Portfolio of Public Health & Health Care Preparedness Funded Information Systems

Florida HEALTH

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Introduction

When a public health incident or emergency threatens Florida's residents and visitors, the ability to collect precise detailed situational awareness, share data, and receive and deliver fast, accurate and consistent communications can save lives.

Florida faces many threats with the potential for large-scale health consequences, including disease outbreaks, natural disasters and terrorist attacks. Effective preparation and response to public health or related threats requires commitment and cooperation across state agencies and key partners.

The Florida Department of Health is the lead agency for the state's Health and Medical Emergency Support Function (ESF8) and coordinates preparedness and recovery efforts for incidents and events that impact public health and the health care system.

The Department has a diverse portfolio of innovative systems and applications that have been engaged and tested to maximize health situational awareness and support crucial preparedness, response and recovery activities.

The Department's fiscal year 2016-2017 portfolio of systems and applications includes responder and stakeholder alerting and notification, hospital and health care facility notification and status management, Geographic Information System mapping, resource tracking and management, and risk and hazard assessments. Also available are a series of systems for disease surveillance, tracking, reporting and communications.

The systems are designed to ensure maximum security and provide needed access and user rights. Public Internet pages are viewable by all persons; however, select individual applications require credentials and/or registration. Specific applications can assign multi-level roles and permissions ranging from administrator to read-only access.

This document describes each of the Division of Emergency Preparedness and Community Support, Bureau of Preparedness and Response, Public Health and Health Care Preparedness Program online data systems, applications and tools. For purposes of this document, the term system is used to reflect included data systems, applications or tools.

For more information on any of the systems, contact Victor Johnson, Administrator, Resources and System Management Section at Victor.Johnson@flhealth.gov or 850-245-4346.

Summary of Systems

System or Function	Current Provider or Application	Funding Source	Approximate Current User Count
Alerting and Notification	Everbridge	CDC PHEP	55,000
Communications and Resource Management	EMResource	ASPR HPP	13,000+
Emergency Operations Plans Search Engine	DOH Maintained	N/A	Not Available
Florida Health Alert Network	HAN	CDC PHEP	31,500 current contacts Unlimited Capacity
Florida Jurisdictional Risk Assessment	FPHRAT	CDC PHEP	Admin Rights 10 Default Users 67 Read-only 150
Geographic Information Services	DOH Maintained GIS	CDC PHEP	30+ GIS developers, indeterminate public users
Hazard Vulnerability Data Explorer	HVDE Parsing Tool	CDC PHEP	90
Information Technology Field Operations & Incident Response Resources	DPC	CDC PHEP	67 County Health Departments
Laboratory Information Management System (LIMS)	LabWare LIMS	CDC PHEP PHEP Ebola	579 - Increases expected in 2016
Statewide Inventory Management	IRMS	ASPR HPP	250
Surveillance – Disease Outbreak Communications System	Epi-Com	CDC PHEP	1,394 53 Forums
Surveillance – Early Notification of Community-Based Epidemics	ESSENCE	CDC PHEP	210 Hospitals 33 Urgent Care Centers
Surveillance – Reportable Disease Case Reports	Merlin	CDC PHEP	67 County Health Departments; unknown others

System or Function	Provider or Application	Brief Description
Alerting and Notification	Everbridge	An online public health alert communications network capable of rapid distribution of health alerts and messages to a defined set of individuals. The externally-hosted system provides public health professionals and key response partners timely and relevant access to information necessary to respond to incidents or events that may be of urgent health or related consequences.
Communications and Resource Management	EMResource	A secure information sharing solution for determining health care facility status, bed availability and situational awareness. The externally hosted system by Intermedix also serves as the Agency for Health Care Administration (AHCA) statutorily designated online database system for reporting information regarding licensed health care provider emergency status.
Emergency Operations Plans	DOH EOP Search Engine	An internal online repository for approved public health and medical related response plans. The repository includes Department of Health state and county plans and other non-departmental plans relevant to health and medical preparedness, response and recovery.
Florida Health Alert Network	HAN	An online web-based gateway to applications which support key preparedness, response and recovery activities for health and medical emergency management. Hosted by the Department, the gateway provides access to systems such as Everbridge, the Virtual Joint Information Center and EpiCom. It also displays data on Responder and Volunteer information. The application performs daily verification of responder license information through automated daily verification.
Florida Jurisdictional Risk Assessment	FPHRAT	An online tool for the assessment of hazard risks as well as capabilities and resources available to counteract hazards. The tool assesses the risk of 36 hazards relevant to public health for the state and each county or region. The tool, hosted by the Department, includes a feature to calculate the social, medical and hazard vulnerabilities for each Florida census tract, city and county.
Geographic Information Services	DOH Maintained GIS	A system hosted on a Department server for capturing and storing environmental health, public health and health care facilities' geospatial data, providing analytical tools to turn data into information and communicating that information effectively. The system and its products have been adopted for all phases of emergency management.
Hazard Vulnerability Data Explorer	HVDE Parsing Tool	A Geographic Information System (GIS) based widget and database that provides exploration, comparison and spatial query capabilities regarding populations at risk in areas with a low, medium and high social, medical and all-hazard vulnerability index. The tool also provides a community resilience data set with information regarding jurisdictional risk assessments and community resilience, as well as data from the Building Resilience Against Climate Effects program that anticipates climate impact and assesses related vulnerability.
Information Technology Field Operations and Incident Response Resources	DPC	An Information Technology (IT) Field Operations Incident Response Team of Disaster Preparedness Consultants (DPC) to ensure critical local systems remain available and operational during and after any incident or event. DPCs assist the Department in meeting its responsibility for ensuring the availability of IT resources related to mission-essential functions.

