

H1N1 PANDEMIC 2009-2010

April 26, 2009 – June 30, 2010

**AFTER ACTION REPORT
/IMPROVEMENT PLAN**

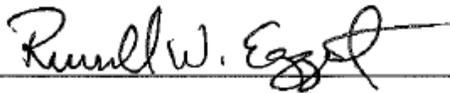
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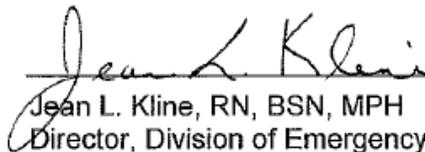
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EXECUTIVE SUMMARY

Florida H1N1 Pandemic 2009-2010

In March 2009, a novel H1N1 influenza virus began infecting people in Mexico. The Centers for Disease Control and Prevention (CDC) officially confirmed the first two cases of 2009 H1N1 Influenza virus in the US on April 17. On April 26 the US Government declared a Public Health Emergency. On June 11, the World Health Organization (WHO) officially declared a Level 6 Pandemic.

Florida was one of the first states affected by H1N1. In accordance with then current Pandemic Annexes to the Florida Department of Health (FDOH) Emergency Operations Plan (EOP) and Florida Comprehensive Emergency Management Plan (CEMP), case containment through isolation and voluntary quarantine was initiated. As the number of cases rapidly increased, FDOH recommended a shift to community containment strategies, again in accordance with the pandemic annexes.

The Florida Department of Health organized an incident management team (IMT) to prepare for the arrival of H1N1 cases in Florida. The State Emergency Response Team briefly activated to Level 2 (partial activation) with emergency support function 8 (health and medical) in the lead as the first Florida cases were reported, but returned to an IMT organization to manage the day-to-day response requirements. The IMT structure provided great flexibility, and the IMT was reorganized as needed to respond to the evolving situation and support emphasis.

Through the summer of 2009, FDOH focused on collecting epidemiological and surveillance data, the distribution of antivirals, providing or promulgating guidance, and planning and preparations for the vaccination campaign. As anticipated, a second wave of H1N1 cases arrived in August, with the start of the school year. Disease activity greatly accelerated and then peaked in late September and early October. The early peak of H1N1 in Florida, relative to other parts of the country and prior to the availability of significant quantities of vaccine, resulted in added risks and challenges.

County Health Department (CHD) reporting of localized or widespread influenza activity in the fall of 2009 was notably different from past influenza seasons with activity occurring during different months than in prior flu seasons and demonstrating a higher peak and a longer duration. The state continued to have reports of localized and widespread Influenza activity until the end of January when, for the first time since the fall season of 2008, no county in Florida reported localized or widespread Influenza activity. In February, the FDOH IMT determined that the fall wave of H1N1 was over in Florida with influenza activity falling to levels normally seen that time of year.

By the end of April, demobilization was underway and official IMT operations were discontinued with continuing duties and responsibilities returned to department staff responsible for daily operations. The formal H1N1 vaccination campaign ended with CHDs continuing to respond to requests for vaccinations at worksites and offering and marketing the vaccine in their respective counties.

Even with the closeout of activities, the department continued to closely monitor the situation. Through June 12, 2010 when national influenza reporting to the CDC ended for the summer

months, Florida reported a cumulative 1324 hospitalizations and 230 deaths for persons with laboratory confirmed H1N1. Deaths were predominantly in the 25-64 age group. Most of the deaths were individuals who had underlying medical conditions that increased their risk for flu complications. While persons under age 25 accounted for only 13% of deaths, they accounted for nearly 40% of the hospitalizations. A detailed Epidemiological description of the progression of the disease in Florida is included as Enclosure 1: Epi Surveillance Report. A comprehensive timeline of the event and Florida’s response activities is included in Appendix D: Response Summary Table.

Thankfully, the 2009 H1N1 influenza was not a more severe/virulent pandemic. While there were some anecdotal reports of emergency departments, intensive care units and pediatric practices being stressed, we cannot fully measure the impact to the state’s overall healthcare system. Had the virus been more severe or affected Florida’s elderly population to a greater degree, there would have been additional challenges and difficulties.

FDOH pandemic annexes to its Emergency Operations Plan and the Pandemic Annex to the Florida Comprehensive Emergency Management Plan included a matrix of potential interventions and actions based on CDC pandemic severity guidance. When CDC did not follow the severity index provisions, it caused initial confusion. However, Florida was able to modify the intervention response to the 2009 H1N1 influenza pandemic from that of a worst case scenario to what was actually experienced. FDOH is reviewing pandemic plans in the context of this after action report for lessons learned that will be incorporated into future revisions.

The following table summarizes data from Florida’s response to the H1N1 Pandemic 2009-2010 through May 31, 2010. Note that some of these activities continued through the end of June.

Table ExSum 1: Summary of Response Data

Summary of H1N1 Pandemic 2009-2010 data as of May 31, 2010	
Action	Number
Public Stockpile Antiviral Regimens Distributed to CHDs	172,672
Public Stockpile Antiviral Regimens Dispensed by CHDs	14,476
Public Stockpile Antiviral Regimens Distributed to Retail Pharmacies	252,911
Public Stockpile Antiviral Regimens Dispensed by Retail Pharmacies	21,328
Retail Pharmacies Receiving Public Stockpile Antiviral Regimens	1,285
Public Stockpile Surgical Masks Distributed	678,865
Specimens Tested by Bureau of Laboratories	15,368
Vaccine Doses Shipped to CHDs	5,627,400
Vaccine Doses Administered from those Shipped to CHDs	*At least 2,158,052
Vaccine Doses Administered from those Shipped to Retail Pharmacies	235,449
Total Reported Vaccine Doses Administered	*2,393,501
Vaccine Clinics Held by CHDs	7,776
VAERS Reports of Serious Health Events	49
Calls to Florida Flu Information Line	54,139

Summary of H1N1 Pandemic 2009-2010 data as of May 31, 2010	
Action	Number
Calls to the Healthcare Provider Call Center	1,740
Calls to Florida Adverse Reactions Call Center	427
Visitors to H1N1 MyFluSafety Website	156,398

* Reported number of doses administered is likely lower than actual doses administered due to underreporting or non-reporting of doses administered by some partners.

For more information on calls to the Florida Flu Information Line Healthcare Provider and Adverse Reactions call centers see Enclosure 2.

Event Capabilities

The Florida response to the H1N1 Pandemic 2009-2010 incorporated these Department of Homeland Security Target Capabilities:

- Epidemiological Surveillance and Investigation
- Public Health Laboratory Testing
- Mass Prophylaxis
- Emergency Public Information and Warning
- Medical Supplies Management and Distribution
- Responder Safety and Health
- On-Site Incident Management

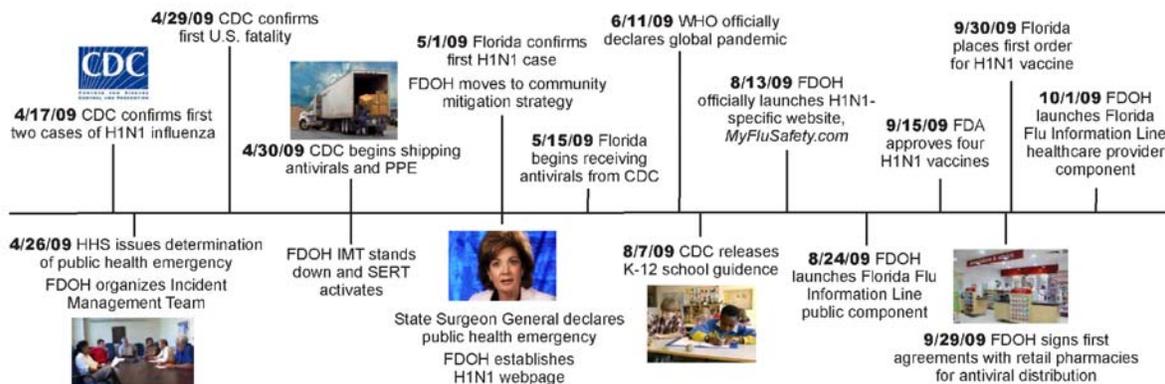
Participating Agencies

The response was composed of the Florida Department of Health in partnership and collaboration with the Executive Office of the Governor, local county health departments, Florida Division of Emergency Management State Emergency Response Team, County Emergency Managers, Florida Department of Education and local school districts, other Florida state agencies including the Department of Agriculture, Department of Corrections, Department of Environmental Protection, Department of Juvenile Justice, Agency for Health Care Administration, and the Agency for Persons with Disabilities. Other partners included universities and colleges especially student health centers, hospitals through the Florida Hospital Association, private health and medical partners, private retail pharmacies, Native American communities (Seminole and Miccosukee Tribes), military installations with civilian employees and dependants such as Eglin and Tyndall Air Force Bases, Florida National Guard, and Veterans' Administration.

Coordinating with agencies and being able to quickly share and provide accurate and timely information was initially challenging. A variety of communication methods were implemented including establishing an H1N1 website, disseminating "H1N1 Weekly Flu Partner Guidance" bulletins, and conducting weekly calls with the Division of Emergency Management, County Emergency Managers, county health departments, Florida Department of Education, and local schools.

While efforts were made to work closely with other state and partner agencies, it became

Figure 1: H1N1 Pictorial Timeline



apparent that greater engagement by the larger stakeholder community in future pandemic planning, training, exercising and response is needed.

Event Objectives

The FDOH IMT developed these objectives for the H1N1 Pandemic 2009-2010 response:

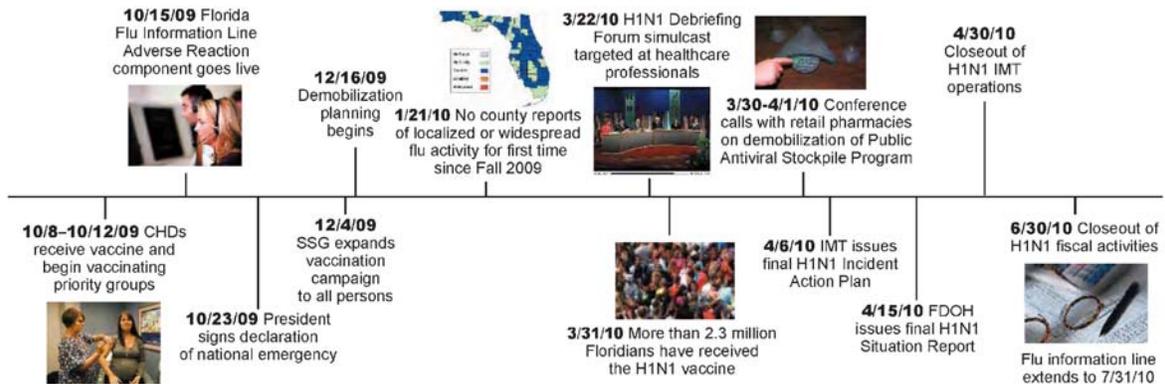
- Objective 1: Develop and communicate policy, guidance & procedures to identify H1N1 cases through epidemiology surveillance and investigation and laboratory testing and to support disease reduction and treat the infected.
- Objective 2: Reduce morbidity and mortality from H1N1 through assuring access to antiviral medications.
- Objective 3: Reduce morbidity and mortality from H1N1 through promotion of hygiene and mass vaccination.
- Objective 4: Maintain personal protective equipment, medical supplies and equipment support system for county operations.
- Objective 5: Provide credible information to healthcare providers and the general public.
- Objective 6: Support FDOH H1N1 IMT Structure while maintaining core department operations.

Major Strengths

Three major strengths identified during this event are:

- Establishment and maintenance of an Incident Management Team for a long duration event
- Direction and management of epidemiology surveillance, including lab testing and investigation operations
- Direction and management of mass prophylaxis tactical operations that significantly expanded the participation of the private sector

These strengths and others are reviewed in detail in Section 3: Analysis of Capabilities.



Primary Areas for Improvement

Three primary areas for improvement are:

- There were initial laboratory surge issues associated with staffing and procurement.
Key Recommendation: That more licensed Clinical Laboratory Improvement Act (CLIA) certified laboratory staff be trained to perform PCR analysis for influenza and that non-BOL (e.g., CHD), staff be trained to perform the various non-technical duties required for surge support of laboratory testing. Staffing, at the scientist level, at the BOL needs to be evaluated for an increase to be able to cross-train and maintain expected performance levels in reserve.
- There was a lack of a uniform method to ensure reporting and accountability of doses administered by private providers.
Key Recommendation: That procedures for allocating future vaccine to private providers as part of a mass vaccination campaign should consider the requirement for all to register in Florida SHOTS, the state immunization registry, to receive a vaccine allocation. However, lack of participation in Florida SHOTS should not preclude reporting by private providers.
- The magnitude and duration of logistic support requirements stressed limited staff and storage capacity
Key Recommendation: That the draft Logistics Support Annex be finalized and used for emergency response to future disasters.

These areas for improvement and others are reviewed in detail in Section 3: Analysis of Capabilities.

SECTION 1: EVENT OVERVIEW

Event Details

Event Name

H1N1 Pandemic 2009-2010

Response Start Date

April 26, 2009

Response End Date

June 30, 2010 (While the IMT deactivated on April 30, 2010 handling of additional responsibilities of the event continued through department daily operations and specifically hired H1N1 personnel.)

Duration

429 days

Location

Statewide including involvement of 67 County Health Departments (CHD)

Native American communities (Seminole and Miccosukee Tribes)

Military installations with civilian employees and dependants such as Eglin and Tyndall Air Force Bases

Capabilities

Epidemiological Surveillance and Investigation

Public Health Laboratory Testing

Mass Prophylaxis

Emergency Public Information and Warning

Medical Supplies Management and Distribution

Responder Safety and Health

On-Site Incident Management

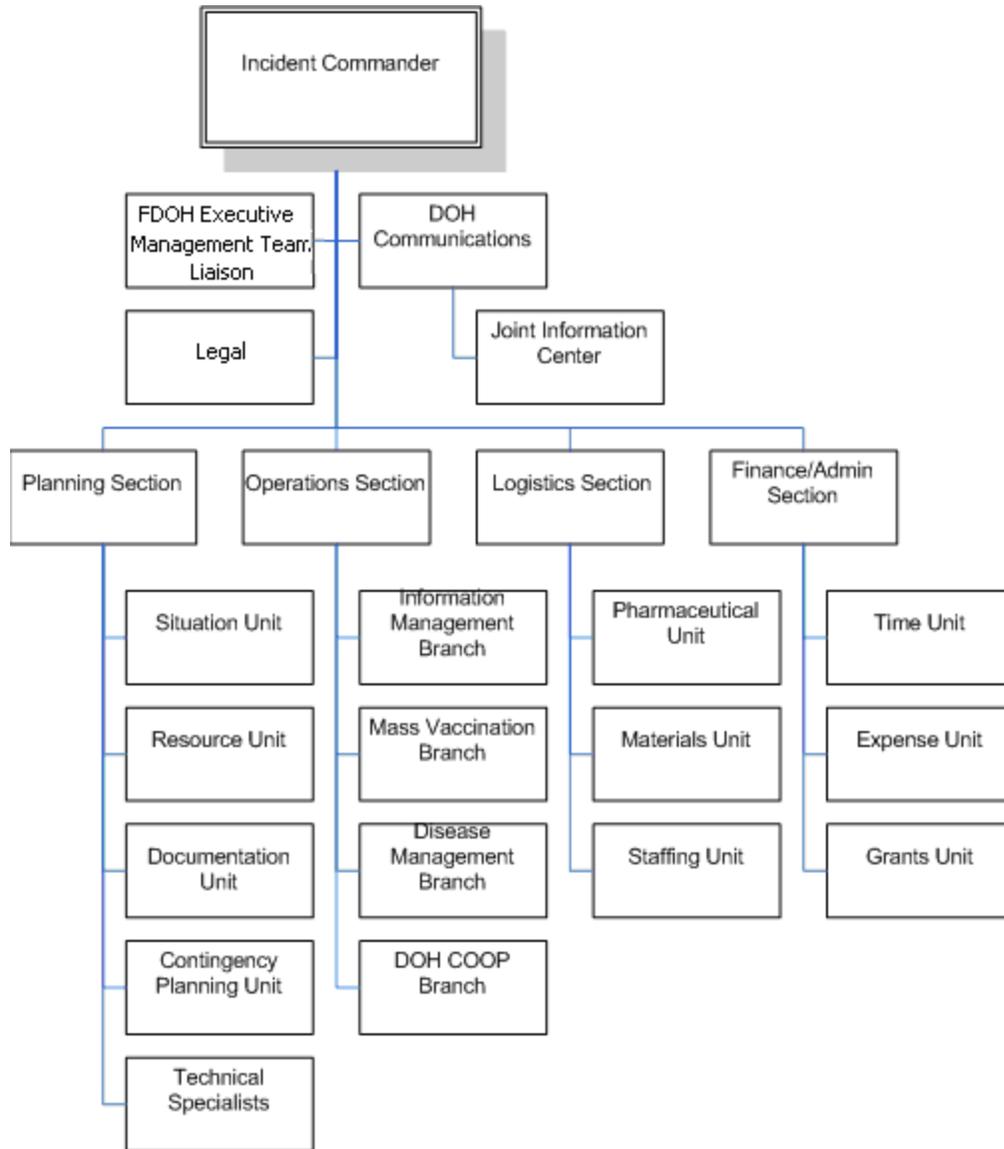
Scenario Type

H1N1 Response (Spring 2009 – Spring 2010)

Event Response Team

Florida's response team leadership operated under a scalable Incident Management Team (IMT) structure. The IMT organization began to coalesce in June 2009 and reached a formal structure on August 5, 2009 (Figure 2). It remained at this basic structure throughout the event, adapting by adding or deleting specific positions, subject matter experts, and technical specialists necessary to respond as the situation evolved.

Figure 2: IMT Table of Organization



Because of the length of the event, persons assigned to the response leadership team changed several times. The following table reflects the members of the leadership team, to the level of Section Chief on the Information Management Team Table of Organization, at the conclusion of the event.

The Florida Department of Health is the Organizational Affiliation for all members of the response leadership team. The mailing address for all members is 4052 Bald Cypress Way, Tallahassee, FL 32399.

Table 1.1: Leadership Team

Name	Role in Event	Job Title	Phone Number / E-Mail Address
Russell Eggert, M.D.	Incident Commander	Medical Executive Director	(850) 245-4787 Russell_Eggert@doh.state.fl.us
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Doc Kokol	Public Information Officer	Communications Director	(850) 245-4111 Doc_Kokol@doh.state.fl.us
Jack Pittman	Planning Chief	Exercise Program Manager	(850) 245-4444 x3725 Jack_Pittman@doh.state.fl.us
Tom Belcuore	Operations Chief	Consultant	(352) 258-4295 Tom_Belcuore@doh.state.fl.us
Kelly Waters	Logistics Chief	Finance and Administration Manager	(850) 245-4444 x2042 Kelly_Waters@doh.state.fl.us
Rhonda White	Finance and Administration Chief	Chief, Bureau of Preparedness and Response	(850) 245-4562 Rhonda_White@doh.state.fl.us

Participating Organizations

The event response was led by the Florida Department of Health in partnership and collaboration with local county health departments. Organizations and agencies that participated included:

- The Executive Office of the Governor
- Florida Division of Emergency Management State Emergency Response Team
- County Emergency Managers
- Florida Department of Education and local school districts
- Florida state agencies including:
 - Department of Agriculture
 - Department of Corrections
 - Department of Environmental Protection
 - Department of Juvenile Justice
 - Agency for Health Care Administration
 - Agency for Persons with Disabilities
- Other participating organizations including:
 - Universities and Colleges (especially student health centers)
 - Hospitals through the Florida Hospital Association
 - Private health and medical partners
 - Private retail pharmacies
 - Native American communities (Seminole and Miccosukee Tribes)
 - Military installations with civilian employees and dependants such as Eglin and Tyndall Air Force Bases

- Florida National Guard
- Veterans' Administration

- In addition, contracts were established with PATLive and the Florida Poison Information Control Network (FPICN) for operation of Flu Information call centers for the public and healthcare providers, and for adverse reactions calls.

Number of Participants

A list of the total number of state-level and local public health participants by job classification is not possible due to the complexity, scope, and length of the response.

Florida's H1N1 response involved the activation of more than 300 staff during the duration of the event. Some staff filled more than one role or switched roles during the event. The response involved staff at the state agency as well as staff at each of Florida's 67 county health departments, and five department laboratories. Responders included epidemiology staff, clinic managers, public health laboratory staff, public health nurses, preparedness, purchasing and contracting staff, and Subject Matter Experts. Staff consisted of not only existing agency staff but also staff, at the state and county level, contracted specifically for the event.

In addition to staff officially activated, additional staff supported the event response. Numerous staff at the state level provided administrative and technical assistance. Public health nurses and other staff at each county health department worked to conduct the vaccination campaign, respond to consumer questions, and coordinate the local response with community providers and partners.

Public health nurses played an important role in the H1N1 response. The Florida Department of Health, Office of Public Health Nursing, Nurse Practice Council, surveyed County Health Department nursing leaders to identify their roles and responsibilities in the planning and implementation of the H1N1 vaccination campaign. Responses were received from fifty-seven of the sixty-seven counties. For a summary of the findings from the survey see Enclosure 3: H1N1 Public Health Nurse Survey.

Healthcare and other volunteers included individual volunteers and volunteers from Community Emergency Response Teams and the Florida Medical Reserve Corps. Medical Reserve Corps (MRC) volunteers were a strong presence in local response activities with more than 550 volunteers participating statewide. For more information on the involvement of the Medical Reserve Corps see Enclosure 4: H1N1 Response and the Florida MRC Network.

SECTION 2: EVENT SUMMARY

Event Purpose and Goals

Florida was one of the first states affected by H1N1. Cases began to occur in early May 2009. In accordance with then current Pandemic Annexes to the FDOH Emergency Operations Plan (EOP) and Florida Comprehensive Emergency Management Plan (CEMP), case containment through voluntary isolation and quarantine was initiated. As the number of cases rapidly increased, FDOH recommended a shift to community containment strategies, again in accordance with the pandemic annexes.

Through the summer of 2009, the Florida Department of Health (FDOH) focused on collecting epidemiological and surveillance data, the distribution of antivirals, and preparation for the vaccination campaign. As projected, a second wave of H1N1 cases arrived in August at the beginning of the school year. Disease activity greatly accelerated and then peaked in late September/early October. The early peak of H1N1 in Florida relative to other parts of the country and prior to the availability of significant quantities of vaccine, resulted in added risks and challenges.

The state continued to have reports of localized and widespread Influenza activity until the end of January when, for the first time since the fall season of 2008, no county in Florida reported localized or widespread Influenza activity. Through June 12, 2010 when national influenza reporting to the CDC ended for the summer months, Florida reported 1324 hospitalizations and 230 deaths for persons with laboratory confirmed H1N1. A comprehensive timeline of the event and Florida's response can be found in Appendix D. A detailed epidemiologic description of the progression of the disease in Florida is included as Enclosure 1: Epi Surveillance Report.

Florida's main goals during the event were to reduce the impact of and spread of the disease among all Floridians, with special emphasis on those persons determined to be most at risk of getting the virus and those most at risk of complications if they did get the virus. These goals were addressed through the objectives, capabilities, and activities discussed in the next section.

Event Objectives, Capabilities, and Activities

The H1N1 Incident Management Team developed the objectives listed below in responding to the pandemic event. These objectives are cross-referenced to the US Department of Homeland Security Target Capability List, capabilities and activities. The extended event response involved most of the "public health and medical" related Homeland Security target capabilities and activities. This report reflects on those capabilities and activities most directly supporting the IMT event objectives.

Objective 1: Develop and communicate policy, guidance & procedures to identify H1N1 cases through epidemiology surveillance and investigation and laboratory testing and to support disease reduction and treat the infected.

- Capability - Epidemiological Surveillance and Investigation:
 - Activity 1. Develop and Maintain Training and Exercise Programs
 - Activity 2. Direct Epidemiology Surveillance and Investigation Operations
 - Activity 3. Surveillance and Detection

- Capability - Public Health Laboratory Testing:
 - Activity 1. Sample and Specimen Management
 - Activity 2. Provide Surveillance Support.

Objective 2: Reduce morbidity and mortality from H1N1 through assuring access to antiviral medications.

- Capability - Mass Prophylaxis:
 - Activity 1. Direct Mass Prophylaxis Tactical Operations
 - Activity 2. Conduct Mass Dispensing
 - Activity 3. Monitor Adverse Events
 - Activity 4. Demobilize Mass Prophylaxis Operations

Objective 3: Reduce morbidity and mortality from H1N1 through promotion of hygiene and mass vaccination.

- Capability - Emergency Public Information and Warning:
 - Activity 1. Issue Public Information, Alerts/Warnings, and Notifications
- Capability - Mass Prophylaxis:
 - Activity 1. Direct Mass Prophylaxis Tactical Operations
 - Activity 2. Conduct Mass Dispensing
 - Activity 3. Monitor Adverse Events
 - Activity 4. Demobilize Mass Prophylaxis Operations

Objective 4: Maintain personal protective equipment, medical supplies, and equipment support system for county operations.

- Capability - Medical Supplies Management and Distribution:
 - Activity 1. Direct Medical Supplies Management and Distribution Tactical Operations
- Capability - Responder Safety and Health:
 - Activity 1. Identify Safety/PPE Needs and Distribute PPE

Objective 5: Provide credible information to healthcare providers and the general public.

- Capability - Emergency Public Information and Warning:
 - Activity 1. Issue Public Information, Alerts/Warnings, and Notifications
 - Activity 2. Provide Public Rumor Control

Objective 6: Support FDOH H1N1 Incident Management Team Structure while maintaining core department operations.

- Capability – On-Site Incident Management:

- Activity 1. Establish Full On-Site Incident Command
- Activity 2. Develop and Execute Incident Action Plans (IAP)
- Activity 3. Demobilize On-Site Incident Management

Some objectives include more than one capability and some capabilities are repeated in more than one objective. The following capabilities will be addressed in Section 3 Analysis of Capabilities: Epidemiological Surveillance and Investigation, Public Health Laboratory Testing, Mass Prophylaxis, Emergency Public Information and Warning, Medical Supplies Management and Distribution, Responder Safety and Health, and On-Site Incident Management.

List of previous exercise/responses that may have informed this response

Training and exercises using pandemic influenza scenarios began in Florida in 2006 and were conducted through May 2009. Strengths and improvements from gaps identified from these exercises influenced ongoing pandemic planning, preparedness activities, and Florida's response to the H1N1 event.

2006

In 2006, training and tabletop exercises on pandemic influenza planning were integrated into a series of locally-held workshops titled *Pandemic Pandemonium*. Workshop participants included the health and medical communities as well as local government, education, and civic, volunteer, social, and faith-based organizations. The purpose of these workshops was to train community response partners concerning the nature, epidemiology, and mitigation measures for influenza viruses and raise awareness of the consequences and complexities of a pandemic response.

