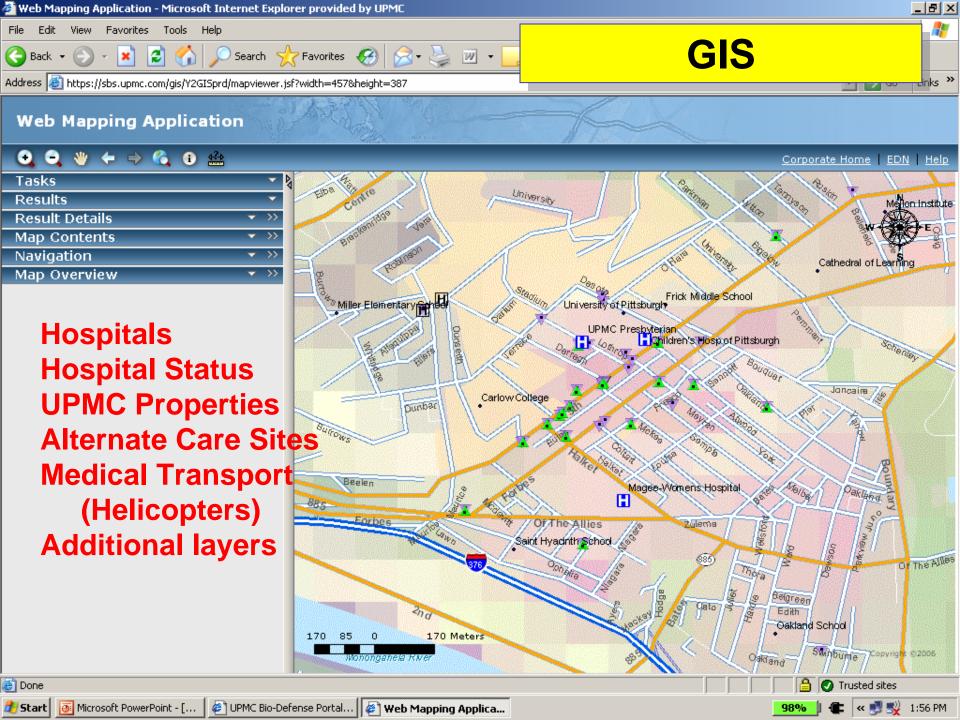
Request Now

🧦 BROWSE Components / Attributes

Resource ID: Source: NIMS120 1053779

Kind: Equipment

STATUS: AVAILABLE (N/A)



PrepLink^(SM)'s HealthComm Component (Healthcare Disaster Communication)

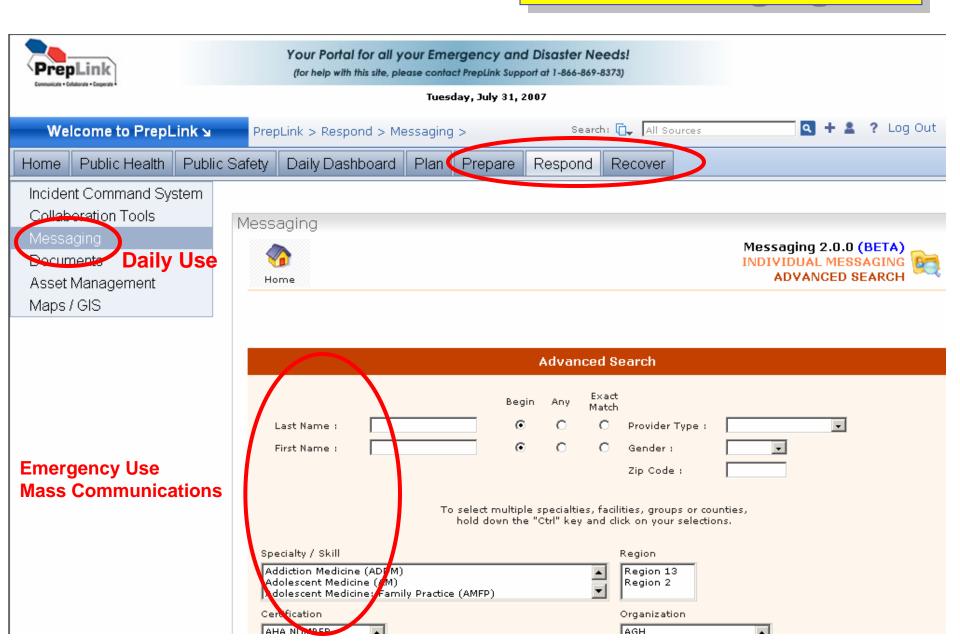
- •During a disaster, ability to make contact with the RIGHT Healthcare Workers the FIRST time is directly related to the accuracy of the data that is available BEFORE the disaster starts.
- •SBEOCS has implemented a successful operational model for widespread data accuracy and effective 'first pass' mass communications/recruitment.
- •There are multiple technology components that have been created to support these operations that bring flexibility and unlimited list/group capability.