System or Function	Provider or Application	Brief Description
Laboratory Information Management System (LIMS)	LabWare LIMS: Version 6	A Laboratory Information Management System used to log, access and manage samples and associated data. The system supports laboratory operations and provides secure electronic reporting of specimen and test result data to public health partners. Technical support and maintenance is provided by LabWare LIMS:Version 6.
Statewide Inventory Management	IRMS	An online statewide inventory management system by Upp Technology. The system provides real-time visibility of inventory levels in multiple locations across the state. The system has radio-frequency identification capability and allows global viewing of assets for preparedness considerations during all stages of an incident or event. Multiple users can access the system simultaneously.
Surveillance – Disease Outbreak Communications System	Epi-Com	An outbreak communications system and moderated message board. EpiCom offers staff and partners the ability to post messages related to contagious diseases or outbreaks of public health significance. Users can post follow-up messages to report similar or related disease activity in their area. The system is used to communicate and share essential information regarding public health and related issues such as disease outbreaks, food recalls, disasters and product recalls.
Surveillance – Early Notification of Community-Based Epidemics	ESSENCE	An Electronic Surveillance System for the Early Notification of Community-Based Epidemics (ESSENCE). ESSENCE-FL provides state and local epidemiologists access to data, analytic tools and data visualizations that enhance their ability to detect outbreaks of disease in a timelier manner. It also provides the ability to conduct routine descriptive epidemiologic analysis, and monitor morbidity and mortality trends across multiple data sources. The system provides data and tools needed to identify outbreaks or unusual trends before they would otherwise be detected, leading to a quicker public health response.
Surveillance – Reportable Disease Case Reports	Merlin	A web-based reportable disease surveillance system that serves as the state's repository of reportable disease case reports. The system has evolved from a data entry and management system for collecting state reportable disease data, to a system that is used to track cases, identify disease trends and improve disease prevention programs.

What are the Systems Primary Purposes and Features?
- Distribute public health alerts and messages rapidly providing access to timely and relevant information needed to respond to public health incidents or related events
- Determine health care facility status, bed availability and share situational awareness and communications for a public health incident or related event
- Provide an online repository of public health and medical-related response plans
- Offer an online gateway to applications supporting public health preparedness, response and recovery activities
- Assess hazards, risks, capabilities, resources and population vulnerability
- Display information in a visual easily understood mapping format
- Ensure the availability and operation of critical systems during and after an incident or event
- Handle laboratory tests for the Bureau of Public Health Laboratories
- Maintain real time visibility and management of inventory available for all stages of a public health incident or related event
- Communicate essential information regarding public health issues and share information regarding disease outbreaks
- Guide to a timelier public health response by providing data and tools needed to identify outbreaks or unusual trends
- Identify disease trends, track cases and improve disease prevention programs

Who Uses the Systems?
- Florida Department of Health state and county staff
- Health Care Coalitions
- State and local agency and organization public health partners and stakeholders
- Florida Medical Reserve Corps
- Florida Crisis Consortium
- State Medical Response and Advanced Surgical and Transport Teams
- Florida Emergency Mortuary Operations Response System
- Florida Division of Emergency Management and Emergency Support Function 8 (health and medical) partners
- Local emergency medical services
- Hospitals and other health care facilities
- Centers for Disease Control and Prevention
- State, hospital and private laboratories

Acronyms

The following acronyms are used in the system fact sheets found in this portfolio.

Acronym	Meaning
AHCA	Agency for Health Care Administration
APD	Agency for Persons with Disabilities
ASPR	Assistant Secretary for Preparedness and Response
BP	Budget Period
BPHL	Bureau of Public Health Laboratories
BPR	Florida Department of Health, Division of Emergency Preparedness and Community Support, Bureau of Preparedness and Response
BRACE	Building Resilience Against Climate Effects
CDC	Centers for Disease Control and Prevention
COOP	Continuity of Operations Plan
COP	Common Operating Picture
DOH	Florida Department of Health
DPC	Disaster Preparedness Consultant
EMS	Emergency Medical Services
ESF8	Emergency Support Function Health and Medical
ESS	Emergency Status System
ESSENCE	Electronic Surveillance System for the Early Notification of Community-Based Epidemics
FAC	Florida Administrative Code
FAQ	Frequently Asked Questions
FAST	Florida Advanced Surgical Transport Team
FEMORS	Florida Emergency Mortuary Operations Response Systems
FLPHRAT	Community Resilience Data Set in the Hazard Vulnerability Data Explorer
FPHRAT	Florida Public Health Risk Assessment Tool
GIS	Geographic Information System
HAN	Florida Health Alert Network
HAvBED	Hospital Available Beds for Emergencies and Disasters
HAZMAT	Hazardous Materials
HazVI	All-hazard Vulnerability Index
HL7	Health Level 7
HPP	Hospital Preparedness Program
HVDE	Hazard Vulnerability Data Explorer
IRMS	Inventory Resource Management System
IT	Information Technology