2007

In 2007, more advanced workshops and tabletops titled *Influenza Control Exercises* (ICE) were conducted across Florida. A total of 956 participants representing 401 organizations in 27 counties took part in this exercise series. The interactive tabletops presented pandemic scenarios that required inter-community discussions and planning instigation.

Pandemic influenza full scale exercises were held in 12 counties. This exercise series was titled *Contagion Containment*. Exercise objectives emphasized Rapid Response and Containment procedures with activation of epidemiology strike teams. Two counties were involved in each exercise which required cross-county and state-level response coordination. The exercise series provided opportunities for "ground-truthing" local isolation/quarantine, epidemiology, and pandemic response plans.

In addition to these two exercise series, four counties conducted locally designed pandemic influenza tabletop exercises, five counties conducted mass vaccination drills, four conducted pharmaceutical distribution drills, three conducted alternate treatment site drills, one conducted an isolation quarantine center drill, and one conducted an epidemiology investigation team drill.

At the state-level, FDOH developed and led two avian influenza/zoonotic disease tabletop exercises in close coordination with the Florida Department of Agriculture and Consumer

Services (DACs), the Florida Wildlife Conservation Commission (FWC) and other partner agencies. Both focused on inter-agency responsibilities, planning, coordination, and response. The second tabletop exercise was held in conjunction with a statewide Zoonosis Summit.

Regional Domestic Security Task Force (RDSTF) Public Information Officers, in partnership with FDOH, conducted a statewide training and tabletop exercise with a pandemic influenza scenario that included testing of newly acquired mobile joint information centers, satellite telephone equipment, Tactical Communications Packages or "Tak Paks." The exercise included 150 public information officers from health, fire, law enforcement, EMS, emergency management and agriculture. It provided an opportunity to introduce local public information officers to the equipment available in the seven RDSTF regions and give an opportunity for hands-on training on the equipment.

Selected Emergency Support Function (ESF) 8 (Health and Medical) planning staff, CDC liaison, and FDOH Executive Policy group participated in a workshop in the first of an exercise series called *Accelerated Analysis* to provide an overview of key decision-making responsibilities in concert with Strategic National Stockpile (SNS) Operations. A second workshop reconvened the original participants for response phase pandemic influenza tabletop exercise requiring the deployment of pharmaceuticals and other medical supplies.

FDOH representatives from the Division of Disease Control and the Office of Emergency Operations participated in two CDC functional exercises held locally and in Atlanta on the pandemic influenza operational planning.

FDOH Office of Emergency Operations revised the Pandemic Influenza Annex to the Florida Comprehensive Emergency Management Plan (CEMP). A series of workshops were held with the State Emergency Response Team (SERT) to solicit their concerns and input culminating with a scenario-based workshop in July 2007. The Pandemic Influenza Annex was formally approved by the State Working Group for Domestic Security Executive Committee in September 2007.

In November 2007, FDOH held a workshop titled *Regional Reinforcements*, a tabletop exercise based on a regional pandemic response for the seven RDSTF Health and Medical CoChairs and county-level Public Health Preparedness planner and trainer staff. Florida tribal representatives also attended this workshop.

2008

At the State-level, FDOH participated in the annual Florida Governor's Tabletop Exercise in August 2008. The scenario was based on pandemic influenza outbreak evolution through Florida. FDOH staff participated as members of the Governor's Tabletop Exercise design team led by the Florida Division of Emergency Management (DEM). There were two parts to the Governor's Tabletop Exercise held at the State Emergency Operations Center (SEOC). The morning session focused on policy decisions that were made by the Governor and state agency leadership in response to an unfolding pandemic in the State of Florida. The afternoon session was conducted with State Emergency Response Team (SERT) Emergency Coordination Officers (ECOs) to review how to best implement the policy decisions made during the morning session.

Concurrent with the afternoon session at the EOC, ESF 8 (Health and Medical) Planning Section Situation Unit hosted facilitated workshop with planners in the Division of Disease Control entitled *Pandemic Prognostication*. The purpose of this exercise was to evaluate procedures for developing epidemiology surveillance essential elements of information (EEI) and adapt current Situation Unit Standard Operations Guidelines to a Pandemic Response.

Again in 2008, FDOH representatives from the Division of Disease Control and the Office of Emergency Operations participated in two CDC pandemic influenza operational plan functional exercises as requested.

2009

The Pandemic Influenza *Formidable Footprint* Tabletop series focused on the sudden introduction of an influenza virus with evidence of significant human-to-human transmission (WHO Phase 4) into a multi-county area. The basic workshop scenario premise was that these areas would form along a medical and health care corridor, or *footprint*, of a concerned public response. The FDOH Office of Public Health Preparedness sponsored six specific scenario-driven workshops. In one exercise, influenza pandemic cases crossed state borders into Alabama, and in two exercises, influenza pandemic cases crossed into Georgia counties.

Each tabletop scenario began with rapid initial case containment and then strong community containment measures to prevent, or at least reduce, potential pandemic spread. Hospitals, the medical and public health communities in concert with emergency management and consistent and measured risk communication were challenged to quickly get control of the situation, request resources, and manage outcomes over both the short and long-term event.

The exercises included “Breaking News” videos to add realism and urgency to the discussions. Exercise AARs and a list of topics to continue discussions beyond the workshops are posted to blog sites. These exercises informed decisions about cross-county and cross-state boundaries, information sharing, and resources coordination and broadened point of contact rosters.

Conclusion

The real-world 2009-2010 H1N1 influenza pandemic event progressed along a timeline different from the exercise scenarios and was less severe than exercise pandemic scenarios portrayed it. However, four years of pandemic exercises, as well as, a history of using an IMT structure at the state and local level for a wide range of response events, provided valuable insights into local thorough federal partner planning and response coordination, management of resources, and public information messaging.

SECTION 3: ANALYSIS OF CAPABILITIES

This section of the report reviews the performance of the addressed capabilities, activities, and tasks. In this section, observations are organized by capability and associated activities. The capabilities referenced in IMT Objectives for the H1N1 Pandemic 2009-2010 are listed below, followed by corresponding activities. Each activity is followed by related observations, which include references, analysis, and recommendations.

Note: Observations are numbered consecutively within each capability in order to cross-reference to Improvement Plan Matrix.

Cross Cutting Observations: The overall impact and stress of a pandemic on the healthcare system could not be adequately evaluated during this event. There were anecdotal reports of Emergency Departments, Intensive Care Units and pediatric practices that were stressed. There were a few reports of alternate triage sites but there is no record of alternate treatment sites being activated and Florida did not have to resort to applying alternate standards of care. If the virus had been more severe or affected the elderly population, hospitals and ICUs would have been faced with additional challenges and difficulties affecting all capability areas.

FDOH pandemic annexes to the Emergency Operations Plan and the Pandemic Annex to the Florida Comprehensive Emergency Management Plan included a matrix of potential interventions and actions based on pandemic severity. This proved helpful in modifying the actual response to the 2009 H1N1 influenza pandemic from that of a worst case scenario to what was actually experienced. FDOH is reviewing pandemic plans in the context of this after action report for lessons learned that will be incorporated into future revisions.

CAPABILITY 1: EPIDEMIOLOGICAL SURVEILLANCE AND INVESTIGATION

Capability Summary: The Epidemiological Surveillance and Investigation capability is the capacity to rapidly conduct epidemiological investigations. It includes exposure and disease (both deliberate release and naturally occurring) detection, rapid implementation of active surveillance, maintenance of ongoing surveillance activities, epidemiological investigation, analysis, and communication with the public and providers about case definitions, disease risk and mitigation, and recommendation for the implementation of control measures.

Activity 1: Develop and Maintain Training and Exercise Programs

Observation 1: Developing and Maintaining Training Programs -- Strength. The following courses are maintained and available on-line to FDOH and CHD staff through the Trak-it Learning Management System as basic epidemiology and refresher courses: Basic Epidemiology, Epidemiology in Action, Epidemiology and Prevention of Vaccine-Preventable Diseases, Epidemiology Specialties-Forensic Epidemiology, and Principles of Epidemiology. On site training includes staff assigned to outbreak investigations and, as noted in Activity 2, Epidemiology Strike Teams. FDOH Bureau of Epidemiology conducts bi-weekly conference calls and "Epi Grand Rounds" keeps all staff updated and informed about unusual cases and disease presentations.

References: FDOH Trak-it Learning Management System, Minutes from Epidemiology and Epi Grand Rounds Conference Calls.

Analysis: On-line courses help to maintain proficiency for epidemiology staff and provide basic information for those who are assigned in incident management team positions who need to be familiar with epidemiology terms and investigation procedures to assess their role and responsibilities in a pandemic event.

Recommendation: That FDOH continue to maintain, enhance, and promote on-line and other on-site trainings.

Observation 2: Developing and Maintaining Exercise Programs -- Strength. Most of the pandemic exercises listed in Section 2, List of Previous Exercise/Responses had an epidemiology investigation objective and component.

References: FDOH Multi-Year Training and Exercise Plans

Analysis: Exercises conducted from 2006-2009 provided venues for practicing and evaluating epidemiology investigation skills for trained staff and raised awareness of investigation complexities and control measures for those with non-health and medical roles and responsibilities in other agencies and organizations.

Recommendation: That FDOH continue to maintain on-line epidemiology training programs and conduct exercises that contain objectives for evaluating epidemiology skills for professional staff and familiarization for non-health and medical agencies and organizations including other state agencies.

Activity 2: Direct Epidemiology Surveillance and Investigation Operations.

Observation 3: Maintaining Epi Staff -- Strength. FDOH maintains a core team of professional epidemiologists at the state level within the Division of Disease Control, Bureau of Epidemiology, at the regional level and within local CHDs. As the pandemic evolved, a need developed for respiratory surveillance. Although not used for H1N1 response because of the statewide nature of the pandemic, FDOH has trained and equipped regional NIMS-typed Epidemiology Strike Teams. The initial H1N1 IMT was established by the Division of Disease Control. In subsequent IMT reorganizations, a Disease Control Branch, which included the Epi surveillance functions, was assigned to the IMT Operations Section.

References: FDOH and IMT organization Charts

Analysis: The availability of professional epidemiology staff from state through county-level greatly assisted in assessing the initial and continuing surveillance of the spread and degree of H1N1 infection cases. From April to late May 2009, all Division of Disease Control, Bureau of Epidemiology, Acute Disease Section and some Administrative Section staff worked full-time on H1N1. If the level of effort required had been needed for a longer time period, replacement staff would have been needed for many roles. Epidemiology work load later exceeded available capacity during the vaccine campaign when the Epi/Surveillance unit was tasked with carrying out an ongoing random sample survey of vaccine providers. A half-time staff from the Division of Emergency Management Operations was assigned to the project for about 6 weeks. The amount of time Acute Disease Section staff devoted to influenza surveillance and

policy development put a strain on the ability to maintain other projects resulting in other projects falling behind.

Recommendations: That FDOH continue to maintain a trained core of professional epidemiology staff at county, region and state levels.

Activity 3: Surveillance and Detection.

Observation 4: Maintaining Epi Surveillance -- Strength. The IMT FDOH, Disease Management Branch staff compiled H1N1 surveillance data each week from multiple sources:

1. Emergency department syndromic surveillance as monitored through Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE). H1N1 activities increased hospital partner participation in ESSENCE. Over two-thirds of all Florida hospitals now participate in the surveillance system;
2. Laboratory data from the Bureau of Laboratories;
3. County influenza activity levels as reported by county health department epidemiologists;
4. The Florida Pneumonia and Influenza Mortality Surveillance System;
5. Florida Outpatient Influenza-like Illness Surveillance Network (ILINet) providers. Provider participation in the network increased as a result of H1N1 surveillance;
6. Novel H1N1 influenza notifiable disease data for special surveillance populations (deaths, hospitalized pregnant women, and those with life threatening illness) and pediatric influenza-associated mortality as reported in the Merlin system for notifiable disease surveillance; and outbreaks or clusters of influenza-like illness (ILI) as reported through EpiCom; and
7. Conference calls with CHD epidemiologists

The compiled surveillance data was incorporated into weekly Epidemiology Influenza Reports which were made available on line at the FDOH Internet site.

Epidemiology surveillance also included:

- Developing guidance for CHDs, physicians, hospitals, and laboratories on how to diagnose and manage patients, how to use laboratory resources optimally, what to report to public health agencies and how CHDs should process and react to case reports.
- Advising CHDs on management of outbreaks and clusters of disease in numerous settings.
- Assisting in the monitoring and ongoing evaluation of the vaccine campaign by carrying out an extensive survey over an 8-week period on the proportion of monovalent H1N1 vaccine given to various vaccine target groups.
- Preparing special analysis of influenza risk and severity by various underlying risk factors, by age, by occupation, and by race and ethnicity to guide response activities.
- Carrying out daily (for three weeks) and then weekly conference calls on H1N1 surveillance, case response, and prevention and control with CHD staff, throughout the outbreak.
- Conducting special ad hoc just-in-time trainings on H1N1 surveillance, case response, and prevention and control for CHD staff
- Participating directly in outbreak investigations and in CDC multi-state data collection and analysis projects on occupational risk and on risk to pregnant women.

- Staffing meetings of an external Guidance and Analysis Group which produced policy advice for the IMT on topics such as vaccine priority groups and use of personal protective equipment.
- Designing and implementing new surveillance systems in mid-epidemic, specifically the system to monitor intensity of influenza activity in 10-12 specific settings in each county on a weekly basis, in addition to the overall assessment of influenza activity.

References: Weekly Epidemiology Influenza Reports

Analysis: Epidemiology surveillance was expanded to support disease investigation and monitoring in accordance with CDC guidelines. Surveillance activities continued throughout the entire campaign and aided in the reporting of cases and consultation to county health departments and the healthcare and medical communities. The weekly Influenza Surveillance Report was used to inform the situation report, the Incident Action Plan (IAP), and the Weekly Media Report distributed through the Governor's Office, and to brief the IMT and the FDOH executive offices. The Bureau of Epidemiology held weekly meetings with the Situation Unit to review and explain the content of the Influenza Surveillance Report.

Recommendation: That FDOH continue to compile and publish weekly surveillance reports during active influenza pandemics or seasonal outbreaks.

CAPABILITY 2: PUBLIC HEALTH LABORATORY TESTING

Capability Summary: The Laboratory Testing capability is the ongoing surveillance, rapid detection, confirmatory testing, data reporting, investigative support, and laboratory networking to address potential exposure, or exposure, to all-hazards which include chemical, radiological, and biological agents in all matrices including clinical specimens, food and environmental samples, (e.g. water, air, soil). Such all-hazard threats include those deliberately released with criminal intent, as well as those that may be present as a result of unintentional or natural occurrences.

Activity 1: Sample and Specimen Management

Observation 1: Laboratory Staffing and Support -- Strength. The Bureau of Laboratories (BOL) maintains a cadre of analyst and support staff at five locations throughout Florida who are trained and experienced in a myriad of laboratory procedures. They provide screening, monitoring, reference, research and emergency and public health laboratory services to CHDs and other official agencies, physicians, hospitals and private laboratories. Standard operating procedures (SOP) for pandemic influenza were used for all phases of analysis. The main elements supporting this activity include: the laboratory incident command system; SOPs; the need to develop further training and exercises; supplies and equipment necessary for support; and the use of Advanced Capacity Hospital Laboratories (ACHLs).

References: BOL Table of Organization and SOP

Analysis: Incident command was established by FDOH early in this event and the BOL possess a well defined chain of command. There were some issues regarding the

reporting of results early in the process because of the large initial influx of samples. However, the BOL had sufficient flexibility to make scheduling adjustments and subsequent analysis and reporting became more routine.

Recommendations: That BOL continue to review its Table of Organization and SOP to retain response flexibility.

Observation 2: Laboratory Surge -- Area for Improvement. There were initial laboratory surge issues associated with staffing and procurement.

References: BOL Table of Organization and SOP

Analysis: Laboratory operations were expanded during the response to handle the higher volume of testing for H1N1 influenza. This increased the ability to identify strains of H1N1 for an extended time period. It also made data collection, entry and reporting more efficient. Just in time training is an important component of many emergency response plans, however, because of the skill levels required, this type of training was difficult to perform for laboratory surge staff and others who are not routinely involved in processing influenza specimens. It should be noted that available additional licensed staff were all trained rapidly (within 10 days), however, due to budget cutting over the years, there were not enough licensed staff at the appropriate technologist level to cover the amount of work.

Large procurements for supplies, nucleic acid extraction kits, and reagents were expedited, but took a lot of supervisory staff time that could have been focused on laboratory analysis. Purchasing card (P-Card) limits were raised from \$1,500 to \$2,500 per expenditure, which did help for smaller purchases. Viral transport media was in short supply toward the end of the first week. Most laboratories were well stocked with supplies purchased with pandemic influenza grant funds but replenishment was a problem.

ACHLs were not well positioned to provide any surge relief support to BOL. They did not have access to the CDC reagent kits, nor were they screening for influenza type A for the BOL facilities.

Recommendation: That more licensed Clinical Laboratory Improvement Act (CLIA) certified laboratory staff be trained to perform PCR analysis for influenza and that non-BOL, (e.g., CHD), staff be trained to perform the various non-technical duties required for surge support of laboratory testing. Staffing, at the scientist level, at the BOL needs to be evaluated for an increase to be able to cross-train and maintain expected performance levels in reserve.

Activity 2: Provide Surveillance Support

Observation 3: Laboratory Coordination -- Area for Improvement. Communications in support of surveillance was initially an issue. Communications to and from the laboratory included the following elements: publication of guidance and algorithms for testing and specimen collection; reporting of results; phone calls to the laboratory from providers; the use of call centers; calls from the media.

References: BOL Table of Organization and SOP

Analysis: Federal guidance for clinicians and hospitals changed frequently – particularly at the beginning of the pandemic. Most of the initial guidance and recommendations were based on templates and assumptions created for avian influenza (H5N1) pandemic plans. Many providers either did not receive the most recent guidance in a timely manner, or did not adhere to the guidance recommendations, and were collecting specimens for diagnostic purposes or as a response to other pressures. The CDC, WHO, and FDOH were receiving intelligence about the pandemic at a pace that made it very difficult, at first, to develop a standard guidance. Regional epidemiologists are physically situated at the BOL facilities. This helped to facilitate communications between the BOL and epidemiology staff.

The length of time it took for CDC to report results were inconsistent in the early days of the pandemic ranging from two to six days. When BOL had validated the CDC assay, the reporting timeframe for positives was 24-48 hours. The automated laboratory reporting system (LabWare) utilized by BOL had an effective interface with the outbreak module in the MERLIN disease surveillance system. However, not all CHD epidemiologists used the system consistently. Instead, they called the laboratories for these results. In the first few days, reporting and the tracking of specimens through LabWare took longer than anticipated because of the time required to enter data and verify results. This improved after the first two weeks. In some cases, training for LabWare was difficult and time-consuming. Over time, virology staff became more proficient as they became exposed to the system.

Many lab staff reported that there were large volumes of calls that often distracted them from the time needed to test clinical specimens. Most of the calls were from providers seeking results, ordering supplies, asking questions about guidance on how to correctly submit specimens, and from the media inquiring about positive results. Conference calls in the first two weeks took up to 3.5 hours per day.

Recommendation: Most of the initial surge and communication issues were resolved as the pandemic progressed and procedures and guidance were standardized. While initially, FDOH Laboratories were the only venue for diagnostic testing, the following remains for future consideration:

That FDOH continue to educate health care providers (including those affiliated with the CHDs) that the primary role of the public health laboratory is to support influenza surveillance activities, rather than to provide diagnostic testing for the providers.

CAPABILITY 3: MASS PROPHYLAXIS

Capability Summary: Mass Prophylaxis is the capability to protect the health of the population through the administration of critical interventions in response to a public health emergency in order to prevent the development of disease among those who are exposed or are potentially exposed to public health threats. This capability includes the provision of appropriate follow-up and monitoring of adverse events, as well as risk communication messages to address the

concerns of the public. For the purposes of this AAR/IP, Mass Prophylaxis includes both the distribution of antivirals and the H1N1 Vaccination Campaign.

Activity 1: Direct Mass Prophylaxis Tactical Operations

Observation 1: Antiviral Distribution -- Strength. The CDC recommended the early use of antiviral medication for the treatment and/or prevention of infection in those at increased risk for complication of influenza. The priority uses for flu antiviral medications were to treat severe flu illness and to treat sick people who have a condition which placed them at high risk for serious flu-related complications. While national stockpiles of antivirals were made available from the CDC they were unfortunately distributed to the states several weeks after the H1N1 campaign began. In the interim, FDOH prepositioned its limited stockpile of 70,000 regimens of antiviral medication from the state stockpile to the CHDs. While this was sufficient until the CDC National Stockpile antivirals were received, it would not have been adequate for a more severe disease outbreak. When CDC National Stockpile antivirals were received, they were combined with the state stockpile to form Florida's Public Antiviral Stockpile. There were also insufficient quantities of pediatric doses. This required the department to work with pharmacies and healthcare professionals and provide guidance for diluting adult dosages for pediatric use.

References: IMT Table of Organization, Pandemic Annex to FDOH EOP and Florida CEMP, H1N1 Pharmaceutical & Medical Logistics Florida Action Plan, July 6, 2009, Public Antiviral Stockpile Program Concept of Operations, Version 2.0, 64F-12.011 Florida Administrative Code

Analysis: Antiviral medications were distributed through the Public Antiviral Stockpile Program to ensure that persons with influenza-like-illnesses had access to these medications, regardless of their ability to play. Through the use of distribution warehouses, the Bureau of Statewide Pharmaceutical Services (BSPS) was able to distribute mass quantities of Antiviral medication to all 67 CHDs within a six-hour time frame. Floridians were able to access antiviral medication through CHDs, clinics, physician offices, hospital emergency rooms, and local pharmacies. Through partnerships with these healthcare entities and the eventual successful establishment of memorandums with seven large chain drug stores, the Public Antiviral Stockpile Program distributed over 425,000 regimens of antiviral medication and dispensed nearly 36,000.

There were delays in distributing antivirals to retail pharmacies because of the need to address legal constraints. Antiviral distribution on the scale accomplished during this event had not been done before. Eventually antivirals were distributed to 1,285 retail pharmacies throughout the state.

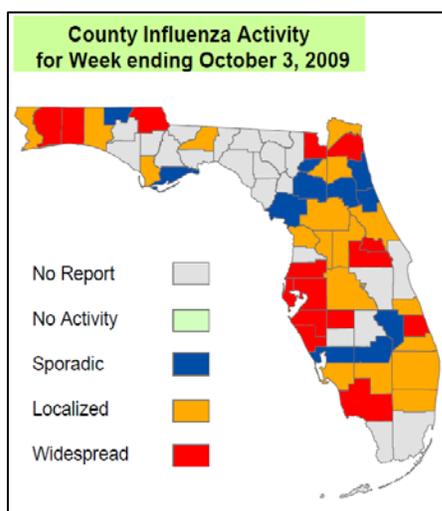
The Florida State Surgeon General's (SSG) Public Health Emergency Declaration on May 1, 2009, helped to lesson legal impediments to this distribution. Further efforts by the department established this process first in an emergency rule and then as permanent rule changes. This change to Florida Administrative Code put a system in place that will allow FDOH to partner with retail pharmacies to dispense public stockpile antivirals. This should prevent delays and expedite distribution if necessary in the future.

Recommendations: Most of the initial antiviral distribution issues were resolved as the pandemic progressed and procedures and guidance were standardized. The following remains for future consideration:

1. That more thought and planning are necessary to better coordinate distribution systems between FDOH and non-FDOH entities.
2. That there is a need for a better system of inventory management for the multiple facilities used as distribution centers.
3. That future pandemic planning includes consideration for Florida antiviral stockpiles sufficient to meet emergency disease response needs.

Observation 2: Vaccine Distribution -- Area for Improvement.

Figure 3: Weekly Influenza Surveillance



Florida was one of the first states affected by H1N1. Following the opening of schools in the fall, the disease accelerated and then peaked near the end of September 2009. On October 1, 2009, H1N1 was reported to be widespread in 17 of Florida's 67 counties.

The Florida Department of Health was responsible for coordinating the administration of H1N1 influenza vaccine in the state. This included educating the public and providers about the vaccine, enrolling providers to administer the vaccine, coordinating the allocation and ordering of vaccine, and tracking doses administered in Florida. The Mass Vaccination Branch was established within the IMT to develop and manage the vaccination distribution and was staffed by the FDOH Bureau of Immunization (BOI).

CHDs were responsible for coordination at the local level. Large numbers of private providers and community partners were already or quickly enrolled in Florida SHOTS, the state immunization registry. In order to receive H1N1 influenza vaccine, registered providers had to sign agreements and registration forms for H1N1. Over 4,800 private providers in Florida SHOTS opted to participate in the campaign. Approximately 1,700 additional private providers and community partners requested less than 100 doses of vaccine and received their vaccine and supplies through agreements with their local county health departments.

In January 2010, CDC began shipping vaccine directly to pharmacy chains and retail outlets to administer vaccine. This helped the vaccination campaign. Retail pharmacies reported a total of 235,449 doses administered.

References: IMT Table of Organization, Pandemic Annex to FDOH EOP, Pandemic Annex to Florida CEMP, Mass Vaccination Campaign Technical Assistance Guide, and Mass Vaccination Provider Engagement Concept of Operations.

Analysis: Based on best available data, at least 2.39 million doses have been reported as administered out of over 5 million doses received. A Mass Vaccination Program

Dashboard was established and available on the FDOH Intranet to report vaccination data. The overall management of the FDOH immunization program is a strength, however, there is an area for improvement in accountability practice.

Providers and community partners already registered in Florida SHOTS were asked to sign up for H1N1 vaccine and complete an on-line agreement. Vaccine doses administered were to be reported via the SHOTS program. This on-line immunization registry was of significant value in tracking presentations ordered, vaccine shipped and doses administered. However, to remove barriers for participating in the campaign, providers who chose not to enroll in Florida SHOTS, were offered the opportunity to participate by signing an agreement with the local CHD. These providers completed aggregate vaccine administration data reports for the local CHDs. The lack of a uniform method to ensure reporting and accountability of doses administered resulted in delayed or non-reporting, lack of clarity related to presentations administered, and difficulty measuring the reach of the campaign.

Recommendation: That procedures for allocating future vaccine to private providers as part of a mass vaccination campaign should consider the requirement for all to register in Florida SHOTS, the state immunization registry, to receive a vaccine allocation. However, lack of participation in Florida SHOTS should not preclude reporting by private providers.