Components That Increase Communication Efficiency

- Accurate Contact information
- Correct Contact attributes
- On call schedules
- Contact preferences
- Availability
- Relationship Database
- Daily Use

Anyone can have a list!

Messaging

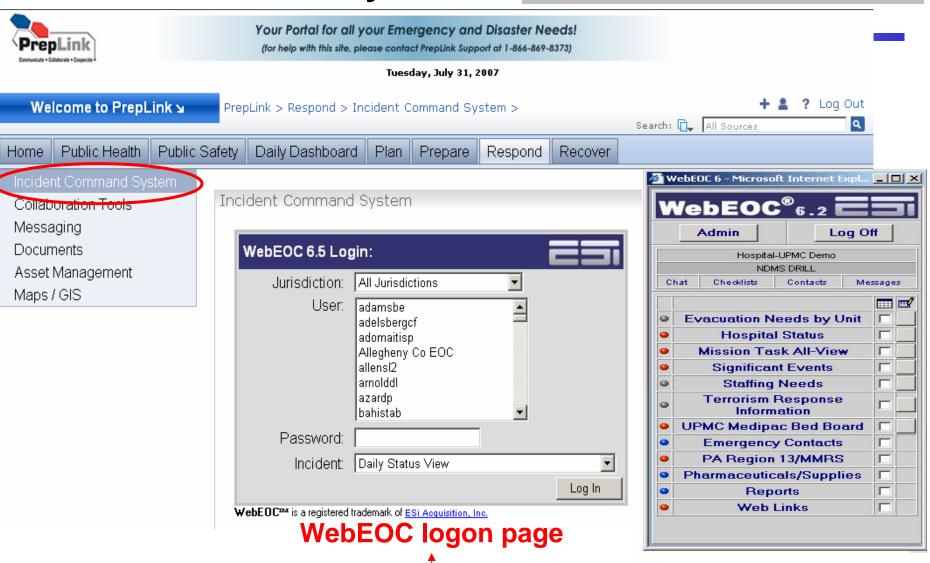


Incident Command within PrepLink (SM)

- Focus is on healthcare incident command
- Boards designed specifically for health care response
 - Bed Availability
 - Hospital Status
 - Etc.
- Permits communication between EOC/ESF8, Health Systems, Hospitals, etc.
- End result will share pertinent public safety data to healthcare facilities for timely and effective response