Acronym	Meaning
JIC	Joint Information Center
LIMS	Laboratory Information Management System
MedVI	Medical Vulnerability Index
MRC	Medical Reserve Corps
MRP	Mission Ready Packages
PAHPRA	Pandemic and All Hazards Preparedness Reauthorization Act
PHEP	Public Health Emergency Preparedness
PHHP	Public Health and Healthcare Preparedness
PHMP	Public Health and Medical Preparedness
PIO	Public Information Officer
PSA	Public Service Announcement
RERA	Regional Emergency Response Advisor
RFID	Radio-Frequency Identification
SERVFL	State Emergency Responders and Volunteers of Florida
SMRT	State Medical Response Teams
SOP	Standard Operating Procedures
SOG	Standard Operating Guide
SoVI	Social Vulnerability index

Alerting and Notification

Purpose: The Florida Department of Health has an established online public health alert and notification network capable of rapid distribution of health alerts and messages to a defined set of individuals. The current application for the network that provides real-time secure communications is the Everbridge Mass Notification System. The system provides public health professionals and key response partners timely and relevant access to information necessary to respond to incidents or events that may be of urgent public health consequence.

Primary Features:
- Sends notifications across multiple jurisdictions utilizing multiple devices; email, telephone, text message and fax
- Provides a mobile application for smart phones and tablets
- Provides the ability to confirm receipt of notification
- Provides an online training module
- Provides secure access with user name and password

Who Uses Everbridge?
- Florida Department of Health
- Florida Medical Reserve Corps
- Health Care Coalitions
- Florida Crisis Consortium
- Florida Emergency Mortuary Operations Response System (FEMORS)
- Florida State Medical Response Teams (SMRT)
- Florida Advanced Surgical and Transport Teams (FAST)
- Agency for Persons with Disabilities
- Local community partners

Year Implemented	Funding Source	Current User Count
The DOH Notification System was established in 2006. Everbridge became the provider in 2014.	CDC – Public Health and Emergency Preparedness (PHEP) Cooperative Agreement	Approximately 27,000 active users Capacity: 55,000
Authorities/Regulations	42 U.S.C. 247d Public Health Emergencies; Chapter 252, Florida Statutes – Emergency Management; Chapter 381, Florida Statutes – Public Health: General Provisions; Department of Health Policy 310-1-15 Health Alert Network	
Future Planning	Continue to review how the notification system can be maximized to increase the ability of public health agencies to electronically exchange data and information. Plans are in place to add partner agency users, expand capacity and reduce costs.	
Capability	PHEP Capability 6 – Information Sharing	

Contact Information: For more information, contact Beverly.Elliott@flhealth.gov or servfl@flhealth.gov. Also visit www.servfl.com.

Communications and Resource Management

Purpose: The Florida Department of Health provides Emergency Support Function 8 (ESF8) health and medical partner's access to an interoperable, secure information sharing solution for determining health care facility status, bed availability and situational awareness. Section 408.821(4), Florida Statutes requires that licensed health care facilities providing residential or inpatient services use an online database approved by the Agency for Health Care Administration (AHCA) to report information regarding the provider's emergency status, planning or operations. AHCA transitioned to EMResource in 2014, replacing the former Emergency Status System (ESS) for health care facility and bed availability reporting and for maintaining situational awareness and communications with local, regional and state emergency partners. The system is co-managed by the Department and AHCA.

Primary Features:
- Uses a direct interface for uploading of licensure data from AHCA's VERSA database
- Performs text and email emergency event alerting, health alert broadcasting, be on the lookout messages from law enforcement and other notifications
- Provides method to enter and display bed availability and facility data
- Allows for easy reporting for health care facility users
- Offers customized dashboards
- Provides dynamic jurisdictional Geographic Information Services (GIS) maps
- Uses color coded symbols based on status type
- Provides canned and dynamic reporting capability

Who Uses EMResource?
- Florida Department of Health
- Agency for Health Care Administration
- Health Care Coalitions
- Health care facilities
- Local 911 call centers
- Local emergency medical services
- Local law enforcement
- Local emergency management
- Local community partners

Year Implemented	Funding Source	Current User Count
2009	Office of the Assistant Secretary for Preparedness and Response (ASPR) Hospital Preparedness Program (HPP) Cooperative Agreements	13,000+
Authorities/Regulations	Section 319C-2 Public Health Service Act as amended by the Pandemic and All Hazards Preparedness Reauthorization Act (PAHPRA) of 2013, Public Law 113-5; Chapter 252, Florida Statutes - Emergency Management; Section 408.821(4), Florida Statutes – Emergency management planning; emergency operations	
Future Planning	Continue to market and provide training to expand partner use of EMResource throughout the state until transition to a new single statewide application for health care facility status, bed availability reporting and patient tracking in 2017.	
Capability	HPP Capability 6 - Information Sharing	

Contact Information: For more information, contact Marnie.FlaniganLyle@flhealth.gov or StateESF8.CPTS@flhealth.gov. In addition, visit https://www.intermedix.com/solutions/resource-management.