Activity 2: Conduct Mass Dispensing

Observation 3: Vaccination Campaign -- Strength. On September 30, 2009, Florida placed its first order for H1N1 influenza vaccine. The first doses were received on October 8, 2009 and administering vaccine began on the 12th. On October 16, 2009, the CDC announced delays in vaccine availability and supplies. Because initial availability of vaccine was projected to be low and anticipated supplies unknown, the CDC recommended that early doses should be prioritized for at risk populations that included:

- Pregnant women
- People who lived with or cared for infants age <6 months
- Healthcare and emergency medical personnel
- Children and young adults (six months to 24 years)
- Persons (aged 25-64) with medical conditions that put them at high-risk

High risk medical conditions included persons with asthma, emphysema, diabetes, heart disease, neurological disease, and kidney disease.

The CDC recommendations were based on the recommendations of the Advisory Committee on Immunization Practices (ACIP) for the use of Influenza A (H1N1) 2009 monovalent vaccine. The recommendations of the ACIP were published in August 2009.

References: IMT Table of Organization, Pandemic Annex to FDOH EOP, Pandemic Annex to Florida CEMP.

Analysis: Clinics were organized and conducted by CHDs. Many of the early clinics had to be rescheduled due to vaccine production delays. There were also limited

reports of persons being turned away because they were not in one of the priority groups.

The local CHDs were creative and innovative in their approach to offering the vaccine and reaching various populations of Floridians. In addition to local county health departments clinics were held in day care centers, elementary schools, high schools, colleges and universities, malls, sports events, shelters, migrant camps, senior centers, flea markets, churches, community centers, and worksites. The clinics proved very successful in demonstrating CHD response capabilities. Vaccine clinic information was made available via the FDOH and Local Internet sites and by calling the Flu Information line. FDOH helped counties with the development of a standard format and process to provide consistent and updated information to the public.

Conducting clinics at schools was successful in some counties but local decisions not to conduct school based clinics in other counties limited this approach. Issues related to vaccine safety concerns, liability concerns, obtaining parental consent, and interruption of standardized testing programs were given as reasons by some school districts for not conducting school-based clinics.

Florida statutes allow pharmacists to administer adult vaccine. Their participation enhanced the vaccination campaign. While pharmacies and private providers could not charge for the vaccine, fees for administering the vaccine were authorized but could not exceed the regional Medicare vaccine administration rate.

By December 4, 2009, the vaccination supply was sufficient to expand the vaccination program beyond the priority groups. Counties were authorized to expand provision of the H1N1 flu vaccinations beyond the five priority groups based on local availability of vaccine. Counties developed plans which allowed them to expand vaccination availability to additional population groups to meet their respective population's demands.

By mid January 2010, certain lots of the vaccine began to expire. Planning for the retrieval and disposal of expired, spoiled and unused vaccine began.

By the end of March 2010, more than 2.3 million Floridians received the H1N1 vaccine.

Recommendation: That lessons learned from the H1N1 mass vaccination campaign, including an ongoing need for education and collaboration regarding school based vaccination clinics, be reviewed for incorporation into the references cited above.

Activity 3: Monitor Adverse Events

Observation 4: VAERS Management -- Strength. The Vaccine Adverse Event Reporting System (VAERS) monitors the safety of licensed vaccines. VAERS is a national program managed by the Centers for Disease Control and Prevention (CDC) and the Food and Drug Administration (FDA) to collect information about adverse events that occur after the administration of vaccines. An adverse event is a health problem that is reported after someone gets a vaccine or medicine. It *may* or *may not* have been caused by the vaccine or

medicine. Some of these events may occur by chance during the period following vaccination, while others may actually be caused by vaccination.

VAERS is not able to determine that a vaccine caused or did not cause an adverse event. VAERS is primarily used to detect signals that may require further investigation.

Anyone can file a VAERS report. VAERS classifies each report as serious (associated with disability, hospitalization, life-threatening illness, or death) or non-serious (mild side effects such as fever). Most reports submitted describe mild side effects.

The IMT Mass Vaccination Branch was responsible for managing VAERS reports in coordination with the IMB.

References: IMT Table of Organization, Florida VAERS Reports, Pandemic Annex to FDOH EOP.

Analysis: In addition to using VAERS reports to monitor adverse events, Florida established an Adverse Reactions Call Center as part of its H1N1 Florida Flu Information Line. The call line was established to allow persons who think they may be having a medical problem after a vaccination to consult with a healthcare member, about the event, through the Florida Poison Information Center Network.

As of May 31, 2010, the Florida Adverse Reaction Call Center received 427 calls. Reports of all calls are reviewed by the State VAERS Coordinator and forwarded to the designated CHD for the client’s county of residence. CHD staff review the reports and use professional, clinical judgment to determine if follow up is required. To date, all calls have been reviewed and classified as minor effects.

On a weekly basis, the State VAERS Coordinator receives VAERS reports through the CDC Epidemic Information Exchange (Epi-X) Network. The report identifies self-reported serious adverse events. Serious adverse events are reported as: patient died, life threatening illness, short term hospitalization, prolonged hospitalization, and permanent disability. CHD staff follow-up on all serious adverse events to determine if the client fully recovered, required ongoing medical care, or could not be contacted.

The following tables provide a summary of all adverse events reported.

Table 3.1: Florida H1N1 Adverse Reports

Florida H1N1 Adverse Reports as of May 31, 2010		
	VAERS Florida Data	Florida Adverse Reactions Call Center
Non-Serious	416	427
Serious	50	0
Total Reports	466	427
% of adverse reports - Serious	11%	0%
% of all vaccines administered - Serious	0.2/1000*	0%

* This number likely represents an overestimate as the number of doses administered is probably higher than reported.

Table 3.2: Characteristics of Florida VAERS Serious Reports

Characteristics of Florida VAERS Serious Reports as of May 31, 2010				
Disposition	Frequency	Percent of Total	Known Outcome	Comments
Death	4	8%		Preliminary findings do not indicate a common cause or pattern to suggest that deaths were associated with the vaccine. Cases are under further review by CDC
Life Threatening	6	12%	3 fully recovered 3 ongoing medical care	Anaphylactic type symptoms, resolved with treatment
Hospitalized	28	56%	15 fully recovered 5 ongoing medical care 6 pending 2 unable to contact	The number of days ranged from 2 to 22. Average length of stay was 4.3 days. The majority of individuals hospitalized had multiple dispositions that were resolved with treatment.
Prolonged Hospitalization	5	10%	2 fully recovered 3 ongoing medical care	
Permanent Disability	6	12%	2 ongoing medical care 3 pending 1 unable to contact	This classification is based on initial reports.
Other*	1	2.1%	1 pending	
Total	50	100%	20 fully recovered 13 ongoing medical care 10 pending 3 unable to contact 4 deaths	

*Reported by manufacturer as Other Medically Important Condition (OMIC)

The number of Florida reported adverse events is a small number compared to the total number of persons immunized. However, each report is taken very seriously and attempts are made to make contact with the affected person and follow-up. Florida continues to closely monitor all adverse events through its ongoing Bureau of Immunization activities.

Recommendation: That lessons learned from the H1N1 mass vaccination campaign be reviewed for incorporation into the Pandemic and Mass Prophylaxis and Treatment Annexes to FDOH EOP.

Activity 4: Demobilize Mass Prophylaxis Operations

Observation 5: Antiviral retrieval and disposal -- Strength. Large numbers of Public Antiviral Stockpile Program antivirals were distributed to CHDs, healthcare partners, and

retail pharmacies. The BSPS provided guidance and support relating to the proper storage, utilization, and recovery of antiviral medications.

References: Public Antiviral Stockpile Program Concept of Operations, Version 2.0 and DOH Memorandum of Understanding with Retail Pharmacies

Analysis: Responsibilities and instructions for the recovery of unused or expired antivirals from CHDs, retail pharmacies or other health care entities is delineated in the BSPS Public Antiviral Stockpile Program Concept of Operations and Memorandum of Agreements between the department and retail pharmacy chains. Options were put in place on the Central Pharmacy Internet page for transfer of antivirals back to the FDOH Central Pharmacy. Specific return procedures were written and distributed to retail pharmacies at the end of March 2010. These procedures were followed up by conference calls between March 30 and April 1 with each of the retail chains receiving the antivirals to discuss the demobilization of the Public Antiviral Stockpile Program and retrieval of the unused medicines. Procedures were also developed for the disposal of expiring Public Antiviral Stockpile Program antivirals stored at the State Logistics Response Center in Orlando.

Recommendation: That procedures developed and written into Central Pharmacy plans and operating procedures for the transfer back of antiviral from retail pharmacies be incorporated into the Pandemic Annex of the FDOH EOP.

Observation 6: Integration of H1N1 Vaccinations into Daily Operations -- Strength. Extensive planning and preparation went into the H1N1 vaccination campaign. Lessons learned are being incorporated into daily operations. Late spring and summer of 2009 was used to determine the best strategies to reach the target populations and how best to use limited resources. Vulnerable population data was used at both the state and local level. Partnerships with the private sector and community were formalized through MOUs/MOAs with the intent to expand the access options for the groups to be immunized.

Vaccine was received in Florida on October 8, 2009 and administration began on October 12. For the next 8 weeks the focus of the clinics, PODs, and outreach was the five priority groups. Extensive marketing and promotional efforts were conducted as the vaccine availability continued to increase. Worksite and community partners were pursued.

By the end of November, it was apparent that Florida had more vaccine than needed to meet the demand. Target groups were expanded and marketing continued. By the end of March, participation and demand for H1N1 specific clinics was low. At this point, local CHDs integrated H1N1 vaccination into their daily operations, clinics, and programs. At the local level, the CHDs continued to advertise and promote the availability of H1N1 vaccine and responded to requests for "H1N1 clinics" in worksites, partner agencies, and from community groups. At the state level, communications continued to promote the availability of vaccine and the benefits of getting vaccinated. To date, the local CHDs continue to offer H1N1.

References: FDOH Board of MQA, H1N1 CHD Technical Assistance Guide (August 24, 2009), Statewide Pharmaceutical Policies and Procedures for County Health Departments (DOPH 395-1-08), Bureau of Immunizations CHD Immunization Technical Assistance Guidelines.

Analysis: As the demand for H1N1 vaccine declined, efforts were made to promote the vaccine based on the benefits of getting vaccinated and removal of any barriers to access to the vaccine. Integration of H1N1 vaccinations into all clinics and day-to-day operations expanded access to unvaccinated persons. The flexibility of the local staff related to taking the vaccine to private worksites and other community partners was positively received. To date, the local CHDs continue to offer H1N1 vaccine and are including it in their back to school programs. Community requests are also still being honored.

Recommendation: That FDOH continue to promote and offer the H1N1 vaccine per CDC and ACIP guidelines, until the 2010 seasonal trivalent vaccine, containing the H1N1 vaccine, is available to all.

Observation 7: Vaccine retrieval and disposal -- Area of Improvement. During the 2009 - 2010 H1N1 Influenza Vaccination Campaign a variety of vaccine presentations were used. Over 5 million doses of H1N1 vaccine were distributed to providers statewide. Approximately 2.3 million does of vaccine have been administered. All of the state's 67 CHDs (many with multiple service sites) participated in the campaign. A major part of the H1N1 Campaign was the partnership with private sector primary care physicians and community providers, in order to increase access to the vaccine. Approximately 6, 500 private providers entered into agreements with the Florida Department of Health. Many still have unused and expired vaccine on site.

As the H1N1 flu season came to an end, it was apparent that there were significant quantities of vaccine that was expired, spoiled or waste vaccine. The two issues that needed to be addressed were accountability regarding the unused vaccine and proper disposal of the vaccine. Expiration dates for the vaccine ranged from March 2010 through June 2011. Based on CDC's agreement with the manufacturers, returning the unused vaccine to the manufacturer was not an option. In Florida, disposal of large quantities of vaccine needed to address Board of Pharmacy Rules, as well as, environmental and waste disposal concerns. Florida is fortunate to be a state that has a central pharmacy providing a potential mechanism for distribution. However, current rules impose barriers on FDOH accomplishing centralized vaccine retrieval and disposal, from entities that received vaccine from sources other than the Central Pharmacy.

As early as March 2010, it became apparent that the department would need a mechanism for disposal of vaccine. The states were advised that CDC was going to establish a national program for the recovery and disposal of H1N1 vaccine. However, at that time, no date for when the program would be operational was provided. The IMT Mass Vaccination Branch also recognized the need for a mechanism for disposal of vaccine and decided to begin the competitive procurement process for securing a Florida licensed universal pharmaceutical waste disposal company. Securing a vendor is a lengthy process and could be stopped at any point up to the execution of a contract if the national program became operational and met Florida's needs. This would provide two options, if necessary, for disposal of the vaccine.

References: FDOH Board of MQA, H1N1 CHD Technical Assistance Guide (August 24, 2009), Statewide Pharmaceutical Policies and Procedures for County Health

Departments (DOPH 395-1-08), Bureau of Immunizations CHD Immunization Technical Assistance Guidelines

Analysis: The H1N1 vaccine was shipped directly to CHDs and partners and did not go through FDOH Statewide Pharmacy Services, therefore the FDOH Pharmacy could not retrieve the expired and unused vaccine. Handling of pharmaceuticals, such as retrieval and disposal of outdated prescription medications, is controlled by Board of Pharmacy Rules. The lead agency administering pharmacy rules is the Department of Health Division of Medical Quality Assurance. It became apparent that it would be necessary to secure the services of a Florida Licensed Universal Pharmaceutical Waste Disposal vendor to conform to Board of Pharmacy rules. The majority of the CHDs and community partners do not currently have access to such services and disposal of the expired, spoiled or waste H1N1 vaccine will result in unanticipated costs to CHDs and H1N1 partners requiring such services for the disposal of vaccine. As the vaccine began to expire, it became important to address vaccine issues and concerns.

The delay in getting national guidelines and confusion over environmental disposal requirements led to CHD confusion and frustration in working with community partners and planning for retrieval and disposal. Planning for future mass immunization programs at the local, state, and federal levels should include vaccine retrieval/disposal at the end of the campaign.

In March 2010, all CHDs and community partners were advised to remove 2010 H1N1 vaccine that was expired, spoiled, or waste vaccine from the unexpired inventory. The goal was to assure that there would be no potential for medication errors. Instructions to CHDs and community providers included directions to box, seal, mark expired vaccine "quarantined," and store in a locked room until directions for disposal and appropriate procedures were available. CHDs and community partners were informed that they should hold stocks of vaccine set for disposal until further notice. They were advised that there was the potential for access to a federal program, once established, or that the department would secure the appropriate services and cover the cost of disposal. The department pursued the competitive procurement process until it was announced that the federal program was operational. Required information for providers was sent to CDC, as requested, and it is anticipated that identified providers will be able to participate in the national program this summer for the 2010 expired vaccine and in the fall for the vaccine that will expire in 2011.

Recommendations:

1. That FDOH review and consider policies that would allow for future state centralized vaccine distribution, retrieval and disposal.
2. That current plans and procedures be reviewed and updated as necessary to provide clear guidelines on the disposal of expired, spoiled, or waste pharmaceuticals and coordinating with the CDC.

CAPABILITY 4: EMERGENCY PUBLIC INFORMATION AND WARNING

Capability Summary: The Emergency Public Information and Warning capability includes public information, alert/warning and notification. It involves developing, coordinating, and

disseminating information to the public, coordinating officials, and incident management and responders across all jurisdictions and disciplines effectively under all hazard conditions.

Activity 1: Issue Public Information Alerts/Warnings, and Notifications.

Observation 1: Emergency Public Health Information Management -- Strength. Beginning with the first US H1N1 cases, FDOH began constructing an information distribution system to provide up-to-date and relevant information to state government decision makers, the health and medical communities, and the general public using multiple means of communications. The IMT evolved to include the FDOH Communications Officer with a link to the Joint Information Center and an Information Management Branch (IMB) staffed by the Office of Communications, Office of Emergency Operations, and the Office of Public Health Preparedness.

References: IMT Table of Organization, Pandemic Annex to FDOH EOP, Pandemic Annex to Florida CEMP, and IMB SOG.

Analysis: The State Surgeon General established a weekly bulletin to keep the health and medical communities informed and later established weekly conference calls with County Emergency Managers, CHDs, and the Florida Department of Education. As the complexity of the pandemic response widened, daily media updates and social media news, such as Twitter and Blogs were collected and distributed.

At the beginning of the campaign, the Florida Emergency Information Line was activated to provide telephone response to H1N1 calls. This line was open for approximately ten days. In August, 2009, the Florida Flu Information Line was established to answer questions and concerns from the public. In early October, as vaccine started arriving in Florida, the information line was expanded to include call centers for healthcare providers and persons with possible adverse vaccine reactions. The three call centers: one for the public, one for healthcare providers, and one for adverse reaction reporting were toll free and operational 24 hours per day, 7 days per week. Operators were available at the public call line from 8 am to 8 pm. The call centers served to alleviate call surge to CHDs. During the course of the event, more than 54,000 calls were made to the *Flu Information Line*. See Enclosure 2: Distribution of Calls to the Florida Flu Information Line. Medical doctors and registered nurses topped the list of callers selecting the healthcare line.

An H1N1 Internet webpage was established in May 2009 to provide the public and healthcare providers with up-to-date information. In August, a website to report pandemic influenza news and developments distinct from the FDOH Internet site was established as *MyFluSafety.com*.

The *MyFluSafety* Internet site was updated weekly, and as necessary, with public and healthcare provider information. From its inception in August 2009 through May 31, 2010 more than 156,000 visitors to the site were recorded. Especially useful components of the Internet site proved to be the Weekly Epidemiology Surveillance Report, the Frequently Asked Questions Q&A segment, and the County Vaccine Clinic information and schedules segment. The number of views peaked at the beginning of the reporting period and tapered off as the disease diminished. An H1N1 page was also

added to the DOH Intranet to provide greater access to information and technical information to FDOH and CHD staff.

Florida's disease peaked early in the event, before vaccine was readily available. FDOH engaged in a number of activities to mitigate the H1N1 pandemic. Resources and information related to seasonal flu provided a strong basis for educating the public. FDOH produced public service announcements and posters related to health hygiene and vaccination topics. These were available free to schools, businesses, and the public. As part of the overall media campaign, other methods of communication included establishing a "speaker's bureau" and televised summits for the general public and healthcare professionals. While the public and healthcare providers were advised of ways to protect themselves, prevent infection, and reduce transmission, in retrospect, this information should have been provided earlier and with greater emphasis.

The IMB communications team was expanded to review and update information on a daily and weekly basis. Information was prepared and reviewed by subject matter experts prior to distribution to scripts, reports and the websites. A weekly review of the website visits via Web Trends Analysis was conducted to determine what users were interested in. These areas were then enhanced and access increased. Reviews of the call centers logs provided similar data.

There were vaccination campaign challenges that IMB worked within the IMT to overcome. The initial at risk populations established by CDC for vaccination priority were different from the normal seasonal flu demographic, which includes persons 65 and older. Marketing the two different concepts of H1N1 vaccine to a younger population and seasonal flu vaccine to a traditional at risk population proved confusing and frustrating to providers and the public. Another challenge was the lack of an Executive Order which could have eased contracting with vendors for communication and marketing campaigns.

Confusion about the target populations coupled with vaccine shortages, production delays, and safety concerns may have contributed to a lower level of participation in the vaccine campaign. Despite ongoing communication efforts, an insufficiency of consistent and timely public information on the safety and effectiveness of the vaccine also likely impacted public demand for the vaccine.

By the time vaccine became available to all populations, the occurrence of H1N1 flu infection in Florida, which was one of the first states with confirmed cases, was declining. The public perception appeared to be that the pandemic was not as severe as originally thought and was nearly over. Marketing efforts to reach underserved and minority groups were intensified but overall Florida public participation remained low in spite of efforts at the state and local levels.

Recommendation: That lessons learned from the H1N1 mass vaccination campaign be reviewed for incorporation into the references cited above.

Activity 2: Provide Public Rumor Control.

Observation 2: Rumor Control Procedures -- Strength. Misinformation related to the vaccination campaign in the form of rumors, letters, email, and calls to the Florida Flu

Information Line were common. These often addressed the safety of the vaccination and mandatory vaccination or quarantine for the public. A Rumor Investigation Control Unit was established within the IMB and staffed by Office of Public Health Preparedness and the Office of Communications.

References: IMB Rumor Investigation and Control Standard Operations Guidelines.

Analysis: Florida was fortunate not to have many state specific problems with rumors, scams or fraud related to H1N1. Florida Flu Information Line questions, CHD conference calls, media reports, and social media sites were regularly monitored for rumors and reports of fraud and scams. FDOH addressed national reports of fraud and scams as well as rumors about safety issues and misinformation found in the media and on social media sites. Many questions, concerns, and internet and social media reports related to safety and effectiveness of the vaccines, led to the call center and subject matter experts spending a significant amount of time responding to the issues.

Information was shared on the FDOH MyFluSafety.com website and through updated scripts provided to Florida Flu Information Line operators. News releases and media updates were prepared as needed and distributed by the Office of Communications. Information and facts countering national fraud and rumor alerts were often posted to MyFluSafety.com within hours of surfacing. Florida providers and consumers were advised to report suspected scams and price gouging incidents to the Attorney General's office for investigation and the Attorney General's Hotline number was posted on the website. At this time, there is only one documented complaint related to price gouging filed with the Florida Attorney General's Office. In addition, a vaccine attitude survey of healthcare providers (public and private) is underway.

Recommendation: That lessons learned from the H1N1 incidents of rumors, fraud, and scams be reviewed for incorporation into the All-Hazards Rumor Control SOG being developed to expand on the guidelines established for the IMB in response to the H1N1 pandemic.

CAPABILITY 5: MEDICAL SUPPLIES MANAGEMENT AND DISTRIBUTION

Capability Summary: Medical Supplies Management and Distribution is the capability to procure and maintain pharmaceuticals and medical materials prior to an incident and to transport, distribute, and track these materials during an incident.

Activity 1: Direct Medical Supplies Management and Distribution Tactical Operations

Observation 1: Logistics Support -- Area for Improvement. A Logistics Section was established within the IMT to manage pharmaceuticals, staffing resources, and materials. The Materials Unit was responsible for medical supplies management and distribution.

References: IMT Table of Organization, Logistics Support Annex (DRAFT) to FDOH EOP

Analysis: The duration and extent of FDOH logistics support and resource management for the H1N1 Pandemic response has been unprecedented and although

this activity is listed as an Area for Improvement, logistics and warehouse staff worked long hours to help ensure the expeditious distribution of medical supplies to CHDs, schools, hospitals, and other health and medical organizations.

Typically, disaster logistics support is targeted to specific regions and counties that are impacted by the disaster. Florida has experience in pre-positioning Strategic National Stockpile (SNS) resources. However, in responding to the H1N1 pandemic, the impact was statewide with immense quantities of antivirals, PPE, and other support equipment and medical supplies and materials arriving from federal agencies and their contractors, sometimes on a daily basis. The response rapidly stretched storage capacity and staffing. Prior hurricane and other disaster responses provided FDOH with an understanding on managing and distributing supplies and equipment. However, because of the relative short duration of other emergencies there was no foreseen requirement to develop an overarching logistics *strategy* for tactical operations.

Initially, the Logistics Section had no system in place to document what orders had been processed or to track order status. The Resource Unit was established within the Planning Section of the IMT. Tracking inventories of antivirals, PPE, and other items of equipment and supplies over several different systems was a major challenge that the Resource Unit successfully met and managed. However, as a lesson learned, the Resource Unit should have been brought in earlier in the course of the event to assist with documenting and reporting information.

The Logistics Section initially did not have a system for having medical staff review and approve orders for medical equipment and supplies. This led, at least in one case, to ordering an incorrect medical resupply item.

Except for a brief period at the beginning of the pandemic event, the Florida SERT was not activated. There was no Governor's Executive Order issuing a state emergency declaration. The lack of an Executive Order posed response constraints for Logistics operations that could have eased routine purchasing and contracting rules.

As a result and on a continuing in-process review of logistics tactical operations and lessons learned, the FDOH Office of Emergency Operations developed a draft Logistics Support Annex to FDOH EOP for future support disaster response.

Recommendation: That the draft Logistics Support Annex be finalized and used for emergency response to future disasters.

CAPABILITY 6: RESPONDER SAFETY AND HEALTH

Capability Summary: Responder Safety and Health is the capability that ensures adequate trained and equipped personnel and resources are available at the time of an incident to protect the safety and health of on scene first responders, hospital/medical facility personnel, and skilled support personnel through the creation and maintenance of an effective safety and health program.

Activity 1: Identify Safety/PPE Needs and Distribute PPE

Observation 1; Receiving and distributing personal protective equipment (PPE) -- Strength. On April 30, CDC began shipping a 25% of 25% allocation of the state SNS allocations of PPE to treat confirmed cases and their contacts in an attempt to reduce virus spread through case containment. PPE supplies were scarce early in the pandemic response. Additional N-95 respirators, surgical masks and gloves were purchased through a bid procurement process and were cached in five state warehouses for distribution.

References: Florida Department of Health Purchasing Policies and Procedures DOHP 250-9-08; Guidelines issued August and September 2009 for Health Care Systems, Shelter Systems, Law Enforcement Settings, County School Superintendents/Warehouse Managers, and County Emergency Managers

Analysis: Initially, the CDC and FDOH recommended face masks as a means of protection for healthcare workers, first responders, school nurses and students with flu like symptoms. Ultimately, however, the CDC strongly recommended use of N-95 respirators for the protection of healthcare personnel, with the federal Occupational Safety and Health Administration stipulating that they would monitor and enforce compliance of the CDC recommendation. Florida supported the use of surgical masks when N-95 respirators were not available or not appropriate. FDOH face mask and respirator recommendations were modified as new information emerged and as N-95s became available. FDOH purchased PPE through competitive bidding. Distribution of N-95 respirators was accompanied by guidance related to safety and fit testing. To assist in future events, FDOH is contracting for a statewide "fit test train the trainer" program.

Guidelines for use and ordering of Personal Protective Equipment and safety supplies for law enforcement, health care system, school, and shelter personnel were distributed and posted on the department's intranet site.

Over the course of the H1N1 pandemic, FDOH acquired and stored: 1.6 million adult surgical masks, 385,275 pediatric surgical masks, 7.1 million N-95 masks, and 399,000 gloves. In addition 1.6 million gloves were stockpiled. Of these, the department shipped 839,409 adult and 344,400 surgical masks, primarily to schools, 878,534 N-95 masks and 389,000 gloves. In accordance with CDC recommendations, remaining supplies have been offered to local CHDs for use in their regular clinics and programs. Any counties requesting N-95 masks are required to have a plan or the capability for fit testing in place.

Recommendation: That lessons learned from the receipt, storage and distribution of PPE be incorporated into the FDOH EOP Logistics Support Annex

CAPABILITY 7: ON-SITE INCIDENT MANAGEMENT

Capability Summary: On-site Incident Management is the capability to effectively direct and control incident activities by using the Incident Command System consistent with the National Incident Management System.