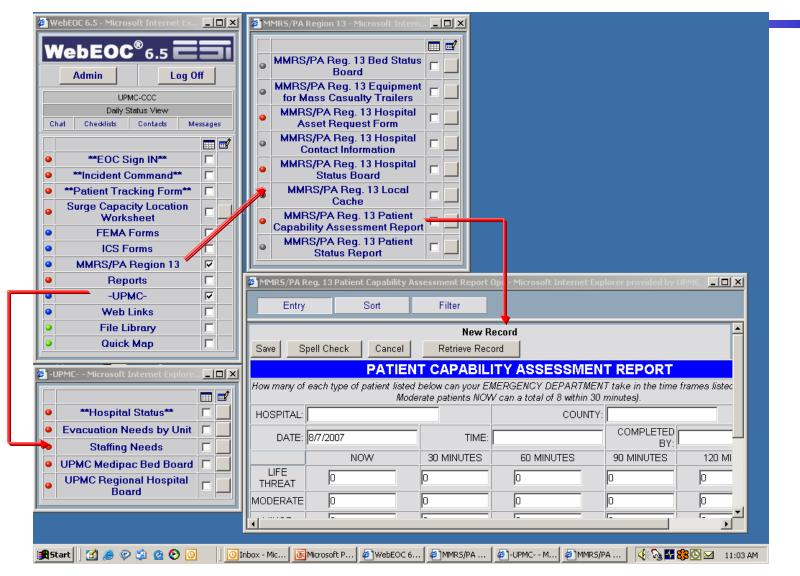
Incident command system

Incident Command



Main control panel

WebEOC for Healthcare





Daily Status View

NDMS Bed Availab

NDMS Bed Board

Hospital Name	Burn	ICU/Monitored	Medical/Surgical	Pediatric	Psychiatric
UPMC Shadyside	0	125	384	0	0
UPMC Presbyterian		1116	3480	0	0
UPMC St. Margaret	0	10	114	0	0
UPMC Horizon - Greenville	0	12	74	0	0
UPMC Braddock	0	7	48	0	19
UPMC McKeesport	0	9	91	0	10
UPMC South Side	0	13	24	0	0
UPMC Horizon - Shenango Valley		20	10	0	0
Western Psychiatric Institute	0	0	0	0	49
UPMC Passavant		4	33	0	0
Magee-Womens Hospital		0	10	0	0
UPMC Bedford		2	18	0	0
Childrens Hospital		0	25	10	0
TOTALS:		1318	4311	10	78

Return to Medipac Bed Board



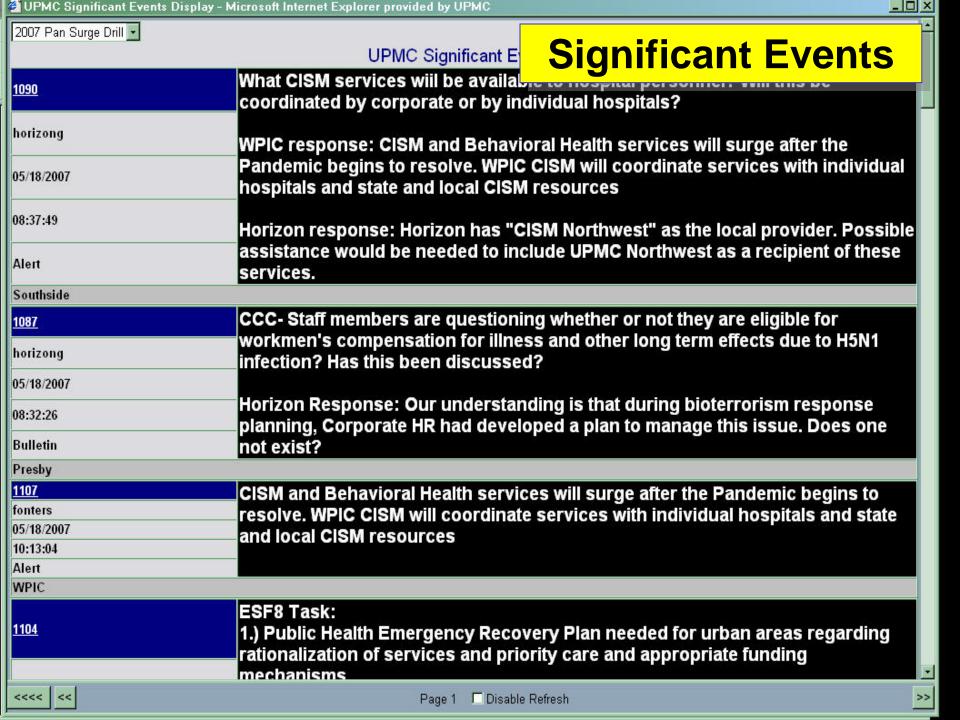








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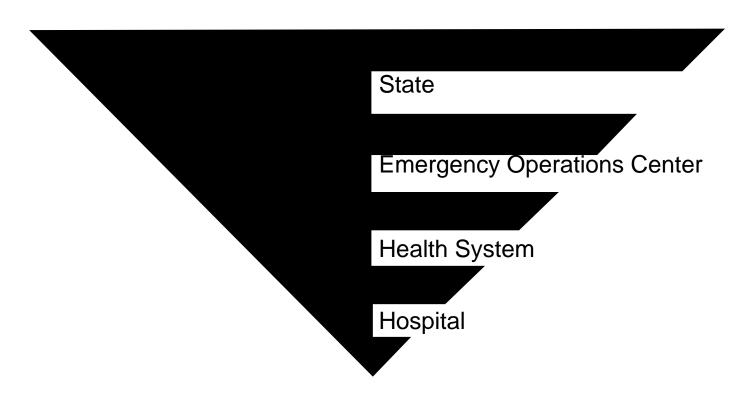