Emergency Operations Plans Search Engine

Purpose: The Florida Department of Health, Bureau of Preparedness and Response has established an Emergency Operations Plan Search Engine. This resource is designed to serve as a repository for all approved public health and medical related response plans. The repository includes Department of Health state and county plans and other non-departmental plans relevant to health and medical.

Primary Features:
- Provides an online repository for public health and medical related response plans
- Includes Base plans, Functional or Incident annexes or playbooks, planning guides, contingency plans, Standard Operating Procedures (SOP) / Standard Operating Guides (SOG) Continuity of Operations Plans (COOP), Mission Ready Packages (MRP) and job aids
- Allows for a search of plans by jurisdiction, plan type or keyword
- Provides secured computer access within the Department's network
- Serves as a preparedness tool. Does not contain incident action plans or incident specific response plans developed during an incident
- Contains more than 1,000 plans
- Updated on a routine basis with new and revised plans

Who Uses the Emergency Operations Plan Search Engine?
- Florida Department of Health Bureau of Preparedness and Response
- Florida Department of Health employees
- County Health Department preparedness planners and public information officers.

Year Implemented	Funding Source	Current User Count
2014	N/A	N/A

Authorities/Regulations	No regulatory authority
Future Planning	Continue to maintain, enhance and update the repository and seek additional relevant health and medical planning resources.
Capability	Supports all Office of Assistant Secretary for Preparedness and Response (ASPR) Hospital Preparedness Program (HPP) and Centers for Disease Control and Prevention (CDC) PHEP capabilities.

Contact Information: For more information, contact Denita.Mitchell@flhealth.gov.

Florida Health Alert Network

Purpose: The Florida Department of Health has established a Health Alert Network (HAN) as an online web-based gateway to applications which support key preparedness, response and recovery activities for health and medical emergency management.

Florida Health
Alert Network

Primary Features:
- Provides situational awareness on the front web page
- Performs daily verification of responder license information through automated daily verification; verification includes license status, license holder identity and suitability for emergency duty deployment. Once verification is completed, automated interfaces between the HAN and Everbridge ensures verification data is updated in the Everbridge Mass Notification system
- Provides access to functionality
    - Reporting functions to organize data across applications
    - Dashboards to display data
    - State Emergency Responders and Volunteers of Florida (SERVFL) provides information for resources for Emergency Support Function 8 (ESF8), Health and Medical responders and volunteers for the Florida Medical Reserve Corps (MRC)
- Requires password for access to individual applications
- New features planned for FY 2016-2017 include:
    - Development of Virtual Joint Information Center (JIC), to provide information and resources to state and county Health Public Information Officers and spokespersons
    - Integration of current EpiCom system for real-time exchange of health related information
    - Access to new Health Care Facilities Status/Patient Tracking system

Who Uses the HAN?
- Florida Department of Health
- Emergency Support Function 8 Health and Medical response partners
- Everbridge Administrators and Group Managers

Year Implemented	Funding Source	Current User Count
The Health Alert Network was deployed in 2015.	CDC – Public Health and Emergency Preparedness (PHEP) Cooperative Agreement	Unlimited Capacity 31,500 Current Contacts
Authorities/Regulations	42 U.S.C. 247d Public Health Emergencies; Chapter 252, Florida Statutes – Emergency Management; Chapter 381, Florida Statutes – Public Health: General Provisions; Department of Health Policy 310-1-15	
Future Planning	Expand the capability of the system to better serve the needs of responders and partners.	
Capability	PHEP Capability 6 – Information Sharing	

Contact Information: For more information, contact Beverly.Elliott@flhealth.gov or servfl@flhealth.gov. Also visit http://www.floridahealthalertnetwork.com/.

Florida Jurisdictional Risk Assessment

Purpose: The Florida Department of Health developed a tool for the assessment of hazard risk, and the capabilities and resources available to counteract hazards. The Florida Public Health Risk Assessment Tool (FPHRAT) assesses the risk of 36 hazards relevant to public health for the state and each county or region.

FPHRAT

The online tool includes a feature to calculate the social, medical and hazard vulnerabilities for each census tract, city and county across Florida.

Primary Features:
- Produces a jurisdictional risk assessment (Hazard probability, social and medical vulnerability indexes, public health impact, health care and behavioral impact scores, critical infrastructure index, capabilities, resources, and community resilience indexes, hazard risk and residual risk)
- Generates aggregated and non-aggregated reports:
    - Jurisdictional risk assessment and all its variables
    - Capability Assessment, Capability Gaps and Capability Hazard Component
    - Hazard Risk Index and Hazard Risk Index Aggregated
    - Resource Gap (resource readiness gap) and Resource Gap Aggregated
    - Resources Worksheet and Resources Worksheet Aggregated
- Links to a Hazard Vulnerability Data Explorer (HVDE) Parsing Tool (this is a feature derived from the HVDE that provides population counts for census tracts, cities and counties in Florida in areas of high, medium and low social, medical and all hazards vulnerability; it also includes population estimates related to natural hazards and storm surge)
- Contains guidelines and produces charts
- Provides tools for County Capability Assessments and County Resources Assessments
- Provides secure access through log in and password with an option for read-only user log in

Who Uses FPHRAT?
- Florida Department of Health and County Health Department preparedness staff
- Health Care Coalitions
- Emergency Support Function 8 Health and Medical response partners
- Florida Division of Emergency Management

Year Implemented	Funding Source	Current User Count
2013-2014	CDC – Public Health and Emergency Preparedness (PHEP) Cooperative Agreement	Administrative rights: 10 Default users: 67 Read-only users: 150
Authorities/Regulations	Public Health and Emergency Preparedness (PHEP) Cooperative Agreement	
Future Planning	Continue marketing, maintenance and improvement of the tool.	
Capability	PHEP Capability 1 – Community Preparedness	

Contact Information: For more information, contact Sonia.McNelis@flhealth.gov. Also visit https://flphrat.com.