Activity 1: Establish Full On-Site Incident Command

Observation 1: Establish, and Maintain Incident Management Team -- Strength. CDC confirmed the first case of H1N1 virus in the US on April 15, 2009. In response to rising numbers of confirmed US cases, on April 22, the CDC activated its Emergency Operations Center, and on April 26, the US Government declared a Public Health Emergency. On the same day, although no cases had yet been reported in Florida, FDOH Division of Disease Control organized an incident command system (ICS) Incident Management Team (IMT) to track the influenza progress and prepare for Florida's response as confirmed cases appeared. To maintain situational awareness continuity, an ESF 8 Situation Unit Leader served as Plans Chief on the IMT.

On April 30, the initial ICS team stood down as the state emergency operation center (SEOC) was activated to Level 2 (partial activation) and ESF 8 was organized as a unified command with the state emergency response team.

Because of the sporadic spread of the virus and low mortality associated with it, on May 15, 2009, the SEOC returned to activation Level 3 (monitoring). ESF 8 stood down, and FDOH returned to an Incident Management Team organization to track disease spread and manage stocks of antivirals to mitigate the virus until the arrival of a vaccine, predicted for October.

References: IMT Organization Chart.

Analysis: The FDOH IMT was reconfigured several times as understanding of the disease progression, urgency in preparing for an early second wave in Florida, and pending availability of vaccine in October grew.

The IMT stated mission was "to provide a structured approach to reduce H1N1 morbidity and mortality by:

1. Developing and implementing policy, guidance, and procedures that reduce the spread of disease and support the care of the ill;
2. Maintaining information outreach;
3. Maintaining a pharmaceutical, personal protective equipment (PPE), medical supply, and equipment support system for county operations;
4. Completing plans and other activities to support a statewide vaccination program; and
5. Maintaining core department operations."

Because of the long duration of the H1N1 event and the necessity for accomplishing item #5 in the mission statement, FDOH staff were rotated among most assigned IMT positions. Although all FDOH staff are required to take basic ICS courses (100 – Introduction to Incident Command System and 700 – National Incident Management System, An Introduction), not as many had the opportunity to see the system fully applied to an emergency situation. This required on-the-job training, but the experiences of those serving in the IMT has now left FDOH with an expanded cadre of capable planners and responders.

Although the response initiative and organizational flexibility is considered as a strength, an area of improvement is the need for IMT standard operational guidelines (SOGs) and job action sheets (JAS). These would have greatly assisted in on-the-job training for inexperienced staff and in process, communications, and position transition for all staff.

SOGs and JAS were developed for some IMT units (e.g., the Disease Control and Information Management Branches) but these were not achieved across the IMT.

The IMT also needed to stand up a documentation unit earlier and have standards established for documentation. This would help accountability, transition of staff, and preserve lessons learned.

The IMT continued as the focus of H1N1 pandemic planning and operations for FDOH and Florida until April 30, 2010.

Recommendations:

1. That the FDOH staff that served on the IMT and staff who may be designated to serve in a future IMT leader position receive refresher and advanced ICS training and participate in periodic exercises to continue to preserve and hone their experiences and skills.
2. That SOGs and JAS continue to be developed as a priority to support future FDOH IMT organizations.

Activity 2: Develop and Execute Incident Action Plans (IAPs)

Observation 2: IAP Development -- Strength. IAPs were developed by the initial IMT established within FDOH Division of Disease Control, the SERT during its Level 2 Activation and by the second FDOH IMT beginning in August 2009.

References: IMT IAPs

Analysis: Florida responds to many emergencies each year. ESF 8 staff are well trained and familiar with preparing and executing IAPs. Many ESF 8 planning staff participated within the IMT and brought their knowledge and experience with them. IAPs were based on ICS form 204. Eighteen IAPs were prepared and executed between August 2009 and April 2010. The IAP format was modified during this time period in accordance with planning information and operational needs.

IAPs were developed from the review of situation reports with input from subject matter experts as well as the IMT staff at scheduled meetings.

Recommendation: That the IMT Documentation Unit archive IAPs as sources of information if response is needed to another pandemic.

Activity 3: Demobilize On-Site Incident Management

Observation 3: Demobilization Plan -- Strength. Demobilization planning began in December 2009. The 2009/2010 H1N1 Pandemic Incident Management Team Demobilization Plan for IMT stand-down and return to routine operations was approved and distributed in early February. After it was distributed, the Demobilization Plan timeline and responsible staff checklists were reviewed and updated at every IMT meeting until the IMT itself was finally demobilized.

References: 2009/2010 H1N1 Pandemic Incident Management Team Demobilization Plan, January 1, 2010.

Analysis: The four basic goals of the demobilization process were to:

1. Eliminate waste;
2. Eliminate potential negative fiscal and legal impacts;
3. Ensure a controlled, safe, efficient, and cost-effective release process; and
4. Work towards closing out the Florida Department of Health IMT response to the 2009/2010 H1N1 Pandemic and facilitate a return to normal operations.

The demobilization plan contained responsibility checklists for all IMT staff, the Incident Commander, Liaison Officer, Legal Council, Public Information, Planning Section, Operations Sections, Logistics Section, and Finance and Accounting Section.

It contained priorities and procedures for release of IMT staff and action timeline checklists. ICS forms 221 (Demobilization Checkout) and 225 (Incident Personnel Performance Rating) were included as enclosures.

Recommendation: That the IMT Documentation Unit archive the 2009/2010 H1N1 Pandemic Incident Management Team Demobilization Plan as a source of information for demobilization of future IMT activations.

SECTION 4: CONCLUSION

Florida was one of the first states affected by H1N1. Cases began to occur in early May 2009, with continued outbreaks throughout the summer. There was a Pandemic Influenza Plan written as an Annex to the Florida CEMP that governed actions that state and county agencies would take in response to a pandemic. There was also a Pandemic Influenza Plan written as an Annex to the Florida Department of Health Emergency Operations Plan that governed actions that the department and CHDs would take in response to a pandemic. Both plans were written in accordance with federal pandemic response guidance. Staff at state and county levels, including the Executive Office of the Governor and County Commissions, were trained and exercised in components of both of these plans. But H1N1 influenza was very different from the H5N1 Avian Influenza that had been predicted as the pandemic disease agent. It had high morbidity, especially for younger populations, but fortunately much lower overall mortality. This difference from planning predictions caused surprise and initial response uncertainty. The uncertainty required flexibility in taking action and less reliance on rigid planning – a major lesson re-learned.

Through the summer of 2009, the Florida Department of Health focused on collecting epidemiological and surveillance data, the distribution of antivirals, providing or promulgating guidance, and preparations for the vaccination campaign. As projected, a second wave of H1N1 cases arrived in August, at the beginning of the school year. Disease activity greatly accelerated and then peaked in late September/early October. The early peak of H1N1 in Florida relative to other parts of the county and prior to the availability of significant quantities of vaccine resulted in added risks and challenges and again flexibility in taking action.

By the middle of June 2010 when national influenza reporting to the CDC ended for the summer months, Florida reported a cumulative 1,324 hospitalizations and 230 deaths for persons with laboratory confirmed H1N1. The exact contribution of H1N1 to the death is variable and may be unknown, as many of these deaths occurred in people with complicated medical histories. Novel influenza A H1N1 infection would be coded as the underlying or primary cause on a death certificate for some but not all of these deaths. About 20 percent of the deaths were in persons with no underlying conditions.

Although the mortality rate was much lower than anticipated and H1N1 may not have been the definitive cause, each loss of life was a personal tragedy for a Florida family. It re-enforced the continuing need in pandemic planning for rigorous epidemiology early in disease outbreaks to understand the characteristics and future course it will take and aggressive public health campaigns for disease avoidance and vaccination. Florida continues to prepare for future pandemics and lesser disease outbreaks by building on the H1N1 Pandemic response strengths, absorbing lessons learned, and accounting for improvement recommendations.

Summary of Strengths Observed

- Development and maintenance of training and exercise programs emphasizing epidemiology and response to pandemics and other disease outbreaks
- Direction and management of epidemiology surveillance, including lab testing and investigation operations
- Public health laboratory management of samples and specimens

- Direction and management of mass prophylaxis tactical operations that significantly expanded the participation of the private sector
- Conducting mass vaccination campaign
- Managing VAERS reporting
- Managing public health information
- Providing public rumor control
- Assuring responder health and safety
- Establishing and maintaining an Incident Management Team for a long duration event
- Incident Action Plan Development
- Demobilization of On-Site Management

Lessons Learned – See Appendix B

Top 3 Recommendations for Future Improvement

- There were initial laboratory surge issues associated with staffing and procurement.
Key Recommendation: That more licensed Clinical Laboratory Improvement Act (CLIA) certified laboratory staff be trained to perform PCR analysis for influenza and that non-BOL (e.g., CHD), staff be trained to perform the various non-technical duties required for surge support of laboratory testing. Staffing, at the scientist level, at the BOL needs to be evaluated for an increase to be able to cross-train and maintain expected performance levels in reserve.
- There was a lack of a uniform method to ensure reporting and accountability of doses administered by private providers.
Key Recommendation: That procedures for allocating future vaccine to private providers as part of a mass vaccination campaign should consider the requirement for all to register in Florida SHOTS, the state immunization registry, to receive a vaccine allocation. However, lack of participation in Florida SHOTS should not preclude reporting by private providers.
- The magnitude and duration of logistic support requirements stressed limited staff and storage capacity
Key Recommendation: That the draft Logistics Support Annex be finalized and used for emergency response to future disasters.

Summary of recommended steps to further refine plans, procedure and training for this type of event

Both the Pandemic Influenza Plan Annex to the Florida SERT CEMP and Pandemic Influenza Plan Annex to the FDOH EOP are being re-evaluated based on this AAR/IP – specifically lessons learned and areas for improvement. The key component for revision will be to better ensure greater flexibility in crafting and executing response actions. The revised plans will include responses to widespread disease outbreaks that occur with little warning and that are not declared as pandemics.

After the plan revisions are staffed, finalized, and distributed, training and exercise programs will be developed to ensure that key response staff at state and local levels understand and practice new operational requirements.

APPENDIX A: IMPROVEMENT PLAN

This IP has been developed specifically for the Florida Department of Health as a result of the H1N1 Pandemic 2009-2010 response on April 26, 2009 – June 3, 2010. These recommendations draw on both the After Action Report, the After Action Conference, and Hotwash, as applicable.

Table A.1: Improvement Plan Matrix

Capability	Observation Title	Recommendation	Corrective Action Description	Capability Element	Primary Responsible Agency	Agency POC	Start Date	Completion Date
Epidemiological Surveillance and Investigation	1. Developing and Maintaining Training Programs	1.1 Continue to maintain, enhance, and promote on-line and other on-site trainings	1.1.1 Annually review staff training reports to ensure and encourage participation in training events	Protect	FDOH	Bureau of Epidemiology (BOE)	8/1/10	Continuing
	2. Developing and Maintaining Exercise Programs	2.1 Continue to maintain on-line Epi training and conduct exercises that contain objectives for evaluating skills	2.1.1 Annually review training and exercise plans and encourage partner agency participation.	Protect	FDOH	BOE	8/1/10	Continuing
	3. Maintaining Epi Staff	3.1 Continue to maintain a trained core of professional epidemiology staff at state through county level	3.1.1 Annually review training gaps and plans to ensure a trained and ready core of professionals	Protect	FDOH	BOE	8/1/10	Continuing

Homeland Security Exercise and Evaluation Program (HSEEP)

After Action Report/Improvement Plan
(AAR/IP)

H1N1 Pandemic
2009-2010

Capability	Observation Title	Recommendation	Corrective Action Description	Capability Element	Primary Responsible Agency	Agency POC	Start Date	Completion Date
	4. Maintaining Epi Surveillance	4.1 Continue to compile and publish weekly surveillance reports during active influenza pandemics or seasonal outbreaks	4.1.1 None needed as influenza surveillance reports are prepared as part of regular and ongoing Bureau operations	Protect	FDOH	BOE	8/1/10	Continuing
Public Health Laboratory Testing	1. Laboratory Staffing and Support	1.1 Continue to review Table of Organization and SOP to retain response flexibility	1.1.1 Review and make recommendations to adjust appropriate staffing levels	Protect	FDOH	Bureau of Laboratories (BOL)	8/1/10	Continuing
	2. Laboratory Surge	2.1 Train more licensed CLIA certified laboratory staff to perform PCR analysis and train non BOL staff to perform non-technical duties	2.1.1 Establish CLIA training program	Protect	FDOH	BOL	8/1/10	11/1/10
	3. Laboratory Coordination	3.1 Continue to educate health care providers on primary role of public health laboratory	3.1.1 Develop education messaging	Protect	FDOH	BOL	8/1/10	11/1/10
Mass Prophylaxis	1. Antiviral Distribution	1.1 Plan for better coordination and distribution systems between FDOH and non-FDOH entities	1.1.1 Revise current pharmaceutical distribution plan	Respond	FDOH	Bureau of Pharmacy (BOP)	8/1/10	11/1/10
		1.2 Respond to need for a better system of inventory management	1.2.1 Revise current pharmaceutical distribution plan	Respond	FDOH	BOP	8/1/10	11/1/10

Homeland Security Exercise and Evaluation Program (HSEEP)

After Action Report/Improvement Plan
(AAR/IP)

H1N1 Pandemic
2009-2010

Capability	Observation Title	Recommendation	Corrective Action Description	Capability Element	Primary Responsible Agency	Agency POC	Start Date	Completion Date
		1.3 Consider planning for sufficient antiviral stockpiles	1.3.1 Determine if recommended legislative actions should be proposed	Respond	FDOH	BOP	8/1/10	11/1/10
	2. Vaccine Distribution	2.1 Consider procedures requiring registration in FL SHOTS to receive vaccine	2.1.1 Revise current pharmaceutical distribution plan	Respond	FDOH	BOP	8/1/10	11/1/10
	3. Vaccination Campaign	3.1. Review and incorporate lessons learned in plans, guides, and procedures	3.1.1 Incorporate into Mass Prophylaxis Annex to EOP	Respond	FDOH	Bureau of Immunization (BOI)	8/1/10	11/1/10
	4. VAERS Management	4.1 Review AAR lessons learned.	4.1.1 Incorporate into EOP Mass Prophylaxis Annex	Respond	FDOH	BOI	8/1/10	11/1/10
	5. Antiviral Retrieval and disposal	5.1 Review AAR lessons learned	5.1.1 Incorporate guidelines and procedures into Pandemic Annex to FDOH EOP	Respond	FDOH	BOP	8/1/10	11/1/10
	6. Integration of H1N1 Vaccinations into Daily Operations	6.1 Continue to promote and offer the H1N1 vaccine per CDC and ACIP guidelines, until the 2010 seasonal trivalent vaccine, containing the H1N1 vaccine, is available	6.1.1 Continue H1N1 vaccination program	Respond	FDOH	BOI	8/1/10	11/1/10

Homeland Security Exercise and Evaluation Program (HSEEP)

After Action Report/Improvement Plan
(AAR/IP)

H1N1 Pandemic
2009-2010

Capability	Observation Title	Recommendation	Corrective Action Description	Capability Element	Primary Responsible Agency	Agency POC	Start Date	Completion Date
	7. Vaccine Retrieval and Disposal	7.1 Consider policies to allow for centralized vaccine distribution, retrieval, and disposal	7.1.1 Incorporate into EOP Mass Prophylaxis Annex	Respond	FDOH	BOI	8/1/10	11/1/10
		7.2 Review and update plans, guides, and procedures for clear guidelines on disposal and coordination with CDC	7.2.1 Incorporate into EOP Mass Prophylaxis Annex	Respond	FDOH	BOI	8/1/10	11/1/10
Emergency Public Information and Warning	1. Emergency Public Health Information Management	1.1 Review and incorporate lessons learned into plans, guides, and procedures	1.1.1 Incorporate into Crisis & Emergency Risk Communications (CERC) Annex to DOH EOP	Respond	FDOH	Office of Communications (OOC)	8/1/10	11/1/10
	2. Rumor Control Procedures	2.1 Review and incorporate lessons learned into All-Hazard Rumor control SOG	2.1.1 Incorporate into CERC Annex to DOH EOP	Respond	FDOH	OOC	8/1/10	11/1/10
Medical Supplies Management and Distribution	1. Logistics Support	1.1 Finalize draft Logistics Support Annex and use for emergency response to future disasters	1.1.1 Publish Final Logistics Support Annex to EOP	Respond	FDOH	Bureau of Preparedness and Response (BPR)	8/1/10	11/1/10
Responder Safety and Health	1. Receiving and distributing personal protective equipment (PPE)	1.1 Incorporate lessons learned from the receipt, storage and distribution of PPE into the FDOH EOP Logistics Support Annex	1.1.1 Publish Final Logistics Support Annex to EOP	Respond	FDOH	BPR	8/1/10	11/1/10

Homeland Security Exercise and Evaluation Program (HSEEP)
 After Action Report/Improvement Plan (AAR/IP) H1N1 Pandemic
2009-2010

Capability	Observation Title	Recommendation	Corrective Action Description	Capability Element	Primary Responsible Agency	Agency POC	Start Date	Completion Date
On-Site Incident Management	1. Establish and Maintain IMT	1.1 Conduct refresher and advanced ICS training and periodic exercises	1.1.1 Continue periodic training	Respond	FDOH	BPR	8/1/10	Continuing
		1.2 Continue to develop SOGs and JAS	1.2.1 Publish as developed	Respond	FDOH	BPR	8/1/10	Continuing
	2. Develop and Execute IAPs	2.1 Archive IAPs for future use	2.1.1 Publish archive location	Respond	FDOH	BPR	8/1/10	Continuing
	3. Demobilization Plan	3.1 Archive Demobilization Plan for future use	3.1.1 Publish archive location	Respond	FDOH	BPR	8/1/10	Continuing

APPENDIX B: LESSONS LEARNED

Event Lessons Learned

Best Practices: This section includes an exemplary, peer validated technique, procedure, and solution that worked in actual operations.

The **Palm Beach County Health Department** (PBCHD), Florida Department of Health was nationally recognized for its H1N1 Vaccine Campaign activities with receipt of the **NIVS Immunization Excellence Award Overall National Winner Overall Season Activities Category- May 2010**. Following is the announcement of the award.

Alina Alonso, MD, Director, Palm Beach County Health Department PBCHD
Savita Kumar, MD MSPH, Epidemiologist, H1N1 Deputy Incident Commander
Lisa A. Rosenfeld, MPH, H1N1 Planning Unit Chief, Pandemic Influenza Coordinator

Seasonal and H1N1 Influenza Prevention, Vaccination and Response Campaign Partnerships and Collaborations – The Health Department and Community Stakeholders

The Palm Beach County Health Department was selected as the recipient of the **Overall 2009-2010 National Immunization Excellence Award** for its comprehensive and coordinated Seasonal and H1N1 Influenza Prevention, Vaccination and Response Plan to be presented on May 18, 2010 at the American Medical Association/Centers for Disease Control and Prevention National Influenza Vaccine Summit Meeting in Scottsdale, Arizona. The award includes an honorarium to cover travel and meeting costs.

This award reflects the tremendous team efforts of so many health department employees working together to decrease morbidity and mortality from influenza by increasing access to vaccination, especially for those at-risk and most vulnerable. By extended evening and weekend hours at our Health Department clinics, by better informing the public about ways to prevent the spread of flu using a toll free Flu Hot Line (1-888-411-4FLU) and partnering with supermarket and community pharmacies in a Flu Readiness Initiative, the Health Department extended its reach to protect the public during this pandemic flu season.

The PBCHD leveraged efforts through collaboration with community partners, recruiting and registering more than 400 providers in FLSHOTS to receive the H1N1 vaccine, including hospitals, physicians, Fire Rescue EMS personnel, outpatient clinics, pharmacists and other healthcare providers, many already connected to the health departments' established all-hazard preparedness programs. In addition, the Health Department offered the vaccine and education materials to the general public, focusing on those without a medical home, at open and closed sites, including child care centers, universities, after-school sites, municipalities and communities, worksites, fairs, festivals and faith-based organizations.

The lessons learned or reinforced from this seasons' influenza pandemic vaccination campaign include the value of great teamwork, a clear and common mission, and having strong community partnerships in place prior to an emergency or disaster. Collaborations will continue to be sustained, exercised and drilled, and remain ready for future outbreaks or events forming the basis of a strong Health Department and resilient and ready families and communities.

Good Stories: This section includes exemplary, but non-peer-validated, initiatives implemented by various Florida counties that have shown success in their specific environments and may provide useful information to other communities and organizations.

The following initiatives were posted on the National Association of County and City Health Officials (NACCHO) website as "Stories from the Field."
www.naccho.org/topics/H1N1/stories_search.cfm

Bay County Health Department

Date Added: 01/27/2010

Themes: Vaccine Planning and Administration

Issue Summary: Difficulties in the vaccination of a large military base and their dependents

Description of Issue(s): The issues in coordinating the vaccination of a large military base and their dependents. To solve the training of personnel to operate a joint point of distribution center (POD) with military and civilian staff. An accurate count of the population on and off base needing vaccine in alignment with the CDC tier. Logistical concerns for material and vaccine storage addressing the differences between military and civilian policy and protocol.

Actions taken to address the issue(s): In conjunction with Texas A & M University, we developed a training curriculum to deploy both civilian and military partners in a joint point of distribution (POD). We developed policies and procedures on how to distribute vaccine for H1N1 and trained in excess of over 250 leadership personnel to implement this plan. Joint exercises were conducted over the summer months to hone our skills in this venture.

From October 1, 2009 to present day, we have been able to distribute in excess of 4,000 doses to the base population, and with their help, over 40,000 within the community.

Outcomes that resulted from actions taken: Tyndall Air Force Base is now ranked #1 in H1N1 Vaccination for Air Education and Training Command bases.

The POD training facilitated with the Bay County response organizations poised Tyndall AFB for immediate response in the H1N1 outbreak. After evaluation, the POD was labeled best in the Air Force.

See attached letter from [the Department of the Air Force](#) regarding this POD.

Collier County Health Department

Date Added: 12/28/2009

Themes: Communications - General H1N1

Issue Summary: Communications - General H1N1

Description of Issue(s): The challenge of communicating timely, accurate H1N1 information to the community including where people can access vaccine, countering misinformation, and keeping the population interested when a campaign

lingers is daunting.

The Collier County Health Department (CCHD) Joint Information Center (JIC) created a comprehensive communications network of community partners including: media outlets, community disaster response partners (Emergency Management, hospitals & community clinics, schools, law enforcement, EMS, Red Cross, etc.), businesses including faith based organizations, and RED (Residential Enclave Disaster) Plan communities (which account for 30% of our population). Regular updates, including clinic schedules, have been sent to these partners since the emergence of the pandemic H1N1 in April 2009. The updates are also placed on our website, CollierPrepares.org for the general population (residents and visitors) to see. This communications approach allows us to quickly educate a network of additional "ambassadors" of our public health messages as these individuals reach out to their family, friends, customers, etc. with our accurate information. In addition, the communication is two-way as the network partners report back misinformation or community concerns via our website, or JIC email and phone lines.

This comprehensive approach to communications has assisted the CCHD JIC significantly in relaying H1N1 information including clinic schedules out to our residents and visitors. It allows us to keep our community informed with accurate and timely information in an effort to keep the community interested and hence, increase their likelihood of getting vaccinated. As of 12/24/09, over H1N1 115,000 vaccines were administered in Collier County, equating to approximately one third of our population. The approach also raises awareness about our website. We are seeing an average of 12,000 hits to our sites per month which is up significantly from before use of this comprehensive communication approach. Overall, our residents and visitors are considerably better informed due to this approach to communications.

See attached [graphic](#) of Collier County Health Department JIC.

Hendry and Glades County Health Departments

Date Added: 01/04/2010

Themes: Vaccine Supply and Distribution

Issue Summary: H1N1 Response & Successes

Description of Issue(s): Communication and vaccination efforts in very rural communities.

The Hendry & Glades County Health Departments are in rural South Florida and our resources and tools for communication are very limited (We do not have local TV or radio and we have one small home-town paper that prints only once a week). We feel that our actions were "pro-active" instead of "reactive" because we took immediate actions before any cases of H1N1 were ever reported in Florida.

Outcomes that resulted from: We feel that our two rural Health Departments were very successful in the following ways:

actions taken:

- **Immediate Agency Partner Notification** - On Friday, April 24th, we immediately sent notification to our local providers, hospital, pharmacies, schools, emergency response agencies (Emergency Management, EMS, Fire, Law Enforcement), and local government agencies regarding the Swine Flu issues in California & Mexico. This notification was sent via e-mail and blast fax.
- **Immediate Public Awareness Campaign** - Monday, April 27th we prepared and submitted an article for our local newspaper (The deadline for our local paper is Mondays at 9am for printing in their Thursday paper--this paper only prints once a week). This was a notification & educational article regarding swine flu and what it could mean for our area. We also came up with creative ways to inform the hard-to-reach populations. We utilized programs within the Health Department to distribute educational materials:
 - Environmental Health distributed information during their inspections at migrant facilities.
 - Healthy Family & Healthy Start distributed information during their home visits & meetings.
 - Healthy Workplace Program distributed information to the local agricultural businesses.
 - Health Department staff distributed information at their local places of worship.
- **Great Partnerships with Schools**
Even though the majority of our schools do not have assigned school nurses, the Health Department staff and school administration worked closely together to monitor any suspected illnesses within the schools as the situation progressed and the communication efforts and partnerships continue to be a mutual success
- **Great Partnerships with Providers**
The providers in our communities followed and continue to follow the recommendations and guidelines of the Hendry and Glades County Health Departments and the communication efforts continue to be a mutual success.

Continued successes include:

- Weekly newspaper articles regarding H1N1-Flu information and clinic/POD sites.
- Creation and distribution of H1N1-Flu Educational brochures, booklets and posters.
- Partnership with Hendry and Glades County School Boards to provide H1N1-Flu vaccinations at Middle and High Schools (during school hours).
- Partnership with Edison State College to provide H1N1-Flu vaccinations on their campus in LaBelle.
- Partnership with Hendry and Glades County EMS to issue vaccines to county employees and law enforcement.
- Partnership with local agricultural businesses to vaccinate the hard-to-reach populations and minorities.

- Partnership with local pharmacies to distribute educational materials and promote vaccinations.
- Providing numerous PowerPoint presentations given to the following groups:
 - Hendry and Glades County Board of County Commissioners
 - Hendry and Glades County Public Safety Offices
 - Hendry and Glades County Emergency Management Offices
 - Hendry and Glades County School Boards
 - Hendry and Glades County community organizations such as Kiwanis & Rotary
 - Local Faith-based organizations within Hendry and Glades Counties
 - Local businesses within Hendry and Glades Counties
 - Daycares in Hendry and Glades Counties.