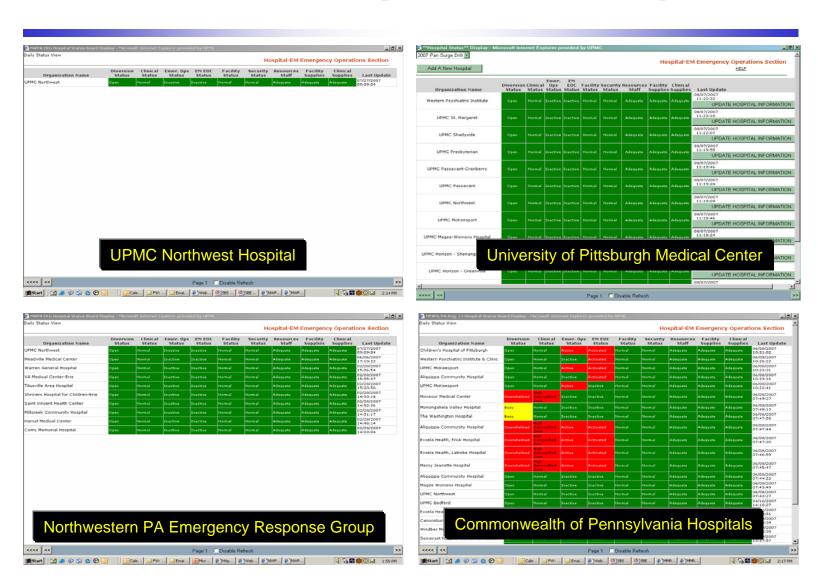
NDMS DRILL	Patient Tracking					
	PA Region	13/MMR	S Hospital P	Patient	I LS	icking
Hospital Name	Date/Time	Triage #	Patient Last Name	Patient First Name	Gender	Status/Triage Condition
UPMC Presbyterian	11/04/2006 11:26:00		Bowman	James	M	E Company
UPMC Passavant	11/04/2006 10:23:00	N0001360	Bowman	James	F	R
UPMC Presbyterian	11/04/2006 11:22:00		Sustern	David	М	8
UPMC Presbyterian	11/04/2006 11:21:00		Muelhman	Jeff	М	R.
UPMC Presbyterian	11/04/2006 11:20:00		Kimmel	Lou	M	8
Allegheny General	11/04/2006 11:34:00				F	
UPMC Presbyterian	11/04/2006 11:19:00		Doe	John	М	8
UPMC Presbyterian	11/04/2006 11:33:00		Anderson	Meg	F	R.
UPMC Passavant	11/04/2006 10:13:00	N0001359	Tunni	Elizabeth	F	Y
UPMC Passavant-Cranberry	11/04/2006 11:31:00	452507	Baines	Stephen	М	R
UPMC Passavant-Cranberry	11/04/2006 11:29:00	452507	Anderson	Meg	F	E .
UPMC Presbyterian	11/04/2006 11:29:00		Hart	Mary	F	R.
UPMC Presbyterian	11/04/2006 11:20:00	452507	Bayo	Jennfier	F	E I
UPMC Presbyterian	11/04/2006 11:28:00		Baines	Stephen	М	G
UPMC Passavant-Cranberry	11/04/2006 11:27:00	452507	Sustern	David	F	E .
UPMC Presbyterian	11/04/2006 11:25:00	452507	Tunni	Elizabeth	F	Y
UPMC Passavant	11/04/2006 10:28:00	N0001361	Carvill	James	М	Y
UPMC Presbyterian	11/04/2006 11:22:00	452507	Carvill	James	М	R.
UPMC Presbyterian	11/04/2006 11:27:00		Weathers	April	F	E .
UPMC Passavant-Cranberry	11/04/2006 11:26:00	452507	Hart	Mary	F	Y
UPMC Passavant-Cranberry	11/04/2006 11:24:00	452507	Kimmel	Lou	М	Y
UPMC Presbyterian	11/04/2006 11:23:00		Wilson	Eric	М	G
UPMC Presbyterian	11/04/2006 11:23:00	452507	Verdetti	Ann	F	G
UPMC Southside	11/04/2006 11:08:00		Bayo	Jennifer	F	E .
UPMC Southside	11/04/2006 11:09:00		Williams	Brian	М	Y
	TO VIEW FULL TRACKI	NC EOD EOD I	ACH DATIENT DOUBLE	FICHER ON PATIENT'S I	NAME	

PrepLink^(SM) Role-Based Security

This process provides hierarchical situational awareness.