Geographic Information Services

Purpose: Florida Department of Health personnel and response partners need information displayed in a format that can easily be understood. Mapping makes complex information instantly comprehensible in a way not possible with text or tables. A common Geographic Information System (GIS)-based server network makes data maintained by various DOH divisions readily accessible for analysis and visual displays, both within the Department and externally. This includes map feeds to the Florida Division of Emergency Management Geospatial Assessment Tool for Operations and Response (GATOR). GIS has been adopted for use in all phases of emergency management - preparedness, response, recovery and mitigation as well as year-round training and exercise - not just response activities. Wireless technologies and web-based GIS applications have also enhanced the coordination of response efforts.

Primary Features:

- Provides more than 20 category sets of health care provider locations available to internal and external GIS developers
- Provides more than 18 category sets of environmental health locations available to internal and external GIS developers
- Provides more than 26 published map services that are available to internal and external GIS developers
- Provides more than 7 web-based map services that are hosted by the Department's Internet and external servers
- Provides GIS developers for ad hoc mapping and geographical analysis

Who Uses GIS Services?

- Florida Department of Health planners and GIS developers
- Florida Division of Emergency Management GIS developers (GATOR)
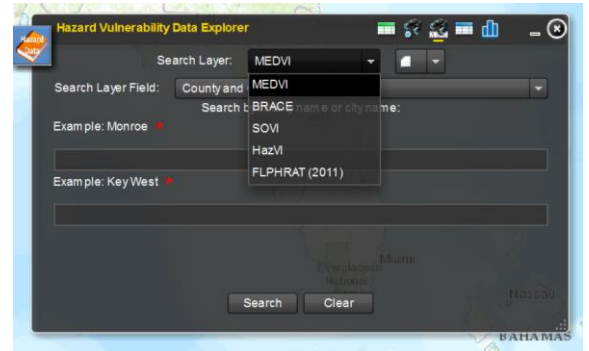- External response partners

Year Implemented	Funding Source	Current User Count
2004. Prior to 2004 GIS existed as individual unit applications.	CDC – Public Health and Emergency Preparedness (PHEP) Cooperative Agreement	195+ GIS developers, indeterminate public users
Authorities/Regulations	42 U.S.C. 247d Public Health Emergencies; Chapter 252, Florida Statutes – Emergency Management; Chapter 381, Florida Statutes – Public Health: General Provisions; Department of Health Policy 310-1-15 Health Alert Network	
Future Planning	Maintain system hardware and software to current standards Develop and deploy wireless applications for editing and routing	
Capability	HPP Capability 1 - Healthcare System Preparedness PHEP Capability 7 - Mass Care PHEP Capability 13 - Public Health Surveillance & Epidemiological Investigation	

Contact Information: For more information contact Marnie.FlaniganLyle@flhealth.gov. Also refer to https://gis.flhealth.gov/ESF8PlanningMap/ or visit www.floridahealth.gov and enter ESF8 Planning Map in the search box.

Hazard Vulnerability Data Explorer (HVDE)

Purpose: The Florida Department of Health uses a Geographic Information System (GIS)-based widget and database that provides exploration, comparison and spatial query capabilities regarding population at risk in areas with low, medium and high social vulnerability index (SoVI), medical vulnerability index (MedVI), and all-hazard vulnerability index (HazVI). In addition, this tool provides a community resilience data set (FLPHRAT) with information regarding jurisdictional risk assessments and community resilience, and data of the Building Resilience Against Climate Effects program (BRACE). BRACE anticipates climate impact and assesses related vulnerability. This tool does not require a login password.

Primary Features:
- Has the ability to search by attributes (e.g., identify the areas with high social vulnerability and high medical vulnerability)
- Allows searches by graphics (e.g. identify the areas intersecting a polygon drawn by the user)
- Displays maps, statistics for the selected features and display and export selected feature data
- Provides ability for a variety of data searches:
    – General Population and Social, Medical and All-hazards Vulnerability
    – Population at risk for flooding, flash flooding, earthquake, fire hazard, hurricane wind and storm surge hazard, predicted heat, drought and sea level rise hazards
- Includes a downloadable HVDE parsing tool: Excel version of the tool that displays a set of pivot tables based on the user's interest

Who Uses Hazard Vulnerability Data Explorer?
- Florida Department of Health preparedness planners
- Division of Emergency Management planners

Year Implemented	Funding Source	Current User Count
2013 -2014	CDC – Public Health and Emergency Preparedness (PHEP) Cooperative Agreement	90
Authorities/Regulations	Public Health and Emergency Preparedness (PHEP) Cooperative Agreement	
Future Planning	Bring to Department server, continue marketing and update user's manual	
Capability	PHEP Capability 1 – Community Preparedness	

Contact Information: For more information, contact Sonia.McNelis@flhealth.gov. Internal customers can visit http://dohiws/Online_Systems/index.html and select the Hazard Vulnerability Data Explorer Parsing Tool under Emergency Preparedness and Community Support.