Martin County Health Department

Date Added: 12/11/2009

Themes: Vaccine Planning and Administration

Issue Summary: Outreach to Racial/Ethnic Minority Groups in FL Through Strategic Vaccination Planning

Description of Issue(s): Outreach to racial and ethnic minority residents hampered by mistrust about receiving health care and vaccine in general.

Actions taken to address the issue(s): We are reaching these groups through the placement of PODS geographically in our county and have found that we have good representation at our PODS of minority groups. We did plan for these groups in staffing of bilingual persons to assist these groups who have language barriers and we have inter-racial staff working the PODS.

Outcomes that resulted from actions taken: Most nurses and doctors are Caucasian and having minorities very visible and part of our PODS aided us in acceptance. We have also been very active as community partners with many of the minority churches, sometimes leading projectors for their programs or tents, etc

Okaloosa County Health Department

Date Added: 12/23/2009

Themes: Vaccine Supply and Distribution

Issue Summary: Creative Strategies to Promote and Make Vaccine Available in FL

Description of Issue(s): We are concerned there will not be enough of a demand at our mass vaccination clinics in January 2010.

Actions taken to address the issue(s): That is why besides our 5-day a week mass vaccination clinics we are targeting 4 separate community venues - a Snowbird Expo (that's an event for seniors coming to our area for the winter); MLK weekend at the mall; a Bridal Fair at a conference center; and a popular outdoor mall with young adults if we can find an indoor space. In addition, from New Years Eve on, advertising at two major nightclubs for young adults with arm bands that

Outcomes that resulted from actions taken: promote FREE H1N1 Shots and our web site!
N/A

Pinellas County Health Department

Date Added: 01/04/2010

Themes: Vaccine Supply and Distribution

Issue Summary: LHD in Florida collaborates with places of worship for H1N1 vaccine distribution

Description of Issue(s): In a move to make it even easier to get the H1N1 flu vaccine, Florida residents can get the shot where they worship thanks to the Pinellas County Health Department.

Health department workers set up shop Sunday morning at Bethel Community Baptist Church in St. Petersburg.

Actions taken to address the issue(s): The event was held at the church but was open to the community. The health department urged everyone to get the shot, especially after an increase in respiratory illness in the community.

Throughout January and the first two weeks of February, county residents can get either the H1N1 flu shot or the nasal H1N1 Flu Mist vaccine for free. The shots are available to all people of all ages who live in Pinellas County. Other locations will be added as more dates are confirmed. Sunday faith community clinics will currently run from Jan. 3 to Feb. 14, 2010.

Outcomes that resulted from actions taken: N/A

St. Johns Community Health Department

Date Added: 12/21/2009

Themes: Vaccine Supply and Distribution

Issue Summary: National and Regional Pharmacy Chain Participation in H1N1 Vaccine Campaign in FL

Description of Issue(s): At the county level, I am approving H1N1 vaccine requests (as my local allocation allows) for pharmacies like Walgreens and CVS/Minute Clinic plus those at grocery chains like Winn Dixie and Publix. They all seem to have a single person at the parent-company level do their ordering for the ship-to-sites in each county (some use one store per county as the ship-to then re-distribute, others have multiple individual ship-to-sites).

Actions taken to address the issue(s): The pharmacies utilize our locally approved consent form, and return copies of those forms to us (weekly) so that we can track the numbers of individuals

issue(s): vaccinated in our jurisdiction that fall into the various target groups. The individual pharmacies each enter the patient and vaccine information into the state's FL Shots vaccination tracking system. (www.FLShots.com)

Outcomes that resulted from actions taken: We do not have a similar arrangement with Target or Wal-Mart because both entities wanted us to have our allocated vaccine shipped to their distribution centers in other states.

St. Lucie County Health Department

Date Added: 11/23/2009

Themes: Communications - General H1N1, Communications - Priority Groups

Issue Summary: St. Lucie County H1N1 Communication Strategy

Description of Issue(s): Early in the vaccination campaign, it was identified that we would have a limited number of vaccine to administer to the entire county and specifically 113,000 high priority residents. Communication was identified as the most significant challenge we would face in administering vaccine to those at greatest risk of severe complications, hospitalization and death. Another significant ongoing issue is explaining to the public which groups are most in need of H1N1 vaccine vs. seasonal influenza vaccine. With H1N1 widely circulating in children, it was imperative to vaccinate this population in order to dramatically reduce the circulation of H1N1 in our county of 280,000 people. While waiting for vaccine shipments to arrive, we aggressively communicated non-pharmaceutical prevention measures to the public.

Actions taken to address the issue(s): St. Lucie County Health Department contracted with a local advertising and marketing agency to develop a media campaign that would deliver our message to the public. The intended audience includes: parents of school children, clinicians, media, stakeholders, staff, and the public at large. After developing a strategy, we vigorously implemented the plan by branding our messages and aggressively marketing them using area media and other community groups to facilitate wide-spread risk communication.

Outcomes that resulted from actions taken: St. Lucie County Health Department registered 75 community partners to participate in administering H1N1 vaccine to the CDC priority groups. The health department conducted three county-wide free vaccination clinics administering vaccine to approximately 5000 high risk residents while only turning away a few that did not meet the CDC priority group criteria. The health department develops weekly situation reports that are widely distributed to the media, political leaders, stakeholders, staff and Department of Health leadership throughout the state.

It is my hope as health department administrator that we incorporate this communication technique in our Project Public Health Ready resubmission next year. We also plan to use this branding technique for future St. Lucie County public health initiatives.

The attached [St. Lucie County Success Story](#) demonstrates the extent to which the health department utilized branding and marketing techniques to

disseminate our message throughout St. Lucie County as well as to a media market of over 2 million people.

Following are other [good stories](#) reported by Florida County Health Departments:

Hillsborough and Pinellas County

Several Florida counties collaborated with area shelters and volunteer organizations to provide vaccine to homeless residents. The Hillsborough County Health Department and the Pinellas County Health Department became concerned about access to vaccine after several cases of influenza occurred in shelters. Pinellas County partnered with the Pinellas Homeless Coalition to hold a vaccination clinic for the homeless, while Hillsborough County collaborated with Servants of Christ Tampa, a group of parishioners dedicated to feeding the homeless. The Hillsborough County clinic took place in a makeshift restaurant in an old gas station, where homeless guests could receive a meal along with a seasonal and H1N1 vaccine. (As reported on the Center for Disease Research and Policy [CIDRAP] website under Promising Practices)

Lee County

Lee CHD held mass H1N1 vaccination clinics for all of the priority population groups in local high schools throughout the county on Saturdays and evenings, Monday through Thursday for eight weeks. Minority populations were not showing up for these clinics in numbers that matched their percentage of the population.

To reach this population the CHD held a mass vaccination clinic in a local flea market that caters to Hispanics and Haitians and is located in a convenient part of town. The flea market donated the space - a whole row with an overhead covering and storage shed. The area had Mexican music behind it, fresh fruit and vegetables to the side, and live parrots and other birds in front. A pharmaceutical trailer was kept at the county Emergency Operations Center; emergency management staff hauled and parked it behind the vaccination tables to keep the vaccine cold and as a site for nurses to prepare the syringes for the vaccinators. The clinic was advertised heavily through minority media and held on a Sunday when the flea market draws a huge crowd. Two Hispanic radio stations broadcast from the clinic. Many of the CHD bilingual staff participated, as well as English-only speakers. The Red Cross supplied 6 or 7 volunteer interpreters. It was a huge success, with close to 1500 individuals (many of them children) being vaccinated. Staff felt gratified for having done public health at its best.

To vaccinate more of the hard to reach populations, the CHD held a Saturday clinic at the local Haitian Community Center and evening vaccination clinics in seven low income neighborhoods where the CHD has established solid relationships.

Martin County

A lesson learned early in the PODs was to have the right person in the right place. Initially the CHD had medical trained persons at the initial triage desk. The first neighborhood served was in Indiantown, Florida with a largely Hispanic population, many who did not speak or understand English. Many in this population did not read Spanish and had difficulty completing the consent form. The noise level and confusion made it a hard task and lines were long and slow. When interpreters were put on the triage desk and medical staff moved to dispensing with an interpreter available, forms

were completed quickly and correctly. The last change was having an area where young children could wait and be supervised as parents filled out the forms. The volume in the first POD was 306 doses given in 3 hours. With lessons learned, the best volume increased to 1286 doses given in 3 hours.

Other good stories include a dentist, dietician and computer support person who due to licensing restrictions could not be dispensers. They took on crowd control duties and did it with flair adding a lot of fun to the PODs. Another story was about a volunteer in her 80s who organized teen volunteers to monitor the parking area to assist persons having difficulty standing in line. Persons needing assistance were directed to a special needs sitting room where they would get their shots and bypass the line. There were no complaints about the special treatment. There were actually comments about what a kind and thoughtful POD we were running. The CHD had other stories of special assistance by volunteers including Medical Reserve Corps (MRC) volunteers, fire chiefs, and paramedics. Coordination and activities with Fire Chief's in the area led to the recognition of health disasters as part of how disasters are defined in the county.

Practice Note: Following is a brief description of four innovative practices, procedures, methods, programs, or tactics that the Florida Department of Health created to adapt to changing conditions or to overcome an obstacle or challenge. These practices will be used in the future. These examples have been published on the **Center for Disease Research and Policy (CIDRAP) Website as Promising Practices**
www.cidrappractices.org/practices/article.do?page=home

1. Mass Vaccination Campaign Concept of Operations (FL)

The Florida Department of Health developed a Concept of Operations to expand its vaccination campaign beyond the ACIP priority groups. The document allowed county health department (CDH) Directors/Administrators to decide when was the most appropriate time for their jurisdiction to move to the next phase(s) of the H1N1 mass vaccination program and provided guidelines for each phase.

Florida's H1N1 influenza mass vaccination program aimed to immunize all Floridians and visitors who choose to be vaccinated. Florida began vaccinating the CDC recommended priority groups and then expanded beyond those groups as vaccine becomes available.

The Florida Department of Health organized the H1N1 influenza vaccination campaign into four phases consistent with the ACIP recommendations: priorities were based on those most at risk for a negative health outcome from the disease.

Phase 1: Pregnant women; persons who live with and provide care for infants aged less than six months; healthcare and emergency medical services personnel who have direct contact with patients or infectious material; children aged six months to four years; children and adolescents aged 5 to 18 years who have medical conditions that put them at higher risk for influenza-related complications Phase 2: Healthcare and emergency medical services personnel; persons aged 5-24 years; persons aged 25-64 years who have medical conditions that put them at higher risk for influenza-related complications Phase 3: Persons aged 25-64; persons 65 and older with chronic health conditions Phase 4: Persons aged 65 and older

In the Concept of Operations, demand for H1N1 vaccine was predicted based on public concern for protection against H1N1 and public acceptance of the vaccination as a viable choice for protection. The Florida Health Department estimated the number of people who may seek H1N1 vaccine for three levels of acceptance: 33%, 50%, and 75% acceptance rates.

Vaccine availability and utilization were also predicted, using national planning estimates, and doses administered reporting, which is required for all providers in Florida. Florida also conducted a qualitative survey of county health departments to determine their estimates of target populations reached. Based on the final survey data, 60 counties, representing 98% of the total Florida population, indicated when they would be ready to expand their vaccination campaign beyond the ACIP priority groups.

Counties were asked to consider disease uncertainty, sufficient quantity of vaccine, and private provider vaccine utilization as they planned to open vaccination beyond the priority groups. In implementing the various phases of vaccination, counties were also asked to consider the following: that reasonable efforts had been to reach priority groups, the impact of seasonal and non-resident visitors; how expansion of vaccination might affect neighboring counties and border states; how to deal with Phase 3 sub-groups, especially if demand were to exceed supply; and messaging the county vaccination plan.

All areas expanded vaccination to all populations by January, 2010. The plan helped to provide a systematic approach that all the local health departments could follow as they transitioned to open vaccination without having to figure out all aspects independently. The state department is currently gathering data on the total number of vaccinations that have been administered across groups, as well as best practices in the implementation of the vaccination campaign in different counties.

Component Parts

- [H1N1 Mass Vaccination Campaign Priority Groups Concept of Operations](#)

2. The Family Preparedness Guide for People with Disabilities (FL)

Florida Agency for Persons with Disabilities and Florida Department of Health

The Family Preparedness Guide for People with Disabilities was created by two Florida agencies to assist families in preparing for a variety of emergencies. The guide provides general instructions for creating segments of a family emergency plan, including guidelines for communicating, keeping pets safe, and building a disaster supply kit. After providing a general basis for family preparedness, the guide focuses on specific planning needs for people with disabilities. It describes several possible emergency situations for which people with disabilities should prepare (e.g., terrorism, floods, tornadoes, hurricanes, and nuclear emergencies) and describes evacuation procedures. The guide also provides limited information on helping children cope with disasters and encourages readers to build relationships with the services available in their communities.

Tools included in the guide include an emergency supply checklist, a form to list important phone numbers, a form to record special needs and other information about family members, a communications plan, and a chart to track plan maintenance. The guide also includes a list of resources and contact information that is relevant to Florida, yet the materials could be adapted

to any jurisdiction. One reviewer noted that the guide does not provide a specific place in which to list detailed health information, so individuals with chronic health conditions, medication needs, or severe allergies may need to supplement the guide with another resource.

Component Parts: Materials submitted for this project consist of electronic documents and web links, and combinations of both. If a component part appears to have more than one link, this is why: CIDRAP saved the documents and reviewed both documents and links when the practices were submitted for review. The external links included here may be duplicative to some of the stored files, but they may also be updated or provide additional useful information.

- The Family Preparedness Guide
 - English [\[View Stored File\]](#)
 - Spanish [\[View Stored File\]](#)
 - Creoles and pidgins, French-based (Other) [\[View Stored File\]](#)

3. Public Antiviral Stockpile Program (FL)

The purpose of Florida's Antiviral Stockpile program is to assure that anyone who has a prescribed need for medication to treat influenza-like illness has access to it, regardless of their ability to pay. Based on this goal, the state identified two situations in which interventions might be necessary: instances in which individuals are unable to afford antivirals, and times in which pharmacies are not able to meet demand for antivirals out of their own supplies. Thus, the major focus of the program is to reach out to providers who then can ensure that everyone who has been prescribed antivirals has access. To complete this goal the program is working through several dispensation options which include partnering with retail pharmacies to provide the medication for free to people who cannot afford it, and during times of scarcity. As a result, private pharmacies have signed agreements with the state allowing them to dispense medication to people who cannot afford it, as well as to any individual during stated times of crisis-level shortages. In addition to pharmacies and hospitals, county public health authorities are also able to dispense antivirals to individuals who lack the means to purchase them. As of August 2009, the health department had 900,000 courses for adults and children in its stockpile and pushed out 25 percent to all 67 counties while retaining the balance in the State Logistic Response Center. The state is currently partnering with 1,104 pharmacies, most of which are chains, to dispense the antivirals. At the start of the program, the state reached out to eight pharmaceutical chains, of which 6 opted to participate, 1 deferred until January, and 1 has not yet committed. To reach small counties, where large chains may be absent, the state signed dispensing agreements with independent retailers. The state thus far has ten such agreements. Since the purpose of this program is to give access to people who already have prescriptions, it does not include patient outreach. However, some of the individual pharmacies do outreach once they have decided to sign the memoranda of understanding.

Component Parts

- [Overview](#)
- [Concept of Operations](#)

4. The 5th Guy Campaign

"The Fifth Guy" is a sophisticated and highly entertaining social marketing campaign. Its message is based on two concepts: 1) Low interest in pandemic flu would undermine audience receptivity to campaigns about an influenza pandemic, and 2) Enhancing basic hand and

respiratory hygiene is a valuable, pandemic-relevant lesson that people would absorb today. The campaign rests on the data that four out of five people wash their hands, which led to the creation of the character "The Fifth Guy." Viewers can feel disgusted by his slovenly behavior and watch co-workers struggle to cope with The Fifth Guy in television spots, radio promotions, and on The Fifth Guy's MySpace page.

The campaign is noteworthy because it uses humor to reinforce healthy behaviors that could reduce the impact of respiratory infections. Included among the humorous materials are useful items such as: a grocery stockpile list; criteria for staying home from work; suggestions on how to create a workplace environment where sick employees stay home; and tips on how to cope with the flu. A report evaluating the impact of the campaign is also included.

Copyright notice: The Florida Department of Health welcomes others to share the Fifth Guy materials but users must agree not to change the content and to preserve the Florida Department of Health's name and logo on all materials as the authoring agency.

Component Parts: Materials submitted for this project consist of electronic documents and web links, and combinations of both. If a component part appears to have more than one link, this is why: CIDRAP saved the documents and reviewed both documents and links when the practices were submitted for review. The external links included here may be duplicative to some of the stored files, but they may also be updated or provide additional useful information.

- [Main web site](#)
- [Overview \(brief\)](#)
- [Final Campaign Report](#)
- [Transcripts](#)
- Stay Home Poster [\[View Stored File\]](#)
- [Avoiding Long Lines Poster](#)
- [Grocery Store Poster](#)
- [The 5th Guy on MySpace](#)
- [Billboards](#)
- [Marketing 4 Change web site](#) Some additional, and some identical, campaign materials can be found on the web site of the firm that developed The Fifth Guy for Florida.

APPENDIX C: PARTICIPANT FEEDBACK SUMMARY

Feedback was sought throughout the event from responders and partners. Surveys and interviews were used at various stages of the event to assist the Incident Management Team implement changes and make improvements from lessons learned along the way. A few major improvements as a result of early lessons learned were, pharmacy rule changes, better staffing of the Information Management Branch to allow it to be more responsive in dealing with public information and rumor control, and changes to Epi reporting systems.

A variety of feedback methods were used at the conclusion of the event to assist with preparing the After Action Report / Improvement Plan and to help guide improvements in day to day operations and the ability to respond to future events.

Incident Management Team Final Team Meeting

All persons who served in leadership roles throughout the event were invited to participate in the meeting and share their feedback. Comments received were used in developing the After Action Report.

After Action Report Input Form (Unit and Individual)

Persons who participated at any time on the IMT were sent a form that could be completed to provide input in four areas: Major Strengths; Areas for Improvement; Analysis (Lessons Learned), and Recommendations. Unit Leaders were invited to complete the form from a unit perspective and all persons were invited to submit confidential individual responses. Comments received were used to determine patterns and common themes.

County Health Department Nurse Practice Survey

The Florida Department of Health, Office of Public Health Nursing, Nurse Practice Council surveyed nursing leaders in each of the state's 67 counties to determine the extent and scope of nurse involvement in the H1N1 response and Vaccination Campaign. The survey also asked for comments regarding lessons learned and recommendations. Responses were received from fifty-seven of the sixty-seven counties. The Nurse Practice Council analyzed and shared responses to the survey with department leadership to assist in future planning. For a summary of the findings from the survey see Enclosure 3: H1N1 Public Health Nurse Survey.

Customer Satisfaction Surveys

BRFSS – The Behavioral Risk Factor Surveillance System is an ongoing telephone health survey system that tracks health conditions and risk behaviors in the U.S. It is conducted monthly in English and Spanish using a random digit dialing system. This system is being used in Florida to survey persons on vaccination decisions and child vaccination status. Questions on customer satisfaction with the department's responsiveness and with obtaining H1N1 information and guidance from the department are being added to the monthly survey.

LAIV Attitude / Decision Survey – Being developed to survey a random sample of health care providers regarding their vaccine use decisions. Questions are being added to the survey to determine health care provider satisfaction with the range of the department's guidance and services including prevention information, access to laboratory testing, medical and public health management of cases and contacts, availability of and indications for antiviral treatment, use of PPE, increased patient loads in emergency departments and intensive care units, management of outbreaks in schools, and implementation of the statewide vaccine campaign.

H1N1 Partner Satisfaction Survey – Designed for organizations the department worked with in planning the response (such as other state agencies, county commissions, healthcare associations, etc.).

H1N1 Customer Satisfaction Survey – Designed for local public health and medical entities involved in the department’s H1N1 response activities (such as CHDs, hospitals, schools, EMS, pharmacies, healthcare practitioners, etc.).

The results and analysis of the customer satisfaction surveys will not be available prior to the submission of the After Action Report but will be considered by the agency in updating response plans and procedures.

APPENDIX D: RESPONSE SUMMARY TABLE

Table D.1: Response Summary

This table includes key events that prompted specific state and agency decisions or actions. Select federal events are included because of their impact on Florida decisions or activities. This table is followed by a comprehensive timeline of Florida's H1N1 response activity.

Event Date	Event	Response
2009		
March	Novel virus originates in Mexico	Department of Health members of SERT-ESF 8 Situation Unit begin to informally monitor the outbreak
April 17	CDC confirms first two US cases in California	Surveillance for influenza-like illness increased in Florida
April 26	Acting Secretary of U.S. Health and Human Services issues a determination of a Public Health Emergency	DOH, Division of Disease Control organizes an Incident Management Team (IMT) with the Bureau of Epidemiology as the lead for implementing the department's influenza response strategy
April 27	FDA authorizes emergency use of Influenza antiviral medicines	Bureau of Pharmacy accesses antiviral medication inventories
April 29	CDC confirms first U.S. fatality	Office of Communications assesses impact of fatality and future Florida fatality for public risk communications
April 30	CDC begins shipping antivirals and personal protective equipment (PPE) to states and territories	ESF 8 Logistics and Bureau of Pharmacy receive shipments and plan for additional warehousing space
May 1	Florida confirms first 2 cases of H1N1 in Lee and Broward counties;	State Surgeon General declares a public health emergency (<i>Declaration is good for 60 days</i>); Activities switch from containment to community mitigation strategy; SEOC increases activation to Level 2
May 4	Preparation begins for statewide H1N1 vaccination campaign	Bureau of Immunization and Office of Communications assess logistics and public information needs
May 5	HHS announces a change in CDC guidance on school closures saying closing schools is no longer needed and recommending focus on keeping those with symptoms out of school	DOH confers with DOE on Florida school closing policies to be implemented at start of school year
May 15	SERT (including ESF8) returns to Level 3 activation	DOH returns to IMT organization to track disease spread and manage the stock of antivirals

Event Date	Event	Response
June 11	WHO officially declares a pandemic and raises alert to Phase 6	Office of Communications assesses impact on public risk communications.
June 16	As of this date, Florida reports first death from H1N1 in Miami-Dade County	SSG provides recommendations to help prevent the spread of the flu
July 6	DOH develops H1N1 Pharmaceutical and Medical Logistics Action Plan for Florida	Plan distributed for implementation
July 31	DOH receives CDC Phase I (PHER) funding in the amount of \$15,474,914	Plan developed with prioritized projects needed to respond to pandemic
August 7	CDC releases guidance for school administrators for K-12	Governor Crist in partnership with the SSG and Commissioner of Education provides H1N1 guidance for school superintendents and parents in preparation for the start of school year
August 20	2 nd wave of H1N1 pandemic begins in FL as schools open	First DOH H1N1 Situation Report is issued for 2 nd wave as preparations for vaccination continue
August 21	CDC adopts ACIP priority groups and releases recommendations	DOH publishes guidelines on vaccination priorities based on CDC recommendations
August 24	The public component of the toll free Florida Flu Information line is launched to provide public health information and updates on H1N1	Daily tracking of calls begins
August 27	DOH develops process to provide surgical masks for use in schools in accord with CDC guidance	Orders are received and filled
September 1	DOH opens an on-line provider pre-registration through Florida SHOTS for private providers interested in assisting with vaccinations	Options are made available for private providers who do not use SHOTS
September 28	DOH receives CDC Phase III (PHER) funding in the amount of \$45,835,672 for implementation of H1N1 2009 Influenza Vaccination Campaign	Plan developed with prioritized projects needed to respond to the pandemic
September 29	First MOU agreements are signed by corporate pharmacies and forwarded to central pharmacy for review and approval	Distribution of initial allocation of antivirals begins to stores with signed/approved MOU
October 8	Counties begin to receive initial vaccine shipment and target priority groups	Florida begins vaccinating individuals for H1N1 Influenza
October 15	The Florida Flu Information Line Adverse Reaction component goes live	Daily tracking of calls begins
December 4	State Surgeon General expands vaccination program beyond the ACIP priority groups	Greater acceptance of vaccination among senior population

Event Date	Event	Response
December 30	Widespread activity is not reported in any county	Demobilization planning begins
2010		
February 1	Influenza activity has fallen to typical seasonal flu levels	IMT concludes the fall wave of H1N1 is over in Florida although EPI surveillance continues
February 8	Demobilization plan approved by Incident Commander	Demobilization timeline monitoring begins
April 30	Closeout of H1N1 IMT operations	Remaining duties and responsibilities returned to DOH units responsible for daily operations

Table D.2: Historic Overview/Timeline Florida H1N1 Pandemic 2009-2010

For more information on any entry, refer to the source documents and color code key referenced at the end of the table. A more detailed timeline of the Bureau of Epidemiology activities is attached.