"Role-Based" Hospital Status Reports



Technical Design Principles

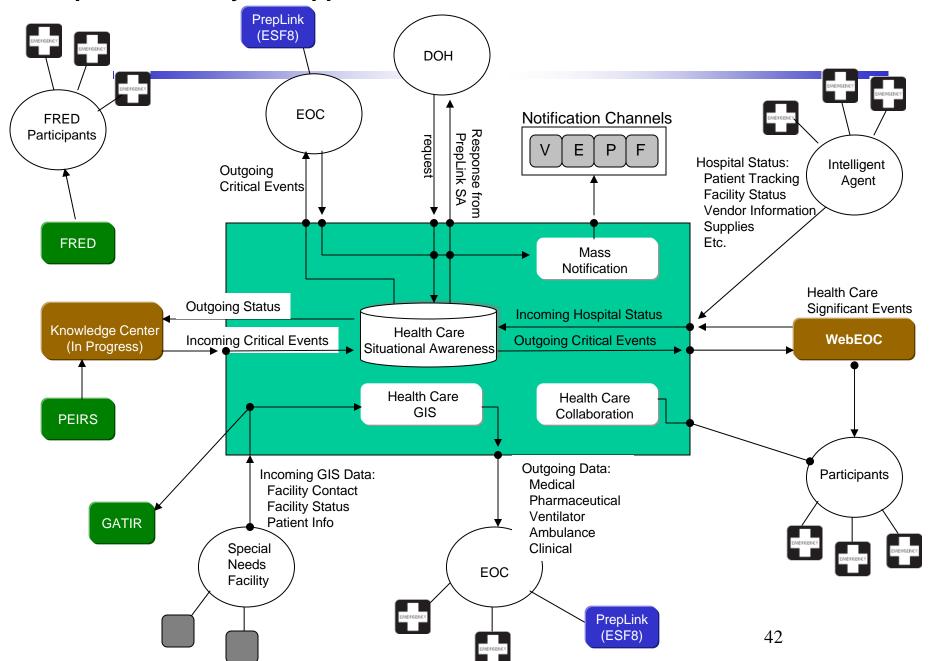
Interoperability:

- Within hospitals
- Among hospitals
- With regional public health and governmental entities

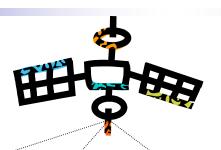
Conformance to technical standards and policies:

- HL7 (healthcare)
- EDXL (emergency management)
- American Hospital Assn./National Disaster Medical System (bed types)
- OGC (map-based interfacing)
- GSR168 (portal interface)
- CMMI (software development)
- Application designed for flexible use (Daily and/or event driven), i.e., bed management, mass communications, situational awareness, public information portal, and others.

PrepLink(SM) Ability to Support ESF #8 Functions



Prototype Satellite Network for Health Care Communications



Northwest Hospital









Raysat Mobile Satellite on EMS Vehicle

SMART Unit and Communications

- UPMC SMART Unit
 - Fully deployable
 - 2 bed surgery suite
 - Triage
 - Training & simulation
- Satellite communications
 - Video, data, VOIP
 - WiFi network
 - Telemedicine (audio scope, ultrasound)
- Raysat mobile system



PrepLink's Installed Applications

- Used in Real-world Events (Power Losses, Water Losses)
- Used for coordination of planned events (Hospital Moves, DHS High Profile Events i.e. Major Sporting Events)
- Team Spaces (Project Planning, Response Planning)
- Installed technology that allows communication with thousands of care providers in the event of a disaster

PrepLink^(SM) Drills

2006:

- Operation Red Rose (September)
- NDMS (November)

2007:

- Pandemic Surge (May)
- Steel Rose (June)
- Red Rose II (July)
- Steel Hammer (September)

2008 (planned):

- Steel Rose II (TBD)
- Red Rose III (May)

Questions

Thank you for your time.

For more information send questions to: info@preplink.org