Information Technology Field Operations and Incident Response Resources

Purpose: The Florida Department of Health has established an Information Technology (IT) Field Operations Incident Response Team of Disaster Preparedness Consultants (DPC) to ensure critical local systems remain available and operational during and after any incident or event. During a public health emergency, the Department is responsible for ensuring the availability of IT resources related to mission essential functions. The Centers for Disease Control and Prevention (CDC) funds equipment and supplies necessary to support the team and sustain IT disaster preparedness and recovery equipment.

Primary Features:
- Offers on-call IT readiness and response
- Supports continuity of operations mission essential functions, critical applications and communication needs
- Works closely with local System Administrators, Continuity of Operations Plan (COOP) Planners and Regional Emergency Response Advisors (RERAs) in implementing health preparedness technical requirements into IT infrastructure
- Supports local, regional and state setup and reestablishment of IT Infrastructure
- Includes mobile recovery service equipment and software
- Conducts exercises and tests of equipment and ability to recover services and applications
- Provides satellite data services, temporary Intranet/Internet services, asset and data recovery services, voice and video conferencing, radio communications, alternate location and field response and portable power generation capability
- Provides mobile communication units

Who Uses IT Field Operations and Resources?
- Florida Department of Health
- County Health Departments
- Emergency Support Function 8 Health and Medical deployed teams

Year Implemented	Funding Source	Current User Count
2003	CDC – Public Health and Emergency Preparedness (PHEP) Cooperative Agreement	67 County Health Departments
Authorities/Regulations	Chapter 282, Florida Statutes – Communications and Data Processing Chapter 252, Florida Statutes – Emergency Management	
Future Planning	Continue to explore ways to effectively consolidate equipment and maximize use of equipment and resources.	
Capability	PHEP Capability 6 – Information Sharing	

Contact Information: For more information, contact the team at IRMRDPC@flhealth.gov.

Laboratory Information Management System (LIMS)

Purpose: The Florida Department of Health uses a Laboratory Information Management System (LIMS) to log, access and manage samples and associated data. This system supports laboratory operations and provides secure electronic reporting of specimen and test result data to public health partners. Technical support and maintenance is provided by LabWare LIMS:Version 6, a Laboratory Information Management System utilizing a contemporary, scalable platform.

Primary Features:
- Handles 76 percent of all Bureau of Public Health laboratories (BPHL) laboratory tests
- Receives and reports, electronically between different software applications as Health Level-7 (HL7) messages, 89 percent of all testing allowing for real-time reporting
- Uses a scalable platform allowing multiple modulary developed add-ons
- Includes Clinical Health Template:
  - Designed to address the needs of state and local public health laboratories
  - Allows BPHL to add functionality as the need arises
- Produces reports for test results, as well as statistical analysis reports for sample submitters and physicians, and a wide-array of utility reports
- Interfaces with laboratory instruments allowing for direct results reporting from instruments to LabWare LIMS, dramatically reducing the risk of preventable medical errors
- Supports centralized, decentralized or regionalized installations
- Supports desktop workstations, tablets and smart phones
- Provides fully integrated configuration tools to adapt the software to end-user requirements without compromising support or future upgrades

Who Uses LabWare LIMS?
- Florida Department of Health Bureau of Public Health Laboratories, Bureau of Epidemiology
- County Health Departments

Year Implemented	Funding Source	Current User Count
In 2007 LabWare replaced the lab's proprietary MUMPS LIMS.	CDC – Public Health and Emergency Preparedness (PHEP) Cooperative Agreement and Ebola Supplemental	579 with expected increase of doctor's offices, clinics and hospitals upon deployment of WebLIMS web portal in 2016
Authorities/Regulations	Section 381.0031, Florida Statutes – Epidemiological research; report of diseases of public health significance to department; PHEP BP5 Cooperative Agreement Guidance – Public Health Information Systems	
Future Planning	Upgrade from version 6, which is over 10 years old, to version 7 which includes a browser based deployment, external-facing web portals, fully configurable web services, and a large catalogue of modular laboratory management software functionality from which to choose for implementing/upgrading/enhancing the lab's LIMS system; upgrade the Clinical Health Template Enhancements to the latest version; and add ordering capability to the WebLIMS web portal. These upgrades will allow for full LabWare support and functionality.	
Capability	PHEP Capability 12 Public Health Laboratory Testing, Function 5 – Results Reporting	

Contact Information: For more information, contact Robin.Lusk@flhealth.gov.

Statewide Inventory Management

Purpose: The Florida Department of Health has an online statewide inventory management system. The current application for this system is the Inventory Resource Management System (IRMS) 360 Enterprise by Upp Technology. IRMS is a supply chain inventory management system. The system provides real time visibility of inventory levels in multiple theaters across Florida. The system allows global viewing of assets for preparedness considerations during all stages of an incident or event.