Date	Event / Activity
March 2009	
	Novel virus originates in Mexico and Department of Health members of SERT-ESF 8 Situation Unit begin to informally monitor the outbreak
April 2009	
April 15-17	CDC confirms first two US cases in California
April 22	CDC activates its Emergency Operations Center (EOC)
April 24	Bureau of Epidemiology (Epi) holds first conference call on the new influenza virus with CHD epidemiologists and distributes surveillance recommendations
April 24	Florida Division of Emergency Management activates Florida Emergency Information Line (FEIL) to respond to H1N1 calls
April 26	Acting Secretary of U.S. Health and Human Services issues a determination of a Public Health Emergency
April 26	DOH, Division of Disease Control organizes an Incident Management Team (IMT) with the Bureau of Epidemiology as the lead for implementing the department's influenza response strategy
April 27	WHO elevates Pandemic Level to Phase 4
April 27	FDA authorizes emergency use of influenza antiviral medicines
April 27	Epi begins hosting daily H1N1 CHD epidemiologist conference calls

Date	Event / Activity
April 28	CDC issues new interim clinician guidance on care for children and pregnant women
April 28	Epi launches Merlin (data reporting system) outbreak module for reporting H1N1 cases and begins several sessions of web conferencing training for all CHD epidemiologists
April 28	Receipt, Stage, and Store Facility opens in Orlando for handling Strategic National Stockpile (SNS) antivirals and personal protective equipment (PPE)
April 29	CDC confirms first U.S. fatality (Texas)
April 29	WHO elevates Pandemic Level to Phase 5
April 29	As of this date, SERT is at a Level 3 Activation (monitoring)
April 29	DOH Surveillance and Sentinel Physician guidance is updated
April 29	Daily H1N1 report template is distributed to CHDs, first daily Surveillance Situation Status Report is produced, and daily reporting to CDC begins
April 30	CDC begins shipping antivirals and personal protective equipment to states and territories
April 30	DOH IMT team stands down as state SERT is activated to Level 2 (partial) and ESF 8 is organized as unified command
May 2009	
May 1	Florida confirms first 2 cases of H1N1 in Lee and Broward counties
May 1	State Surgeon General, Dr. Ana Viamonte Ros, declares a public health emergency (Declaration is good for 60 days)
May 1	DOH H1N1 web page on the department web site goes live
May 1	SSG disseminates Swine-Influenza Update to DOH staff (pre-cursor to DOH H1N1 Bulletin)
May 1	FDA and FTC issues alert for public to be wary of fraudulent web sites and promotions for products claiming to treat or cure the virus
May 1	CDC issues guidance on school closures related to the H1N1 outbreak
May 1	Activities switch from containment to community mitigation strategy
May 2	A daily surveillance data and epidemiology summary report is initiated (Basic Epi Report)
May 3	CDC reports 226 U.S. confirmed H1N1 cases, including one death
May 4	As of this date, Florida reports 5 laboratory confirmed H1N1 cases
May 4	Conference call held with county Strategic National Stockpile planners to discuss Florida's H1N1 response efforts and begin preparations for a statewide H1N1 vaccination campaign
May 5	SSG issues Declaration of Public Health Emergency Supplemental Order #01 to suspend Chapters 120 and 287, Florida Statutes, to the extent needed to procure any and all supplies of the antivirals Tamiflu and Relenza

Date	Event / Activity
May 5	SSG issues Declaration of Public Health Emergency Supplemental Order #02 to suspend wholesale distribution permit requirements under Chapter 499 Part 1, Florida Statutes, to allow the wholesale distribution of Tamiflu and Relenza (Declaration is good for 60 days)
May 5	HHS announces a change in CDC guidance on school closures , saying closing schools is no longer necessary and recommending implementation of measures that focus on keeping those with symptoms out of school
May 5	CDC issues revised interim guidance on school closures
May 7	IMT Education/healthcare subcommittee to deal with school closure, vaccinations, and social/athletic events stands up
May 7	Daily H1N1 CHD epidemiologist conference calls move to a biweekly schedule
May 7	DOH electronic reporting system (EpiGateway) is set up to allow CHD epidemiologists to submit H1N1 data
May 7	Jacksonville and Tampa locations of the DOH Bureau of Laboratories are now able to confirm detection of H1N1
May 8	As of this date, Florida reports 23 laboratory confirmed H1N1 cases
May 9	FEIL stands down due to decreased call volume
May 15	SERT (including ESF8) returns to Level 3 activation and DOH returns to IMT organization to track disease spread and manage the stock of antivirals
May 15	Florida begins receiving antivirals from CDC
May 22	Daily Situation Status Reports are discontinued (see April 29)
May 29	Basic Epi Report switches to a weekly schedule (see May 2)
May 29	As of this date, Florida reports 39 laboratory confirmed H1N1 cases
Other	DOH Labs report that requests for swine flu analysis from CHDs, hospitals, and private practitioners are rising sharply
	The Federal Government and manufacturers initiate the process for developing a vaccine against the Swine Flu virus
June 2009	
June 3	Reporting of cases to CDC switches to weekly in aggregate format (see April 29)
June 6	Updated case reporting guidance to CHD epidemiologists prioritizing seriously ill hospital admissions and cases of investigation significance is issued
June 8	As of this date, Florida reports 306 laboratory confirmed H1N1 cases
June 11	WHO officially declares a pandemic and raises alert to PHASE 6
June 11	Novartis announces production of first batch of flu vaccine
June 15	Memorandum is sent to all CHDs with information and guidance for initiating planning for a fall mass vaccination campaign

Date	Event / Activity
June 16	As of this date, Florida reports first death from H1N1 in Miami-Dade County
June 24	President signs Supplemental Appropriations Act , appropriating \$7.65 billion to HHS for 2009 H1N1 influenza outbreak, including a \$5.8 billion contingent appropriation for an influenza pandemic
June 24	First Epi H1N1 Novel Influenza Surveillance Report is issued. It provides cumulative information from the Basic Epi Report
June 28	Development of protocol for mass vaccination campaign begins. (This will become the Mass Vaccination Campaign Technical Assistance Guide)
June 29	Florida CEMP Pandemic or Widespread Disease Occurrence Annex is revised and approved by the State Working Group for Domestic Security to provide greater flexibility in operational response to outbreaks that do not fit worse case scenario
June 29	As of this date, Florida reports 417 laboratory confirmed H1N1 cases
July 2009	
July 1	State Surgeon General Emergency declaration expires. DOH continues to respond to H1N1 event on ordinary law and rule authority
July 1	First of several meetings held to plan for the development of a DOH Florida Flu Information Line
July 6	DOH develops Florida H1N1 Pharmaceutical and Medical Logistics Action Plan
July 10-12	Statewide online immunization registry, Florida SHOTS (State Health Online Tracking System) web site posts H1N1 campaign information, guidance for registration and vaccine ordering, and surveys potential providers
July 17	Protocol is updated for reporting deaths with H1N1 infection to require immediate data entry and agency phone notification
July 20	Florida SHOTS initiates series of Live Meeting system training sessions for CHDs and other H1N1 providers
July 24	HHS Secretary renews the April 26, 2009 determination of a national public health emergency
July 27-28	Mass vaccination statewide workshop is held in Orlando and attended by more than 250 CHD staff
July 29	Last weekly Basic Epi Report is released. Florida reports 3321 H1N1 cases, 404 hospitalizations, and 31 deaths for persons with laboratory confirmed H1N1
July 30	DOH begins issuing weekly "H1N1 Media Updates"
July 31	DOH receives CDC Phase I (PHER) funding in the amount of \$15,474,914
July 31	DOH receives HHS ASPR (Assistant Secretary for Preparedness and Response) funding in the amount of \$5,348,721 for Pandemic Influenza Healthcare Preparedness Improvement for States
Other	The novel Influenza A H1N1 continues to spread in Florida at higher rates than usual for influenza this time of year

Date	Event / Activity
August 2009	
August 3	Florida updates surveillance guidelines and begins following the lead of CDC and WHO in no longer collecting the number of confirmed H1N1 cases. Reporting includes cases with life threatening illness, hospitalized pregnant, and death
August 4	IMT reactivates and issues first IAP Report for 2 nd (Fall) H1N1 wave
August 4	DOH Office of Communications begins monitoring social media sites and disseminating daily H1N1 “Twitter and Blog” reports
August 5	IMT reaches its formal structure and includes Planning, Operations, Logistics, and Finance sections
August 6	Epi holds a satellite broadcast , “Novel Influenza A H1N1 Outbreak: The Florida Response”
August 7	CDC releases guidance for school administrators for K-12
August 10	Updated Florida infection control guidance on the use on N-95 respirator masks is released
August 11	Biweekly conference calls begin with CHDs. As vaccinations become a major issue, mass vaccinations are the focus of calls
August 13	New DOH H1N1 web site, www.MyFluSafety.com replaces previous web page and is officially launched by Governor Crist
August 13	Governor Crist in partnership with the SSG and the Commissioner of Education provides H1N1 guidance for school superintendents and parents in preparation for the start of the school year
August 14	DOH IMT disseminates first “H1N1 Weekly Flu Partner Guidance” to internal and external partners
August 15	DOH issues H1N1 supplemental training manual, “User’s Guide to Florida SHOTS: Immunization Registry”
August 19	As of this date, Florida reports 577 hospitalizations and 59 deaths for persons with laboratory confirmed H1N1
August 20	First DOH H1N1 Situation Report is issued for 2 nd (Fall) wave
August 20	SSG begins weekly update conference calls with FDEM and County Emergency Managers, CHDs, FDOE, and local schools. “SSG Weekly Updates” are posted to web site
August 20	CDC releases guidance for Institutions of Higher Learning
August 20	DOH receives CDC Phase II (PHER) funding in the amount of \$11,261,100 for H1N1 vaccination campaign planning
August 21	CDC adopts ACIP priority groups and releases recommendations
August 21	DOH releases Florida specific consent forms for the H1N1 vaccine
August 24	The public component of the toll free Florida Flu Information line is launched to provide public health information and H1N1 updates. Daily tracking of calls begin

Date	Event / Activity
August 24	Mass Vaccination Campaign Technical Assistance Guide is issued
August 26	DOH issues a summary of "Who can Administer Vaccines" following a review of Florida Statutes and other regulations governing scope of practice for licensed professionals
August 26	DOH IMT begins disseminating daily "Web & Call Center Report" to IMT leaders and staff
August 26	Epi receives CDC pregnancy related case report and begins case follow-ups
August 27	As of this date, Florida reports 605 hospitalizations and 66 deaths for persons with laboratory confirmed H1N1
August 27	By this date, DOH, in accord with CDC guidance, develops process to provide surgical masks for use in schools and begins receiving orders
August 27	By this date, county health departments are identifying health care partners to help with vaccination campaign
August 30	First weekly survey of CHDs is conducted to obtain data for gap analysis, readiness, and mass vaccinations
August 30	CDC changes case definitions for what states report for hospitalizations and deaths to combine all influenza and pneumonia associated illnesses
Other	DOH and public health and medical partners continue to prepare for mass vaccination campaign
September 2009	
September 1	DOH opens online provider pre-registration through Florida SHOTS for private providers interested in assisting with vaccinations
September 2	First weekly conference call is held with vendor of the Florida Flu Information line, PATLive, for process monitoring and issue tracking
September 3	During this week, 5 counties report widespread influenza activity
September 4	CDC releases guidance for early childhood programs and providers
September 4	Fact sheet developed and distributed with guidelines for utilizing MRC and other volunteers to assist with H1N1 response activities
September 4-9	Meetings are held with seven major chain drug stores to discuss corporate partnering and antiviral distribution
September 8	As of this date, Florida reports 670 hospitalizations and 78 deaths for persons with laboratory confirmed H1N1
September 8	CDC issues Interim Guidance for State and Local Health Departments for Reporting Influenza-Associated Hospitalizations and Deaths for the 2009-2010 season
September 8	Mass Vaccination Provider Engagement Concept of Operations is issued
September 9	"2009 Influenza A (H1N1) monovalent vaccine, Vaccine Provider Agreement" is sent to counties for recruitment of private providers to administer vaccine
September 10	Widespread activity is reported in 10 counties
September 10	Florida SHOTS deploys full registration capability allowing providers to complete enrollment and electronically sign the provider agreement

Date	Event / Activity
September 11	Emergency rule 64FER09-1 FAC (64F-12.011), allowing DOH to partner with retail pharmacies to dispense public stockpile antivirals becomes effective
September 11	SSG sends CDC “Assurance of Conformance” asserting DOH intent to secure providers under the provisions of the Federal Vaccine Provider Agreement
September 14	DOH Office of Communications/Information Management Branch disseminates first daily Media Monitoring Reports
September 14	DOH releases Invitation to Bid for Mass Vaccination Campaign resulting in 7 vendors approved for community vaccination services
September 15	As of this date, Florida reports 709 hospitalizations and 87 deaths for persons with laboratory confirmed H1N1
September 15	FDA approves four vaccines against the 2009 H1N1 virus
September 15	DOH Office of Communications/Information Management Branch begins several sessions of H1N1 Media Training courses for all 67 CHD directors, administrators, and public information officers
September 16	CDC releases Vaccine Administration Billing questions and answers
September 17	CDC issues handling instructions for 2009 H1N1 vaccine
September 17	Widespread activity is reported in 14 counties
September 17	Over 1000 providers are pre-registered in Florida SHOTS to administer the H1N1 vaccine
September 17	DOH IMT disseminates first weekly “DOH H1N1 Bulletin” to DOH staff
September 19	As of this date, Florida reports 724 hospitalizations and 89 deaths for persons with laboratory confirmed H1N1
September 20	CDC releases School-Located Vaccination Planning materials
September 21	Public Antiviral Stockpile Program Concept of Operations is forwarded to CHDs
September 24	Widespread activity is reported in 19 counties
September 25	First weekly conference call is held with directors of Florida’s three Poison Control Centers for process monitoring and tracking of adverse reaction call issues
September 26	Florida SHOTS begins reporting aggregate information for H1N1 doses administered to CDC
September 28	DOH receives CDC Phase III (PHER) funding in the amount of \$45,835,672 for implementation of H1N1 2009 Influenza Vaccination Campaign
September 29	First MOU agreements are signed by corporate pharmacies and forwarded to central pharmacy for review and approval (Publix, Walgreens)
September 29	By this date, major updates are made in Merlin and EpiGateway data reporting systems (additional improvements continue to be made throughout the event)
September 29	As of this date, Florida reports 765 hospitalizations and 102 deaths for persons with laboratory confirmed H1N1

Date	Event / Activity
September 29	DOH makes broadcast quality Sesame Street PSAs, from the Ad Council, Sesame Street, CDC, DHS and HHS, available to CHD Public Information Officers. PSAs also shared with Department of Education K-12 partners on October 1
September 30	Florida places initial order for H1N1 vaccine
September 30	Florida SHOTS initiates system enhancements to manage administration, ordering, allocation, inventory, and reporting (additional system enhancements continue throughout the campaign)
September 30	DOH Office of Communications distributes first "DOH Daily CHD PIO Report" to 67 CHD Public Information Officers. Report provides roll-up of social media, web, and call center reports
October 2009	
October 1	HHS Secretary renews April 26, 2009 determination of a national public health emergency
October 1	Widespread activity is reported in 17 counties
October 1	Over 2000 providers are pre-registered in Florida SHOTS to administer the H1N1 vaccine
October 1	DOH releases alternative Florida specific consent forms for H1N1 vaccine including the additional statement, "I acknowledge the receipt of the Notice of Privacy Practices"
October 1	The Florida Flu Information Line Call Center component for healthcare providers goes live
October 6	As of this date, Florida reports 808 hospitalizations and 110 deaths for persons with laboratory confirmed H1N1
October 6	Antiviral pharmacy MOUs are signed and returned from Winn-Dixie, Navarro, and Kmart
October 6-7	Distribution of initial allocation of antivirals begins to stores with signed/approved MOU (Winn Dixie, Navarro, Publix)
October 8	Counties begin to receive initial vaccine shipment and target priority groups
October 8	Widespread activity is reported in 15 counties
October 8	Over 3000 providers are registered in Florida SHOTS to administer the H1N1 vaccine
October 8	DOH ships new hand washing posters, including a Dracula character, to CHDs, FDOE, 67 school district health coordinators, and statewide university lab schools
October 8	H1N1 Internet site is redesigned and includes a Q & A section
October 10-14	First pharmacies become operational for dispensing antivirals (Navarro, Publix, Winn Dixie). Initial allocation is distributed to Walgreens
October 12	During this week, Florida begins vaccinating individuals for H1N1 Influenza
October 14	As of this date, Florida reports 872 hospitalizations and 121 deaths for persons with laboratory confirmed H1N1

Date	Event / Activity
October 14	Florida SHOTS deploys blast email capabilities for immediate provider notifications. More than 4000 emails are distributed throughout the remainder of the event
October 14	SSG sends health care providers information on reporting significant adverse events that occur after an H1N1 vaccination to the national Vaccine Adverse Event Reporting System (VAERS)
October 14	Florida orders 184,900 does of vaccine
October 14	CDC releases updated H1N1 Interim PPE Guidance for Healthcare Workers
October 15	The Florida Flu Information Line Adverse Reaction component goes live
October 15	Widespread activity is reported in 10 counties
October 16	CDC releases revised infection control guidance and supplemental guidance for treating children with antivirals
October 16	CDC announces delay in H1N1 flu vaccine availability and there has been a temporary lag in release of vaccine supplies from central distributor
October 16	Florida replaces state specific infection control guidance and mask respirator use documents with revised CDC guidance documents
October 17	Widespread activity is reported in 8 counties
October 19-25	Calls to the Florida Flu Information line peak with 6,275 calls
October 20	As of this date, Florida reports 912 hospitalizations and 132 deaths for persons with laboratory confirmed H1N1
October 20	H1N1 Mass Vaccination Doses Administered Concept of Operations is issued
October 21	Revised Florida CEMP Pandemic or Widespread Disease Occurrence Annex is approved by Domestic Security Oversight Committee
October 22	As of this date, 4441 providers are registered in Florida SHOTS to administer the H1N1 vaccine
October 23	FDA issues emergency use authorization (or EUA) for the antiviral drug Peramivir
October 23	President Obama signs declaration of a national emergency . Press release is issued on October 24
October 27	HHS issues Waiver under Section 1135 of the Social Security Act and releases CMS Free Care Rule
October 27	As of this date, Florida reports 965 hospitalizations and 140 deaths for persons with laboratory confirmed H1N1
October 27	DOH initiates online survey for reporting aggregate vaccine doses administered by providers not registered in Florida SHOTS
October 29	Widespread activity is reported in 7 counties
October 30	By the end of this week, State Pharmacy executes contracts with Kmart, Winn Dixie, Walgreens, Publix, and Navarro with 1041 retail pharmacies participating in antiviral dispensing program

Date	Event / Activity
November 2009	
November 2	Data collection for a vaccine penetration study begins and continues through early January
November 2	Florida Poison Information Center Network web based system made available to CHDs for “real-time” data on calls to the Adverse Reaction Call Line
November 3	First weekly VAERS H1N1 report received from CDC
November 3	As of this date, Florida reports 1008 hospitalizations and 149 deaths for persons with laboratory confirmed H1N1
November 5	Widespread activity is reported in 3 counties
November 6	By the end of this week, 1053 retail pharmacies are participating in antiviral dispensing program. MOUs are under review for Target and Walmart
November 7	Widespread activity is reported in 5 counties
November 9	CDC notifies Florida that antiviral outreach to commercial pharmacies program will be featured by HHS Secretary as a best practice on a State Coordination H1N1 Task Force conference call
November 10	As of this date, Florida reports 1054 hospitalizations and 160 deaths for persons with laboratory confirmed H1N1
November 12	CDC announces and adopts a new methodology for estimating total number of deaths based on detailed information from selected states and metropolitan areas. Florida decides to continue to report H1N1 deaths with a laboratory confirmation
November 12	Vaccine Adverse Event Reporting Concept of Operations is issued
November 17	As of this date, Florida reports 1082 hospitalizations and 167 deaths for persons with laboratory confirmed H1N1
November 17	CDC team arrives at DOH state office to coordinate a test of blood serum from a sample of Florida residents to determine the extent of the population with antibodies to H1N1 (seroprevalence study)
November 19	Widespread activity is reported in 5 counties
November 24	As of this date, Florida reports 1119 hospitalizations and 172 deaths for persons with laboratory confirmed H1N1
November 24	Florida SHOTS submits last weekly aggregate report to CDC
November 25	Occupational Analysis of Florida H1N1 cases and other H1N1 reports are published in the DOH “Epi Update”
November 30	MOUs with Target (126 locations) and Walmart for participation in antiviral dispensing program are signed
December 2009	
December 1	As of this date, Florida reports 1142 hospitalizations and 174 deaths for persons with laboratory confirmed H1N1
December 2	CDC issues “Swine Flu” Phishing Scam alert referencing a CDC sponsored State Vaccination Program

Date	Event / Activity
December 3	Widespread activity is reported in only 1 county
December 4	State Surgeon General expands vaccination program beyond the ACIP priority groups
December 8	As of this date, Florida reports 1159 hospitalizations and 180 deaths for persons with laboratory confirmed H1N1
December 10	Widespread activity is not reported in any county
December 10	This week, CDC reports Florida's activity level is decreased from "widespread" to "regional"
December 10	By this date, DOH, in conjunction with community partners, develops plans to expand vaccination availability to additional population groups
December 11	By the end of this week, 1167 retail pharmacies are participating in antiviral dispensing program with 5374 regimens reported dispensed. Walmart elects to postpone distribution
December 11	By the end of this week, CHDs report dispensing 13,699 antiviral regimens
December 13	Final rule 64F-12.011 FAC , allowing DOH to partner with retail pharmacies to dispense public stockpile antivirals, becomes effective
December 15	As of this date Florida reports 1178 hospitalizations and 184 deaths for persons with laboratory confirmed H1N1
December 15	The CDC announces a Non-Safety Related Voluntary Recall of the Sanofi Pasteur H1N1 Pediatric (0.25mL, for 6-35 month olds) vaccine in pre-filled syringes
December 16	IMT section chiefs meet to discuss and begin demobilization planning
December 17	Widespread activity is reported in only 1 county
December 18	Last regularly scheduled H1N1 CHD epidemiologist biweekly conference calls is held
December 23	As of this date, Florida reports 1187 hospitalizations and 186 deaths for persons with laboratory confirmed H1N1
December 23	CDC announces a Non-safety Related Voluntary Recall of the Influenza A (H1N1) 2009 Monovalent Vaccine Live, Intranasal by MedImmune due to postproduction monitoring efforts that found select lots of vaccine did not meet manufacturing specifications
December 24	Widespread activity is reported in only 1 county
December 24	CDC now reports there is enough supply in all 50 states for everyone who wishes to receive the vaccine
December 28	HHS Secretary renews April 26, 2009 determination of a national public health emergency
December 28	CDC begins direct-ship campaign to designated pharmacies to accelerate vaccine administration
December 29	As of this date, Florida reports 1193 hospitalizations and 187 deaths are reported for persons with laboratory confirmed H1N1
December 30	Widespread activity is not reported in any county

Date	Event / Activity
January 2010	
January 5	As of this date, .Florida reports 1204 hospitalizations and 187 deaths for persons with laboratory confirmed H1N1
January 6	Widespread activity is not reported in any county
January 8	Public Stockpile Antivirals are shipped to 87 participating Wal-Mart Pharmacies
January 8	HHS and CDC announces national effort to encourage vaccinations during National Influenza Vaccination Week (NIVW), an annual initiative since 2006
January 9	President issues proclamation declaring NIVW
January 10-16	NIVW week activities are held designating each day of the week for an at-risk group or individuals who are in close contact with them
January 10-16	Florida Department of Health declares NIVW and initiates “Spread the Word, Not the Flu” media campaign
January 11	CDC announces an Expiration Date Change of the Influenza A (H1N1) 2009 Monovalent Vaccine Live, Intranasal by MedImmune
January 12	As of this date, Florida reports 1207 hospitalizations and 187 deaths for persons with laboratory confirmed H1N1
January 14	Widespread activity is not reported in any county. Localized activity is reported in only 2 counties
January 14	CDC is now working directly with local pharmacy chains and retail outlets to make vaccine available
January 14	More than 1 million Floridians have received the H1N1 vaccine
January 19	As of this date, Florida reports 1215 hospitalizations and 187 deaths for persons with laboratory confirmed H1N1. For the 3 rd week, no new deaths reported
January 20	DOH hosts a Town Hall Meeting web cast on the myflusafety web site, “H1N1: Spread the Word, Not the Flu”
January 21	No counties reporting localized or widespread influenza activity for the first time since Fall 2008
January 26	As of this date, Florida reports 1227 hospitalizations and 196 deaths for persons with laboratory confirmed H1N1
January 26	Bi weekly mass vaccination CHD conference calls moves to monthly schedule
January 28	Last weekly “DOH H1N1 Bulletin” is distributed to staff. Additional Bulletins will be distributed as needed
January 28	As of this date, antivirals and vaccination supplies remain available in sufficient quantities
January 29	CDC announces a Non-safety Related Voluntary Recall of certain lots of Sanofi Pasteur H1N1 vaccine in five lots of single-dose, pre-filled syringe pediatric vaccine and one lot of single-dose pre-filled syringe for older children and adults due to potency below pre-specified limits
January 29	Last weekly DOH IMT “H1N1 Weekly Flu Partner Guidance” disseminated to internal and external partners. Future updates/special notices will be distributed as necessary

Date	Event / Activity
January 31	More than 2 million Floridians have received the H1N1 vaccine
Other	Epi begins project investigating Florida death certificates indicating H1N1 as underlying or contributing causes of death
	Planning for the retrieval and disposal of expired, wasted, and spoiled H1N1 vaccines begins
February 2010	
February 1	IMT reports the fall wave of H1N1 is over in Florida with influenza activity falling to levels normally seen this time of year (Epi continues to monitor the situation). Flu activity is expected to continue for months, caused by either 2009 H1N1 viruses or regular seasonal flu viruses. Levels of activity are expected to vary as the season continues
February 2	The CDC announces an Expiration Date Change of the Sanofi Influenza A (H1N1) 2009 monovalent vaccine in pre-filled syringes
February 4	Last regularly scheduled State Surgeon General weekly update conference calls held with FDEM and County Emergency Managers, CHDs, FDOE, and Local Schools. "SSG Weekly Updates" go to a monthly schedule
February 4	Last regularly scheduled conference call with education partners is held
February 4	As of this date, Florida reports 1234 hospitalizations and 201 deaths for persons with laboratory confirmed H1N1
February 4	For the third week in a row, widespread or localized activity is not reported in any county
February 8	Demobilization plan approved by Incident Commander
February 9	As of this date, Florida reports 1240 hospitalizations and 207 deaths for persons with laboratory confirmed H1N1
February 9	DOH IMT "Web & Call Center Reports" dissemination schedule reduced from daily to weekly
February 15	IMB demobilizes (media functions will continue under the Office of Communications)
February 16	As of this date, Florida reports 1245 hospitalizations and 209 deaths for persons with laboratory confirmed H1N1
February 23	As of this date, Florida reports 1251 hospitalizations and 209 deaths for persons with laboratory confirmed H1N1
February 23	WHO Emergency Committee holds its seventh meeting by teleconference and determines not to change the current H1N1 Pandemic Level . It remains at Phase 6
February 26	Finance and Accounting demobilizes (grant functions will remain with DEMO Grant Unit)
February 27	PHP in conjunction with BSPS hosts immunization certification training for all DOH pharmacists in the state. Certification will allow DOH pharmacists to assist in immunizing adults with H1N1 vaccine

Date	Event / Activity
March 2010	
March 1	H1N1 “Keeping the Black Community In the Know” web cast is held about H1N1 prevention to minority populations
March 2	As of this date, Florida reports 1256 hospitalizations and a revised 208 deaths for persons with laboratory confirmed H1N1
March 9	As of this date, Florida reports 1267 hospitalizations and 210 deaths for persons with laboratory confirmed H1N1
March 11	Logistics warehouse in Broward County is closed with remaining items consolidated to the remaining five warehouses
March 16	As of this date, Florida reports 1272 hospitalizations and 210 deaths for persons with laboratory confirmed H1N1
March 18	H1N1 “In the Know” newsletter about H1N1 prevention is distributed to minority populations through inserts in 20 newspapers statewide
March 22	HHS Secretary renews April 26, 2009 determination of a national public health emergency
March 22	H1N1 Forum statewide simulcast targeted to healthcare professionals is held as a debriefing to discuss Florida’s H1N1 planning and medical response
March 23	As of this date, last weekly CHD survey is distributed and last regularly scheduled CHD mass vaccination conference call is held. Future calls will be scheduled as necessary
March 23	BSPS finalizes procedures for disposal of expiring Public Antiviral Stockpile Program antivirals stored at the State Logistics Response Center in Orlando
March 24	Procedures distributed to retail pharmacies for the “Transfer Back” of antivirals from the DOH Public Antiviral Stockpile Program
March 30	Conference call held with 6 of the 7 retail pharmacies receiving antivirals to discuss demobilization of the Public Antiviral Stockpile Program
March 30	As of this date, Florida reports 1296 hospitalizations and 215 deaths for persons with laboratory confirmed H1N1
March 31	As of this date, more than 2.3 million Floridians have received the H1N1 vaccine
April 2010	
April 1	Last “SSG Update” is disseminated to response partners and posted to web site
April 1	Conference call held with the seventh retail pharmacy to discuss demobilization of Public Antiviral Stockpile Program and discontinuation date
April 2	CDC releases interim results of survey indicating Florida vaccinated 19.5% of population ≥ 6 months of age (3.7 million)
April 6	As of this date, Florida reports 1305 hospitalizations and 219 deaths for persons with laboratory confirmed H1N1
April 6	IMT issues final H1N1 IAP (Number 18, April 6 – 20, 2010) and continues monitoring events through the demobilization timeline
April 13	As of this date, Florida reports 1311 hospitalizations and 224 deaths for persons with laboratory confirmed H1N1
April 15	DOH issues final H1N1 Situation Report (Number 26)

Date	Event / Activity
April 27	As of this date, Florida reports 1318 hospitalizations and 225 deaths for persons with laboratory confirmed H1N1
April 29	DOH issues final weekly "H1N1 Media Updates"
April 30	Formal vaccination campaign ends with vaccine continuing to be offered through CHDs until the 2010 seasonal influenza vaccine becomes available. More than 539 vaccine orders processed totaling 5,331,790 doses with more than 2.37 million doses administered as recorded individually or in aggregate in Florida SHOTS.
April 30	H1N1 IMT operations closeout with remaining duties and responsibilities returned to DOH units responsible for daily operations (except for duties by specifically hired H1N1 personnel)
May 2010	
May 18	H1N1 Media Training Course is held for DOH Executive Team
May 25	As of this date, Florida reports 1324 hospitalizations and 230 deaths for persons with laboratory confirmed H1N1
June 2010	
June 3	WHO Emergency Committee releases statement following eighth meeting by teleconference and determines that while the period of most intense pandemic activity has passed, the Pandemic remains
June 12	National influenza reporting to CDC ends for the summer months. Florida reports a total a 1324 hospitalizations and 230 deaths for persons with laboratory confirmed H1N1 since case reporting began
June 23	HHS declaration of Public Health Emergency determination for 2009 H1N1 Influenza expires
June 30	Closeout of fiscal activities for H1N1 incident. All remaining positions hired specifically for H1N1 will end by July 31, 2010
June 30	Draft H1N1Pandemic 2009-2010 After Action Report / Improvement Plan begins review process, due to CDC July 31, 2010
June 30	Florida Flu Information Line extends availability to July 31, 2010
Other	Begin retrieval and disposal of expired, waste, and spoiled H1N1 vaccines
	Collect data from "Vaccination Attitude Survey" and prepare report

Resources / Sources of Information

- Documents Available in DOH 2009 H1N1 Archive files
 - BSPS Weekly Antiviral Activities Reports
 - Bureau of Epidemiology, Epi Surveillance Reports
 - Bureau of Epidemiology, Timeline of Events (see attached)
 - Incident Action Plans (IAP) for H1N1
 - Situation Reports for H1N1
 - State Surgeon General Weekly H1N1Updates

Weekly H1N1 Swine Flu Media Updates
 Documents Available on DOH Internet

For more details on hospitalizations, deaths, and county level of activity, click here to link to
[Florida Influenza Weekly Surveillance Reports](http://www.doh.state.fl.us/Disease_ctrl/epi/httopics/flu/2010/index.html)
 (http://www.doh.state.fl.us/Disease_ctrl/epi/httopics/flu/2010/index.html)

External web sites

CDC Health Alert Network for Vaccine Recall information:

<http://www2a.cdc.gov/han/Index.asp>

Flu.gov news archive: www.flu.gov/news/index.html

Flu.gov H1N1 Meeting the Challenge Time Line: www.flu.gov/timeline

World Health Organization: www.who.int

Color Code Key

Epi, surveillance, and monitoring activities

Vaccines and vaccinations

Media and partner communications

Pharmacy and antivirals

Clinical and response guidance and policies not included in other categories

Incident and activation status

Linked Documentation

The timeline contains hyperlinks to referenced documents as a convenience for persons wanting additional information. All attempts have been made to link to reliable sources, but sites and URLs are subject to change or have technical malfunctions without warning.

To assist persons viewing this document in a non electronic format, the next page contains the list of web addresses used to hyperlink documents in the timeline.

Linked Documentation

This table provides web addresses for documents hyperlinked to the Florida Department of Health, **Historical Overview /Timeline Florida 2009 H1N1 Pandemic**

Table Date	Hyperlink
2009	
April 17	http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5815a5.htm
April 24	http://www.floridadisaster.org/feil.htm
April 26	http://www.flu.gov/professional/federal/h1n1emergency042609.html

Table Date	Hyperlink
April 27	http://www.who.int/mediacentre/news/statements/2009/h1n1_20090427/en/index.html
April 29	http://www.who.int/mediacentre/news/statements/2009/h1n1_20090429/en/
May 1	http://www2a.cdc.gov/phlp/docs/FLDOH%20Declaration%20Public%20Health%20Emergency%205-1-09.pdf
May 1	http://www.ftc.gov/opa/2009/05/swineflu.shtm
May 5	http://www2a.cdc.gov/phlp/docs/DOH%20PHE%20Suppl%20Order%202%20w%20hsle%20distrib%205-5-09.pdf
May 5	http://www.hhs.gov/news/press/2009pres/05/20090505a.html
June 11	http://www.who.int/mediacentre/news/statements/2009/h1n1_pandemic_phase6_20090611/en/index.html
June 24	http://www.whitehouse.gov/the_press_office/Letter-from-the-President-regarding-H1N1/
August 6	http://www.doh.state.fl.us/disease_ctrl/epi/satellite.htm
August 13	http://www.myflusafety.com/
August 13	http://www.flgov.com/release/10964
August 21	http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5810a1.htm?s_cid=rr5810a1_e
September 4	http://www.floridamrc.com/pdf/H1N1UseofVolunteers20090918.pdf
September 11	https://www.flrules.org/Gateway/View_notice.asp?id=7653802
September 14	http://vbs.dms.state.fl.us/vbs/ad.view_ad?advertisement_key_num=82755
September 18	http://www.floridamrc.com/pdf/H1N1UseofVolunteers20090918.pdf
September 21	http://www.cidrapractices.org/practices/resource.do?resource-id=408&antivirals-id=22
October 16	http://www.cdc.gov/media/transcripts/2009/t091016.htm
October 23	http://www.whitehouse.gov/the-press-office/declaration-a-national-emergency-with-respect-2009-h1n1-influenza-pandemic-0
October 27	http://www.cms.hhs.gov/H1N1/Downloads/1135WaiverSigned_H1N1.pdf
October 27	http://www.cdc.gov/h1n1flu/vaccination/statelocal/pdf/H1N1_CMS_Free_Care_Rule_for_2009_H1N1_Flu_Vac.pdf
November 25	http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/index.html
December 2	http://www2a.cdc.gov/HAN/ArchiveSys/ViewMsgV.asp?AlertNum=00302
December 13	https://www.flrules.org/gateway/RuleNo.asp?id=64F-12.011
December 15	http://www2a.cdc.gov/HAN/ArchiveSys/ViewMsgV.asp?AlertNum=00303
December 23	http://www2a.cdc.gov/HAN/ArchiveSys/ViewMsgV.asp?AlertNum=00304

Table Date	Hyperlink
2010	
January 8	http://www.hhs.gov/news/press/2010pres/01/20100108a.html
January 9	http://www.whitehouse.gov/the-press-office/presidential-proclamation-national-influenza-vaccination-week
January 11	http://www.health.state.ny.us/diseases/communicable/influenza/h1n1/health_care_providers/vaccine/docs/2010-1-11_notice_of_expiration_date_change.pdf
January 29	http://www2a.cdc.gov/HAN/ArchiveSys/ViewMsgV.asp?AlertNum=00306
February 2	http://www2a.cdc.gov/HAN/ArchiveSys/ViewMsgV.asp?AlertNum=00309
February 23	http://www.who.int/csr/disease/swineflu/7th_meeting_ihr/en/index.html
March 22	http://www.flu.gov/professional/federal/h1n1emergency032210.html
April 2	http://www.cdc.gov/mmWR/PDF/wk/mm5912.pdf
June 3	http://www.who.int/csr/disease/swineflu/8th_meeting_ihr/en/index.html

**Florida Department of Health
Bureau of Epidemiology**

Timeline of Events Associated with the Novel Influenza A H1N1 Pandemic

April 17, 2009

CDC determined that two cases of febrile respiratory illness occurring in children who resided in adjacent counties in southern California were caused by infection with a swine influenza A (H1N1) virus.

April 23, 2009

Six additional cases have been identified in the United States. In total there are now 8 cases: 6 in California and 2 in Texas.

April 24, 2009

First Bureau of Epidemiology conference call with all CHD epidemiologists regarding current novel influenza situation was held, moderated by Dr. Julia Gill.

First surveillance recommendations distributed to CHD epidemiologists which recommend specimen collection on all confirmed influenza cases that have been admitted to the ICU, suspected influenza cases with recent swine exposure or travel to affected areas, people associated with confirmed or suspected influenza outbreaks, and people with suspected avian influenza who were in a country with H5N1 in people and birds.

April 25, 2009

Bureau of Epidemiology began responding on behalf of the Division of Disease Control for ZZZ feedback requests.

April 26, 2009

The first specimen for detection of the new influenza strain is received (at midnight) and tested by the Bureau of Laboratories.

April 27, 2009

Daily H1N1 CHD epidemiologist conference calls started, hosted by the Bureau of Epidemiology for all CHD epidemiologists.

April 28, 2009

Swine flu investigation form was distributed to CHD epidemiologists. Intended for individual case reports.

Merlin outbreak module was launched for use in reporting of novel influenza cases.

Merlin outbreak module Live Meeting training offered to all CHD epidemiologists on how to report cases, capacity of 50 seats was reached and several additional trainings were offered.

Bureau of Epidemiology began distributing H1N1 (Swine) Influenza Questions and Answers document as a summary for the daily CHD conference calls.

April 29, 2009

Daily EIEIO Swine Flu report template was distributed to CHD epidemiologists. This form is required to be filled out daily and emailed to the Epi_Event mail box at the Bureau of Epidemiology. Corresponding summary of EIEIO data reported by 2pm was summarized for internal purposes.

Surveillance guidance was updated to include specimen collection on all patients with rapid influenza test result positive for influenza A, positive for but unable to distinguish between influenza A and B, or other positive laboratory test for influenza.

Sentinel physician guidance was updated to request five specimens be collected on ILI patients each week.

First official daily Surveillance Situation Status Report produced. Included data related to ESSENCE, BioSense, NRDM, and Florida Poison Information System. Previously, information about these data sources had been sent through ICS channels piecemeal.

First submission of comprehensive line list of all H1N1 cases in Florida submitted to CDC via email. Daily reporting of new cases and updates to old cases is required by CDC. At this time there were two probable cases reported to BOE.

April 30, 2009

Two sessions of the Merlin outbreak module Live Meeting training were offered to all CHD epidemiologists with capacity attendance of 50 seats each filled.

May 1, 2009

Two sessions of the Merlin outbreak module Live Meeting training were offered to all CHD epidemiologists with capacity attendance of 50 seats each filled.

May 2, 2009

First Basic Epi Report was distributed. At this time there are 17 probable cases and 2 confirmed cases of novel H1N1 infection in Florida.

May 4, 2009

Updated the daily EIEIO report to reflect the transition to community mitigation from rapid response and containment.

Merlin Live Meeting training offered covering the use interpretation of novel influenza laboratory results received via the flu lab report.

May 5, 2009

Merlin Live Meeting training offered covering the use interpretation of novel influenza laboratory results received via the flu lab report.

May 7, 2009

Daily H1N1 CHD epidemiologist conference calls ended, the schedule is now every other Friday on the opposite Friday as the Bureau's previously scheduled Bi-Weekly Epidemiology Conference Call.

Deployed the Swine Flu Module to EpiGateway allowing for electronic submission the EIEIO report data by CHD epidemiologists previously collected and emailed to Epi_Event email box.

Merlin Live Meeting training offered covering the swine flu outbreak module and case processing.

The Jacksonville and Tampa locations of the Bureau of Laboratories are now able to perform the RT-PCR test for detection of the novel H1N1 strain.

May 8, 2009

Last day that the Bureau of Epidemiology responded on behalf of the Division of Disease Control for ZZZ feedback requests, responsibility was transferred to another branch of the ICS.

May 9, 2009

Bureau of Epidemiology staff trained EOC call center staff on appropriate response to medical provider questions. Training also covered current guidance and recommendations.

May 14, 2009

Discontinuation of daily EIEIO reports by CHD epidemiologists.

May 22, 2009

Daily Situation Status Reports from the Bureau of Epidemiology discontinued as part of the ICS process. However, Bureau of Epidemiology continued reporting out syndromic surveillance data and basic epidemiology summaries every weekday (Basic Epi Report).

May 29, 2009

Last day that the Basic Epi Report was distributed on a daily basis. The time frame switched to weekly reporting.

Early June, 2009

Bureau of Epidemiology notified of an influenza A H1N1 outbreak at a boy scout camp out of state where several attendees were Florida residents. CHDs with camp attendees conducted interviews of these cases in July 2009. Data was analyzed and summarized in Aug/Sept as an assessment of secondary household transmission.

June 3, 2009

Last day for BOE submission of the daily comprehensive line list to CDC for all reported H1N1 cases. From this point forward reporting includes only aggregate numbers entered via a CDC website on a weekly basis.

June 6, 2009

Updated case reporting guidance distributed to CHD epidemiologists prioritizing severely ill cases admitted to the hospital and cases of epidemiologic significance for investigation. All laboratory confirmed cases are still required to be reported in Merlin.

June 24, 2009

First cumulative Basic Epi Report distributed along with the regular weekly update. This allowed for a discussion of the recently reported cases as well as an understanding of all cases report up to this date.

July 17, 2009

Protocol for reporting deaths with H1N1 infection were updated to require immediate update in Merlin and phone notification of the Bureau of Epidemiology. Case definition only requires the presence of H1N1 at the time of death, there is no requirement that it be a cause of death.

July, 29, 2009

Last weekly Basic Epi Report was released, only the H1N1 Novel Influenza Surveillance Report (updated version of what was previously called the cumulative Basic Epi Report) will be distributed from this point forward.

When the report was discontinued there were 3,321 confirmed cases of infection, 404 known hospitalizations, and 31 deaths reported. However, this is very likely to severely underestimate the true number of infections in Florida.

Late July

First two reports of Tamiflu resistance among Florida residents received. The two cases were in children returning from a summer camp in North Carolina. North Carolina Department of Health published a case series relating to these two cases, and others, in the MMWR.

August 3, 2009

Surveillance guidelines updated to include reporting of only cases with life threatening illness, pregnant cases that are hospitalized, and deaths.

August 5, 2009

First of the new format H1N1 Novel Influenza Surveillance Reports distributed. First influenza death line list sent to office of communications for internal purposes only, not distributed for wide consumption.

August 6, 2009

Bureaus of Epidemiology satellite broadcast titled "Novel Influenza A H1N1 Outbreak: The Florida Response."

August 10, 2009

Bureau of Epidemiology updated infection control guidance to recommend use of N-95 masks only for aerosol generating procedures and not for routine patient care of suspected or confirmed influenza A H1N1 cases.

August 21, 2009

Retrospective enhanced data collection on reported pregnant H1N1 cases since the beginning of the pandemic began per CDC request, time frame covered April and actively into September. This data was compiled with data from other states and has been submitted by CDC to JAMA for publication (under review as of 3/2/10).

August 24, 2009

Data on FL H1N1 case reports turned over to NIOSH for occupational analysis.

August 26, 2009

Pregnancy related case report form distributed by CDC and active follow-up of pregnant cases began.

August 28, 2009

First bi-weekly H1N1 conference call, had previously been part of the regular Bi-Weekly Epidemiology Conference Calls. The schedule is now every other Friday on the opposite Friday as the Bureau's previously scheduled Bi-Weekly Epidemiology Conference Call.

September 1, 2009

Thirty-three hospitals participating in the ESSENCE system are able to provide one year of historical admissions data. BOE now uses this data to report aggregate hospitalization data to the CDC.

CDC revised their weekly aggregate reporting requirements to include weekly counts of hospitalizations and deaths. As mentioned earlier, Florida is reporting syndromic hospitalizations and lab confirmed deaths.

September 15, 2009

Deployed Merlin version 8.2 which included major updates to the Flu Lab Report. Allows for better visualization of summary data including counts and percentages of flu tests by subtype.

September 28, 2009

First week that the comments box was available for comment on the County Flu Activity screen in EpiGateway. This allowed for the comment box to be used for counties reporting their activity for September 20-26. This comment box was required for widespread activity, optional for other levels of activity.

September 29, 2009

Deployed Merlin version 8.2.01 which included changes to the Flu Lab Report three new report presentations on the left menu including: Subtype, Percent Positive, and a data table by county.

October 1, 2009

First summary of influenza activity code comments entered as part of the New! County Flu Code by CHD epis was distributed.

Bureau of Epidemiology assisted the Florida Poison Information Center Network with development and implementation of their script for healthcare questions related to pandemic influenza. Healthcare hotline went live on this date.

October 5, 2009

Deployed New! County Flu Code to EpiGateway. This was available for counties to use during the report week of September 27-October 3.

October 8, 2009

First complete summary of all measures included as part of the New! County Flu Code was distributed.

November 2

First week of data collection for the vaccine penetration study. Data collection would continue through early January 2010.

November 12, 2009

Active follow-up began with the influenza coordinator in each CHD that did not report a county flu code in the old or the new module.

November 17, 2009

CDC Epi-Aid team arrives in Tallahassee, Florida to coordinate a serosurvey of residents with antibodies to influenza A H1N1.

Deployed Merlin version 8.2.1 which included major changes to the flu lab report namely the ability to drill down to line list details for any given figure or table.

November 18, 2009

Weekly influenza surveillance report distributed for week 45 ending November 14, 2009. This is the first week that featured 100% reporting of influenza activity codes by CHD influenza coordinators.

November 25, 2009

Summary of occupational analysis of novel influenza A H1N1 cases reported in Florida published in the Bureau of Epidemiology's EpiUpdate

December 17, 2009

Hospitalization case series completed and all records sent to CDC. Eleven cases were randomly selected.

December 18, 2009

Bi-weekly CHD epidemiologist H1N1 conference calls ended.

December 20, 2009

First report distributed from the vaccine penetration study.

January 11, 2010

Death case series completed and submitted to CDC. The case series included 31 cases from September 1 to October 31.

January-March, 2010

Investigation of all Florida death certificates indicating novel influenza or H1N1 as underlying or contributing causes of death (project is ongoing).

Identification and investigation of deaths indicative of hemorrhagic pneumonia associated with influenza infection. Data collection per CDC protocol. Currently three potential cases identified and case finding is ongoing.

Brief Description of the Epidemiology of the Novel Influenza A H1N1 Pandemic Florida Department of Health Bureau of Epidemiology

Please use the figures included below for context when reviewing the Bureau of Epidemiology Timeline.

Figure 1: 2009 H1N1 Cases by Week of Report*
 Week 17 (Ending 5/2/2009) to Week 8 (Ending 2/27/2009)

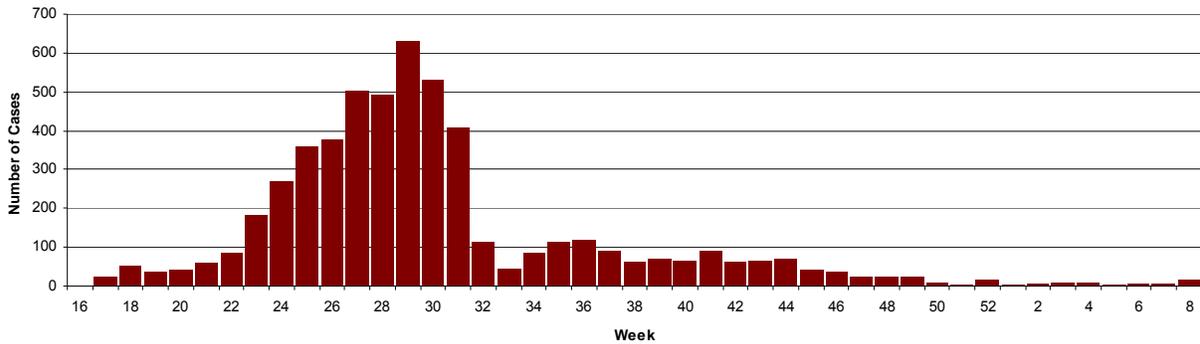
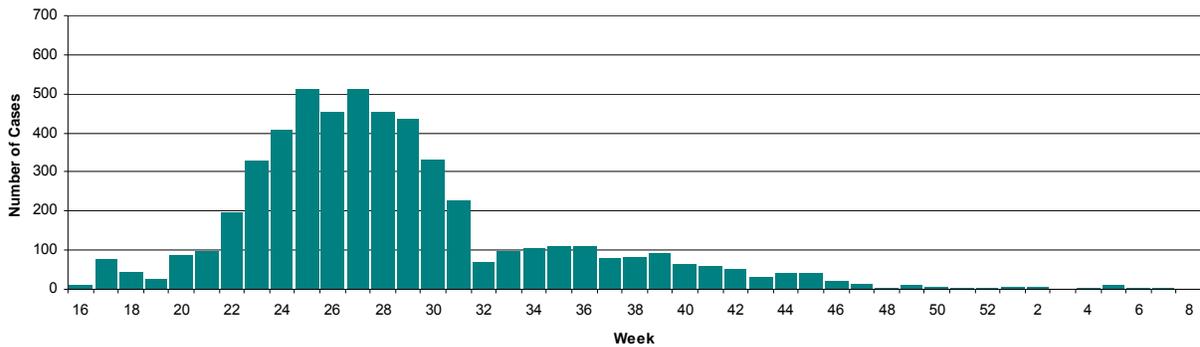


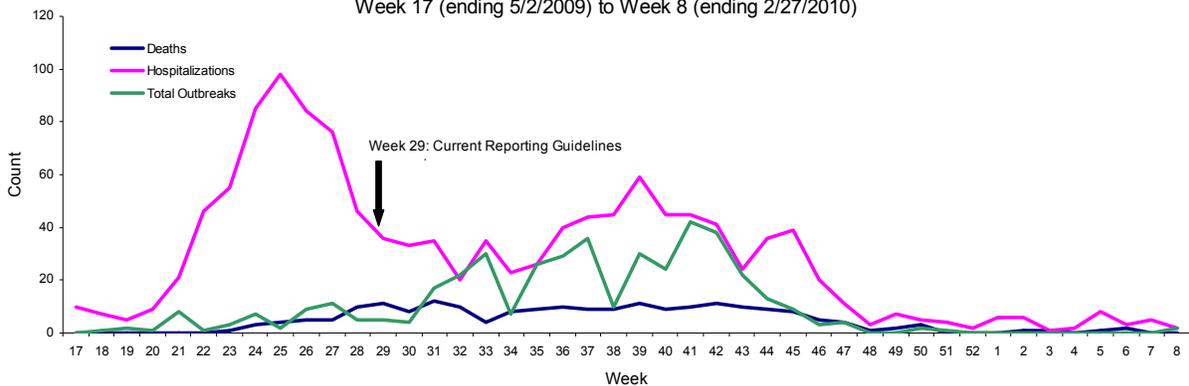
Figure 2: 2009 H1N1 Cases by Event Week**
 Week 17 (Ending 5/2/2009) to Week 8 (Ending 2/27/2009)



* Week of Report is the week the case was reported to the BOE.

** Event Week is defined as the week of the earliest of the following dates associated with the case: date of onset, date of diagnosis, lab report date, or date reported to CHD.

Figure 3: Cumulative Deaths and Hospitalizations in Novel H1N1 Cases, and Outbreaks of Influenza or ILI
 Week 17 (ending 5/2/2009) to Week 8 (ending 2/27/2010)



† Deaths are classified by date of death.

†† Hospitalizations are classified by event week

††† Outbreaks are classified by date reported into EpiCom

Description of Figures:

In week 17 (ending May 2, 2009), FDOH received its first reports of CDC lab-confirmed H1N1 influenza A infection. At that time, all cases of lab-confirmed 2009 H1N1 were reportable. After week 29 (ending July 25, 2009) the reporting guidelines were updated to make only 3 groups reportable as H1N1 cases: persons hospitalized with life-threatening H1N1 illness, pregnant women hospitalized with H1N1, and deaths in persons with H1N1 influenza. The decline in case reporting after week 29, shown in figures 1 and 2, is due to this more restrictive case definition, and not to a decline in influenza activity. Although influenza activity and case reporting fell significantly during the final weeks of 2009 and has stayed relatively low during 2010, identification of old H1N1 cases has caused sporadic increases in reporting, shown in figure 2. These reflect the follow-up investigation rather than recent cases.

H1N1 hospitalizations, as shown in figure 3, follow the same pattern as the cases by event week in figure 2, with a large initial peak, followed by a decline in reporting after the change in case definition, then a subsequent smaller peak. Despite the change in definition, H1N1 deaths did not peak until week 39, and ILI and influenza outbreaks reported into EpiCom did not peak until week 41.

Comments:

Surveillance system investments provided a robust, flexible, standardized set of surveillance and investigation tools utilized during the 2009 H1N1 response. Key results include: 1) the Merlin Outbreak Module enabled statewide timely, comprehensive, electronic reporting of laboratory-confirmed cases with the capacity to analyze case report form risk factor information starting 4 days after the first case was identified. This eliminated management paper case report forms at the state level. 2) Timely, accurate characterization of 75% of all emergency department room visits was accessible via ESSENCE. 3) Integration of case report data into ESSENCE enabled utilization of ESSENCE analysis features (e.g. mapping) of H1N1 case data. 4) As of January 2010, a total of 426 influenza-like-illness outbreaks and clusters associated with 2009 H1N1 have been reported and tracked through EpiCom. 5) More complete assessment of influenza activity at the local level, including in specific settings (e.g. schools/colleges/universities, nursing homes, government offices).

Short- and long-term surveillance system investments and planning for pandemic influenza were crucial during the 2009 H1N1 response. Surveillance data were collected in a timely systematic manner and meaningfully compared and analyzed across jurisdictional boundaries. The intersection of "traditional PH surveillance" methods with new technological capabilities was the foundation of an effective epidemiologic public health response.