Primary Features:
- Has real-time visibility for increased inventory accuracy and operational efficiencies
- Allows global searches-multiple warehouses using same items list
- Includes Inventory lot control and expiration date management to monitor the validation and verification of products to ensure proper and safe handling of perishable and date-sensitive items as well as hazardous materials (HAZMAT)
- Has Radio-Frequency Identification (RFID) capability to wirelessly transfer data for identifying and tracking assets
- Allows multiple users access simultaneously
- Allows flexible naming and typing supporting all desired product definitions, including using National Drug Codes with optional integration to the First Data National Drug Directory
- Offers serialization supporting end-to-end medical and other equipment tracking
- Ensures end-to-end transaction auditing to U.S. FDA 21 CFR Part 11 standards providing a secure or cold storage chain of custody; as reverse logistics manages critical product recalls
- Offers the ability to enter/receive off of purchase orders and track by grant and fiscal year

Who Uses IRMS?
- Florida Department of Health Bureau of Statewide Pharmaceutical Services
- Florida Department of Health Bureau of Preparedness and Response
- County Health Departments and Health Care Coalitions
- Florida Emergency Mortuary Operations Response System (FEMORS)
- State Medical Response Teams (SMRT)
- Florida Advanced Surgical Transport Team (FAST)

Year Implemented	Funding Source	Current User Count
The DOH Inventory Management System was established in 2005. IRMS became the provider in 2009.	ASPR Hospital Preparedness Program (HPP)	250
Authorities/Regulations	42 U.S.C. 247d Public Health Emergencies; Chapter 252, Florida Statutes – Emergency Management; Chapter 381, Florida Statutes – Public Health: General Provisions	
Future Planning	Continue to review how the inventory system can be maximized. Continue to recruit users at the county and health care coalition level in order to present the global picture needed for advanced planning.	
Capability	HPP Capability 3 - Emergency Operations Coordination PHEP Capability 8 - Medical Countermeasure Dispensing PHEP Capability 9 - Medical Materiel Management and Distribution	

Contact Information: For more information, contact Sherry.Watt@flhealth.gov.

Surveillance – Disease Outbreak Communications

Purpose: The Florida Department of Health uses EpiCom as a secure outbreak communications system and moderated message board. EpiCom offers staff and partners the ability to post messages related to suspected, probable or confirmed contagious diseases or outbreaks of public health significance. Users can post follow-up messages to report any similar or related disease activity in their area. The system is used to communicate essential information regarding public health issues to internal and external partners throughout the state. It is used to share information regarding disease outbreaks, food recalls, disasters and product recalls. The system also shares epidemiology newsletters, Centers for Disease Control and Prevention (CDC) health notifications and investigation guidance.

Primary Features:
- Combines an interactive, moderated message board with alerting capabilities
- Prevents accidental circulation of confidential or sensitive information through review of messages by Subject Matter Experts prior to posting
- Provides secure forums for sharing information
- Allows users to set personal preferences to receive messages on topics of interest
- Offers users the option to receive immediate email notification of new posts or choose a daily batched recap of messages

Who Uses EpiCom?
- Florida Department of Health staff. Although it began as a Bureau of Epidemiology system, it is now used by the Bureaus of Immunizations, Environmental Public Health Medicine and Preparedness and Response
- County Health Department staff including epidemiologists
- Public health partners in Florida and the U.S. Virgin Islands
- Hospital infection control practitioners
- Centers for Disease Control and Prevention

Year Implemented	Funding Source	Current User Count
2003	CDC – Public Health and Emergency Preparedness (PHEP) Cooperative Agreement	1,394 Users 53 Forums
Authorities/Regulations	Section 381.0031, Florida Statutes – Epidemiological research; report of diseases of public health significance to department; Chapter 64D-3, Florida Administrative Code (FAC)	
Future Planning	Continue to maintain, enhance and promote use of the system	
Capability	PHEP Capability 13 – Public Health Surveillance and Epidemiological Investigation	

Contact Information: For more information, contact EpiCom.Administrator@flhealth.gov or go to www.floridahealth.gov and enter EpiCom in the search box. To register for access to the system, visit http://servfl.com, click on "EpiCom" on the left hand menu.

Surveillance – Early Notification of Community-Based Epidemics

Purpose: The Florida Department of Health uses a series of systems for disease surveillance, reporting and notification. ESSENCE is a secure Electronic Surveillance System for the Early Notification of Community-Based Epidemics (ESSENCE). ESSENCE-FL provides state and local epidemiologists access to data, analytic tools and data visualizations that enhance their ability to detect outbreaks of disease in a timelier manner. It also provides the ability to conduct routine descriptive epidemiologic analysis, and monitor morbidity and mortality trends across multiple data sources. This system of public health surveillance emphasizes the use of near real-time pre-diagnostic data and statistical tools to detect and characterize unusual activity for further public health investigation. The objective is to provide the data and tools needed to identify outbreaks or unusual trends before they would otherwise be detected, leading to a quicker public health response.

Primary Features:
- Includes five data sets; Acute care visits, Merlin case data, Florida Poison Information Center Network data, Florida Office of Vital Statistics mortality data and Assistant Secretary for Preparedness and Response (ASPR) mission data. It is the only system in the country to include reportable disease and mortality data
- Uses near real-time data
- Offers diverse data visualizations and dashboards to help characterize current syndromic and disease trends
- Results in information that can be used for outbreak detection, situational awareness and surveillance of post-hurricane health issues
- Allows the ability to export graphics and summary statistic tables to include in county reports to stakeholders

Who Uses ESSENCE?
- Florida Department of Health Epidemiologists
- County Health Department epidemiology staff
- Hospital staff
- Specific health education program staff

Year Implemented	Funding Source	Current User Count
2007	CDC – Public Health and Emergency Preparedness (PHEP) Cooperative Agreement	210 Participating Hospitals (out of 221 total hospitals) 33 Participating Urgent Care Centers
Authorities/Regulations	Section 381.0031, Florida Statutes – Epidemiological research; report of diseases of public health significance to department; Chapter 64D-3, Florida Administrative Code (FAC).Florida Administrative Code, Chapter 64D-3	
Future Planning	Continue to work to onboard remaining hospitals. Continue to encourage County Health Departments to initiate hospital recruitments.	
Capability	PHEP Capability 13 – Public Health Surveillance and Epidemiological Investigation	

Contact Information: For more information, contact Essence.Help@flhealth.gov or visit www.floridahealth.gov and enter "Surveillance Systems" in the search box.

Surveillance – Reportable Disease System

Purpose: The Florida Department of Health uses Merlin as a web-based reportable disease surveillance system. Merlin serves as the state's repository of reportable disease case reports. The system has evolved from a data entry and management system for collecting state reportable disease data to a system that is used to track cases, identify disease trends and improve disease prevention programs.

Primary Features:
- Capitalizes on being part of an integrated surveillance and outbreak management system reducing redundancy in development costs
- Includes case management features, data quality reports, performance management features, data summary and visualization features
- Receives electronic laboratory reports from hospitals and private laboratories and the state public health laboratories
- Contains a fully functional and integrated outbreak management module
- Links electronic laboratory reports to cases in the outbreak module
- Uses reportable disease case data input daily by county staff
- Allows access to the system and tasks based on assigned user roles
- Evaluates every case through system-applied decision support algorithms to determine if it meets the surveillance case definition and automatically assigns a case classification of confirmed, probable or suspected
- Generates individual review of high priority diseases by a state-level subject matter expert to insure accuracy, completeness and to look for trends
- Provides automated work flows for some diseases allowing more time for investigation work

Who Uses Merlin?
- Florida Department of Health staff
- County Health Department epidemiology staff
- State public health, hospital and private laboratories

Year Implemented	Funding Source	Current User Count
2001	CDC – Public Health and Emergency Preparedness (PHEP) Cooperative Agreement	67 County Health Departments Unknown other
Authorities/Regulations	Section 381.0031, Florida Statutes – Epidemiological research; report of diseases of public health significance to department; Chapter 64D-3, Florida Administrative Code (FAC)	
Future Planning	Continue to maintain, enhance and promote use of the system	
Capability	PHEP Capability 13 – Public Health Surveillance and Epidemiological Investigation	

Contact Information: For more information, contact Merlin.Helpdesk@flhealth.gov or visit www.floridahealth.gov and enter "Surveillance Systems" in the search box.

Resources and System Management Internal Support

Purpose: In addition to managing a portfolio of systems and applications to maximize health situational awareness and support preparedness, response and recovery activities, the Bureau of Preparedness and Response (BPR), Resource and System Management Section provides technical support to system users. The section also provides the Bureau miscellaneous technical assistance, support and problem solving activities.

Primary Features:
- Provides IT assistance for software and hardware malfunctions and problems
- Establishes IT resources for new employees
- Provides recommendations and guidance on IT equipment purchases
- Monitors internal and external web pages including SharePoint, Hurricane Resource Center and Emergency Preparedness and Response external website. Assists page owners in updating and maintaining pages
- Participates in web team webinars and training sessions
- Assists in set up and production of large meetings and webinars
- Offers guidance on preparing for meetings and conference calls
- Conducts training sessions on IT related topics
- Maintains administrator rights and provides final approval of entries to the BPR calendar
- Provides back up assistance to other Bureaus and Divisions as requested
- Helps to coordinate mass e-mailings

Who Uses Internal Support?
- Bureau of Preparedness and Response staff
- Department of Health executive leadership

Contact Information: For more information, contact Robert.Casavant@flhealth.gov or Barbara.Liberti@flhealth.gov.

Coming in Fiscal Year 2017-2018

The Bureau of Preparedness and Response will transition to a new online database system for situational awareness and for reporting health care facility status and bed availability. This system will replace EMResource and contain comparable and improved functions. It will move the Department from a costly system to an in-house design that is more functional and economical.

Advanced features of the FLHealthSTAT system include:

- Easier to identify the proper role for any user. Each user will have only one role within the system. This will reduce the number of different roles from 135 in EMResource to 11.
- Dashboard map display customized to user role and group
- Custom Event dashboard with summary and detailed view of Event related facility status and information
- Detailed graphical view of facility status information available at a State, Region, County or Facility level
- Ability for users to create, save and share custom created extracts of data
- Ability for County, Regional, and State-wide administrators to update facility information on behalf of facility administrators if needed
- Ability for Facility Administrators and Users to update Event specific information requests either by signing into the FLHealthSTAT system or directly into a custom webpage sent through email without signing into the system
- Separation of Alerts/Information releases from Event creation and distribution
- Patient Tracking component targeted initially to Special Needs Shelters