For more information contact Florida Department of Health, Division of Disease Control, Bureau of Epidemiology www.doh.state.fl.us/disease_ctrl/epi/topics/contact.htm.

APPENDIX E: ACRONYMS

This table contains acronyms used in the After Action Report/Improvement Plan and Appendix D: Response Summary Tables.

Table E.1: Acronyms

Acronym	Meaning
AAR/IP	After Action Report/Improvement Plan
ACIP	Advisory Committee on Immunization Practices
ACHL	Advanced Capacity Hospital Laboratories
ASPR	Assistant Secretary for Preparedness and Response
BOI	Florida Department of Health Bureau of Immunization
BOL	Florida Department of Health Bureau of Laboratories
BOP	Florida Department of Health Bureau of Pharmacy
BRFSS	Behavioral Risk Factor Surveillance System
BSPS	Florida Department of Health Bureau of Statewide Pharmaceutical Services
CEMP	Comprehensive Emergency Management Plan
CDC	Centers for Disease Control and Prevention
CHD	County Health Department
CMS	Centers for Medicare and Medicaid Services
COOP	Continuation of Operations Plan
DOH	Florida Department of Health
DHS	Department of Homeland Security
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPI	Florida Department of Health, Division of Disease Control, Bureau of Epidemiology
ESF8	Emergency Support Function 8 (Health and Medical)
FAC	Florida Administrative Code
FDA	Food and Drug Administration
FDEM	Florida Division of Emergency Management
FDOE	Florida Department of Education
FDOH	Florida Department of Health
FEIL	Florida Emergency Information Line, State of Florida, Department of Community Affairs, Division of Emergency Management
FPICN	Florida Poison Information Control Network
FTC	Federal Trade Commission
HHS	U.S. Department of Health and Human Services
HSEEP	Homeland Security Exercise and Evaluation Program
IAP	Incident Action Plan
ICS	Incident Command System
ILI	Influenza like illness

Acronym	Meaning
IMB	Information Management Branch
IMT	Incident Management Team
JAS	Job Action Sheet
LAIV	Live Attenuated Influenza Vaccine
MOU	Memorandum of Understanding
MRC	Medical Reserve Corps
NIVW	National Influenza Vaccination Week
PCR	Polymerase Chain Reaction
PHER	Public Health Emergency Response
PHP	Public health Preparedness
PIO	Public Information Officers
POC	Point of Contact
POD	Point of Dispensing
PPE	Personal Protective Equipment
RDSTF	Regional Domestic Security Task Force
SEOC	State Emergency Operations Center
SERT	State Emergency Response Team
SHOTS	State Health Online Tracking System
SNS	Strategic National Stockpile
SOG	Standard Operating Guidelines
SOP	Standard Operating Procedures
SSG	Florida State Surgeon General
VAERS	Vaccine Adverse Event Reporting System
WHO	World Health Organization

Enclosure 1: Epi Surveillance Report

Report is as of the demobilization of the IMT. For additional Weekly Influenza Surveillance Reports go to:
www.doh.state.fl.us/Disease_ctr/epi/htopics/flu/reports.htm



Week 17: April 25 – May 1, 2010



Summary

The Florida Department of Health (FDOH) monitors multiple surveillance systems such as the Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE), the Florida Pneumonia and Influenza Mortality Surveillance System (FPIMSS), notifiable disease reports (Merlin), EpiCom, and Florida ILINet in order to track influenza activity in the state.

National:

- There were low levels of influenza activity in the United States during week 16. Florida's national surveillance region, Region 4, shows elevated activity compared to the rest of the country, however there are no longer any Region 4 states reporting regional activity. No states reported widespread or regional activity, and the highest proportion of states reported sporadic activity. Nationally, activity is less than previous years at this time.

State:

- Influenza-like illness (ILI) activity is low in many of our monitoring systems. This week no counties reported widespread activity, the highest activity level, and one county reported localized activity. In week 17, for the first week since H1N1 reporting began, there were no new H1N1 hospitalizations reported. ESSENCE ILI data remain slightly elevated over previous years at this time.
- Virtually all current influenza infection seen throughout the western hemisphere, and most of the rest of the world, is 2009 H1N1. Neither a different influenza virus, nor any other viruses that can cause influenza-like illness, have started causing significant illness in Florida. RSV, a virus that primarily affects infants and toddlers, is active throughout the state, as is usual this time of year.

Weekly state influenza activity: Sporadic

Florida is currently reporting Sporadic influenza activity statewide, due to the continuing low levels of influenza reflected in many of our surveillance systems. Florida is now past the time of year when normal flu seasons begin to decline, and although flu continues to circulate there was not a traditional winter peak in influenza activity.

TABLE 1: Summary of Florida Influenza-Like Illness (ILI) Activity for Week 17

Measure	Difference from previous week	Current week 17	Previous week 16	Page of Report
Overall statewide activity code reported to CDC	No Change	Sporadic	Sporadic	1
Percent of visits to ILINet providers for ILI	▼ 0.2	0.7%	0.9%	2
Percent of emergency department visits (from ESSENCE) due to ILI	No Change	1.7%	1.7%	4
Percent of hospital admissions (from ESSENCE) due to ILI	No Change	0.3%	0.3%	4
Percent of laboratory specimens that were positive for influenza	▼ 4.7	6.1%	10.8%	6
Percent of positive influenza specimens that were identified as 2009 H1N1	No Change	100.0	100.0%	6
Number of counties reporting localized influenza activity	▲ 1	1	0	7
Number of counties reporting widespread influenza activity	No Change	0	0	7
Number of counties reporting increasing influenza activity	No Change	2	2	8
Number of counties reporting decreasing influenza activity	▲ 8	26	18	8
Number of recent deaths in confirmed 2009 H1N1 influenza cases	No Change	1	1	12
Number of recent hospitalizations in confirmed 2009 H1N1 influenza cases	▼ 3	0	3	13
Number of ILI outbreaks reported in Epi Com	▲ 1	1	0	14

May 5, 2010

Posted on the Bureau of Epidemiology website: http://www.doh.state.fl.us/disease_ctr/epi/swineflu/Reports/reports.htm

Produced by: Bureau of Epidemiology, Florida Department of Health (FDOH)

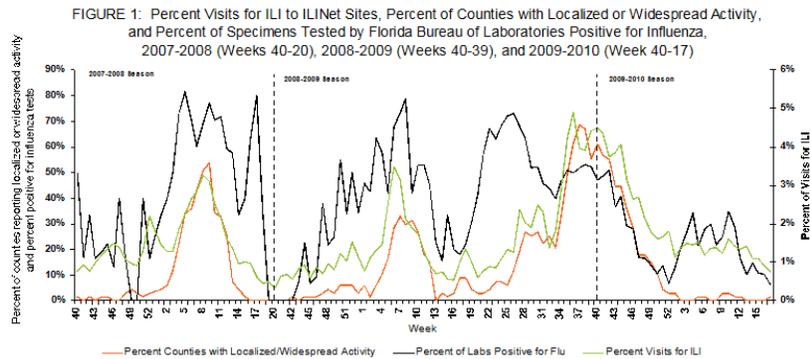
Contributors: Colin Malone, MPH; Anita Ofori-Addo, MPH; Aaron Kite-Powell, MS; Brian Fox, MA; Kate Goodin, MPH; Leah Eisenstein, MPH; Lillian Stark, PhD, MPH, MS; Valerie Mock; Julian Everett B.S.; Subir Goyal, MBBS, MPH; Janet Hamilton, MPH; Richard Hopkins, MD, MSPH



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FIGURE 1 shows the progression of the 2007-2008, 2008-2009, and 2009-2010 Florida influenza seasons as monitored by three surveillance systems: ILINet, Bureau of Laboratories viral surveillance, and county activity levels.

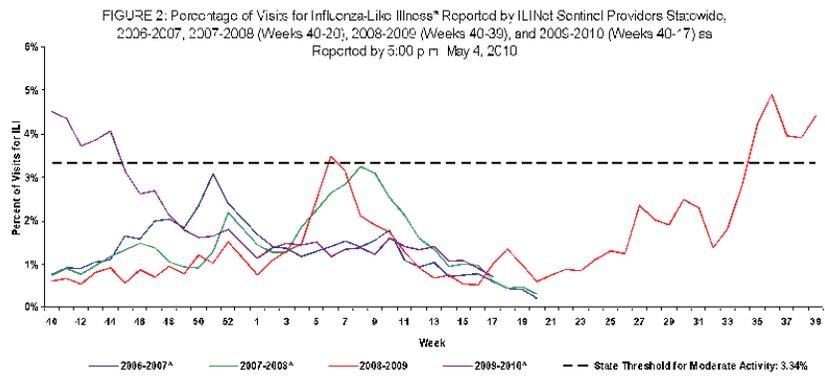


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ILINET Influenza-like Illness-Statewide

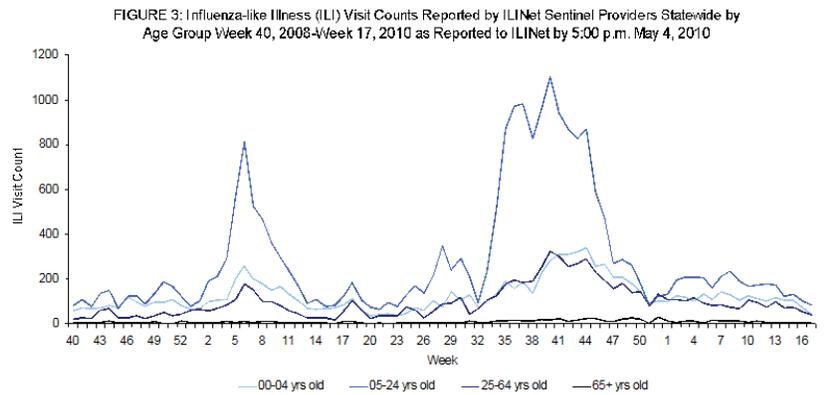
FIGURE 2 shows the percentage of visits for influenza-like illness* reported by ILINet Sentinel Providers statewide.

Week 17 is the 24th week in a row that Florida has been below the threshold for moderate activity. Influenza activity is similar to previous influenza seasons at this time and continues the downward trend seen since week 10.



*ILI = Influenza-like illness, fever >100°F AND sore throat and/or cough in the absence of another known cause.
 **The 2009-2010 threshold for moderate activity is calculated from ILINet data. The threshold for moderate activity is the mean percentage of patient visits for ILI during influenza weeks for the previous three seasons plus two standard deviations. Only weeks with 10% or greater of laboratory specimens testing positive are included in the calculation. Due to wide variability in regional level data, it is not appropriate to apply the state baseline to regional data.
 †There is no week 53 during the 2006-2007, 2007-2008, and 2009-2010 seasons; the week 53 data point for those seasons is an average of weeks 52 and 1.

FIGURE 3 shows influenza-like illness (ILI) visit counts reported by ILINet sentinel providers statewide by age group.



*ILI = Influenza-like illness, fever >100°F AND sore throat and/or cough in the absence of another known cause.
 †Data presented here are counts, not proportions as included in Figure 2. This is because age group denominator data is not available through ILINet.

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ILINET Influenza-like Illness-Regional

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Map 1: RDSTF Regions for ILINet Data



TABLE 2: ILINet Providers and Percent of Visits for ILI by Region, Week 17, as Reported by 5:00 p.m. May 4, 2010

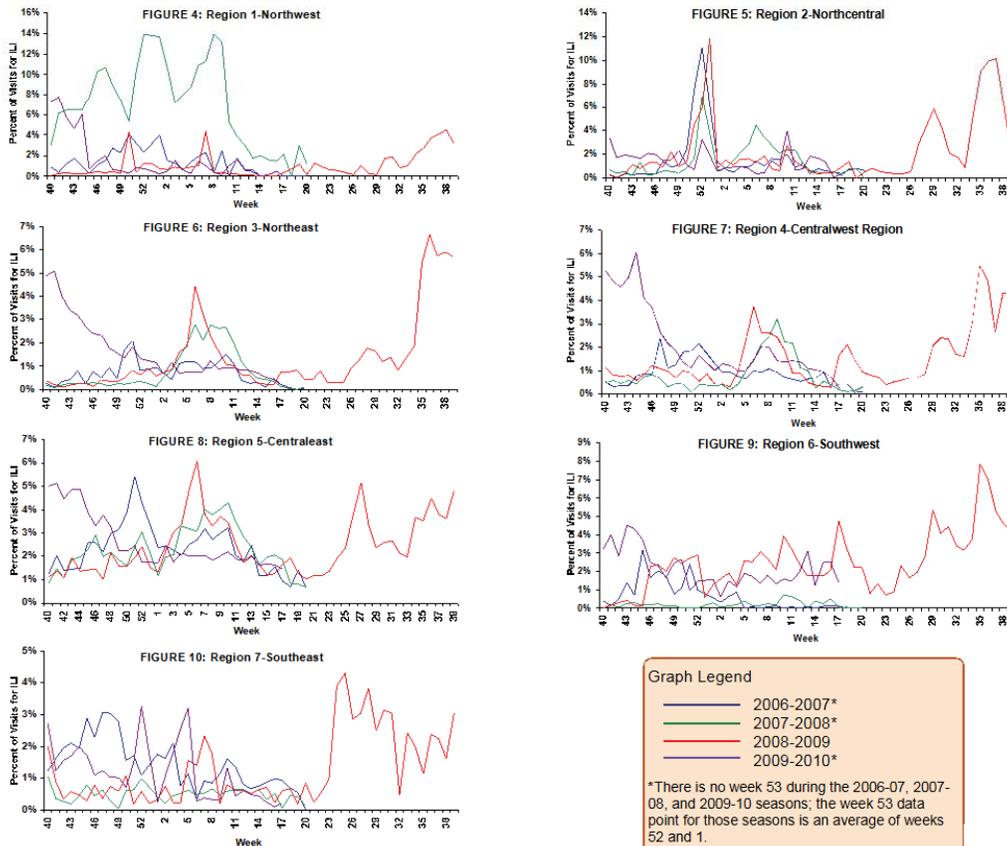
	Number of Participating Providers	Providers that Reported	Percent Visits for ILI	
Region 1-Northwest	15	6	40.00%	0.00%
Region 2-Northcentral	5	2	40.00%	0.29%
Region 3-Northeast	22	11	50.00%	0.21%
Region 4-Centralwest	39	21	53.85%	0.24%
Region 5-Centraleast	50	37	74.00%	1.49%
Region 6-Southwest	20	4	20.00%	1.37%
Region 7-Southeast	26	10	38.46%	0.22%
Total	177	91	51.41%	0.73%

TABLE 2 shows the ILI activity by Regional Domestic Security Task Force (RDSTF) as reported by Florida ILINet physicians for week 17 (ending May 1, 2010).

FIGURE 4 - FIGURE 10 include ILI activity as reported by sentinel physicians for the 2006-2007, 2007-2008, 2008-2009, and 2009-2010 seasons.

This week all regions are reporting a percentage of visits due to ILI similar to what has been seen in previous years. Please refer to table above for the number of providers reporting for each region. Data should be interpreted with caution due to the low number of providers reporting in some regions. Numbers will change as more data are received.

Percentage of Visits for Influenza-Like Illness Reported by ILINet Sentinel Providers by RDSTF Region, 2006-07 (Weeks 40-20), 2007-2008 (Weeks 40-20), 2008-2009 (Weeks 40-39), and 2009-10 (Weeks 40-17) as Reported by 5:00 p.m. May 4, 2010.



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ESSENCE Syndromic Surveillance Summary-Statewide

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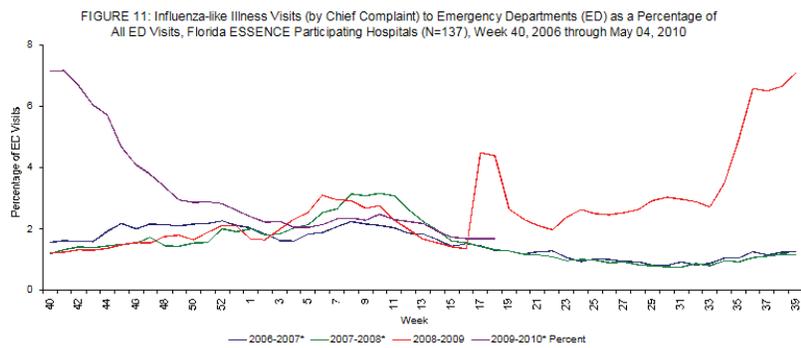
Florida uses the Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE) for syndromic surveillance, which currently collects data daily from 137 hospital emergency departments (ED). These data are processed into 11 different syndrome categories based on the patient's chief complaint. One of the categories is influenza-like illness (ILI), which is composed of chief complaints that include the words "influenza" or "flu," or either fever and cough or sore throat. Thirty facilities participating in ESSENCE have been able to provide historical admissions data and are included here.

FIGURE 11 shows ESSENCE data on ILI visits to Emergency Departments as a percentage of all ED Visits.

Overall activity for influenza-like illness reported in ESSENCE is slightly elevated for this time of year.

Florida has now passed the point at which normal winter influenza activity begins to decline.

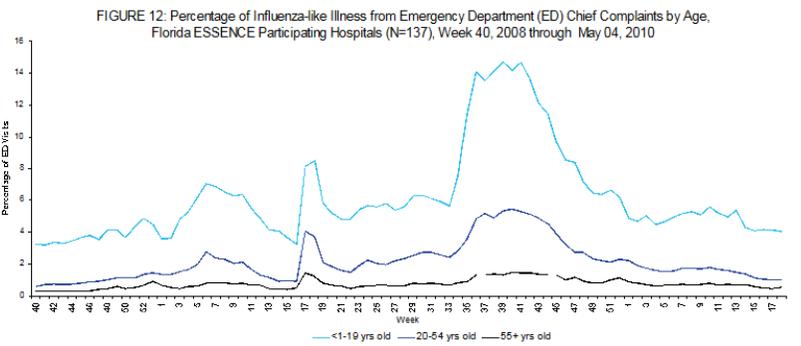
The majority of the increase in ED visits is occurring in younger age groups. After a steep decline in late 2009 and small increases beginning in week 6, 2010, ILI visits have stabilized at a level less than most normal seasonal influenza peaks, but greater than normal lows between influenza



*There is no week 53 for the 2006-2007, 2007-2008, or 2009-2010 seasons; the week 53 data point for those seasons is an average of weeks 52 and 1.

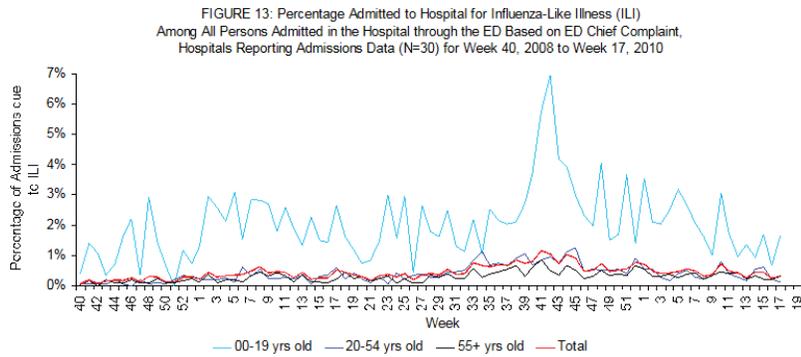
FIGURE 12 shows percentage of ILI among all ED visits by age group.

Age-specific trends show that there are increases in ILI activity for younger age groups (<1-19), while older age groups have seen slight declines in ILI activity levels.



Thirty facilities participating in ESSENCE have been able to provide historical admissions data and are included here. The percentage of admissions for ILI is highest in those less than 20 years old, but the small numerators and denominators in this age group result in high variability. The percentages in the older age groups is less variable and shows a distinct increase starting around week 32. Overall, the percentage of admissions due to ILI is very low. These data are based on the patient's chief complaint when presenting to the emergency department and may not reflect the actual diagnosis.

FIGURE 13 shows hospital admissions due to ILI as a percentage of all hospital admissions.



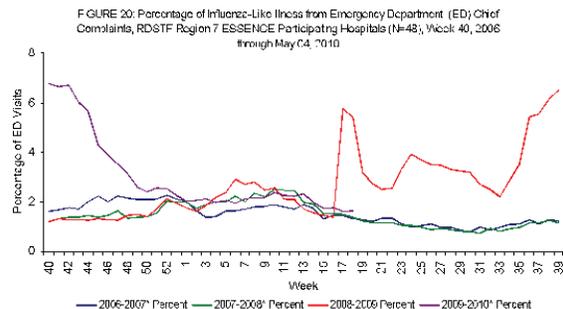
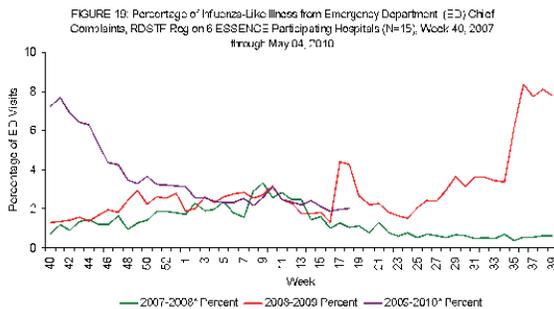
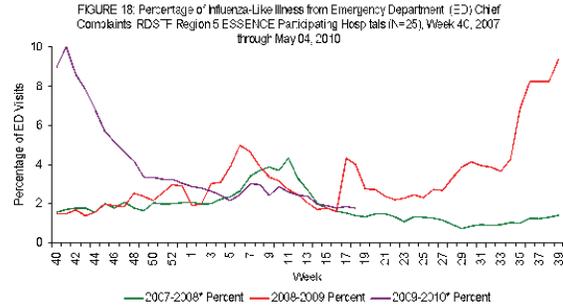
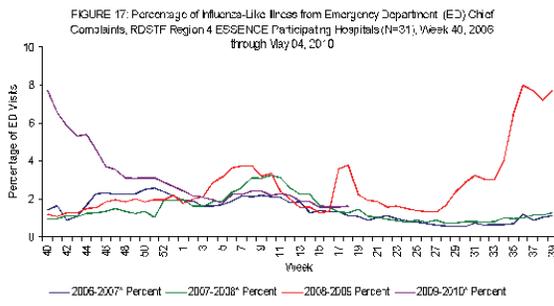
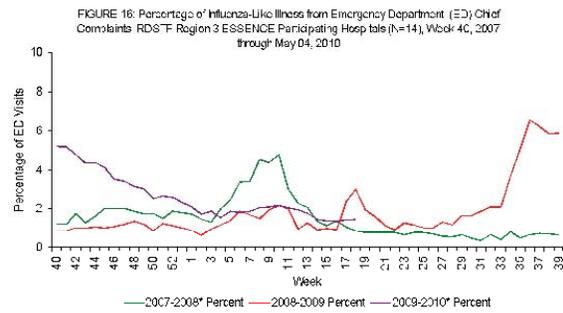
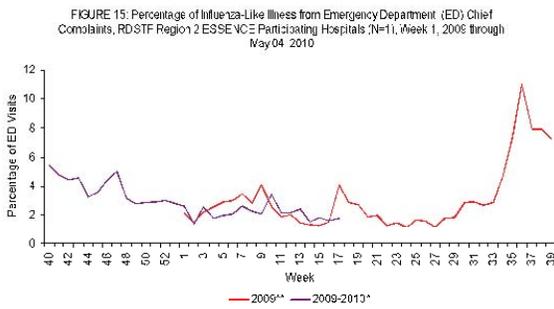
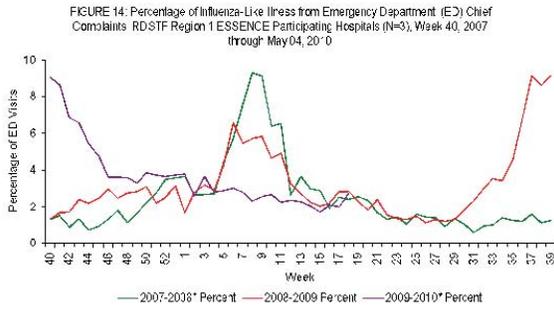
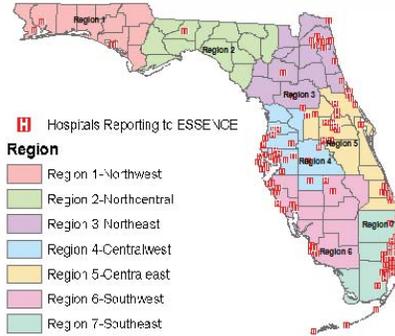
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ESSENCE Syndromic Surveillance Summary-Regional

FIGURE 14 - FIGURE 19 describe emergency department chief complaint data from ESSENCE by Domestic Security Task Force Region

All regions' percentage of ILI among emergency department (ED) visits have stabilized and are at levels similar to normal influenza seasons.

Map 2: Hospitals Reporting Emergency Department (ED) Data to Florida ESSENCE, May 4, 2010 (N=137)



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*There is no week 53 for the 2006-2007, 2007-2008, or 2009-2010 seasons; the week 53 data point for those seasons is an average of weeks 52 and 1.
 **Historical data for region 2 is only available beginning week 1, 2009

Bureau of Laboratories Viral Surveillance

page 6

Table 3 shows the number of specimens tested by the Bureau of Laboratories (BOL), how many are influenza positive, and how many are H1N1 or other influenza subtypes.

Virtually all infections due to novel H1N1 are caused by strains that are sensitive to oseltamivir and zanamivir (Tamiflu and Relenza).

FIGURE 20 - FIGURE 22 use BOL viral surveillance data to track the progress of influenza infection over time. They include weekly information on how many specimens are tested by the BOL, what proportion of those test positive for influenza, and what subtypes are found for the positive influenza specimens

The vast majority of positive influenza specimens are H1N1, with some exceptions:

Five specimens have tested positive for H3 seasonal Influenza A since week 44, 2009.

- One in week 15, 2010, one in week 49, 2009, one in week 46, and two in week 44.

- H3 seasonal Influenza A has been seen during normal influenza season.

Six specimens have tested positive for Influenza B since week 39.

- One in week 6, 2010, one in week 4, two in week 44, 2009, one in week 40, and one in week 39.

- Influenza B, unlike influenza A, does not have significant pandemic potential.

Laboratory information is preliminary and will change as additional results are received. Totals from previous weeks will be adjusted to reflect correct specimen numbers.

Table 3: Bureau of Laboratories Viral Surveillance for Week 17 by Lab Event Date* as reported by 2:00 p.m. May 4, 2010

	Current Week 17	Previous Week 16
Total Specimens Tested	33	49
Influenza Positive Specimens (% of total)	2 (6.1%)	5 (10.8%)
H1N1 Positive Specimens (% of influenza positives)	2 (100.0%)	5 (100.0%)
H3 Influenza A	-	-

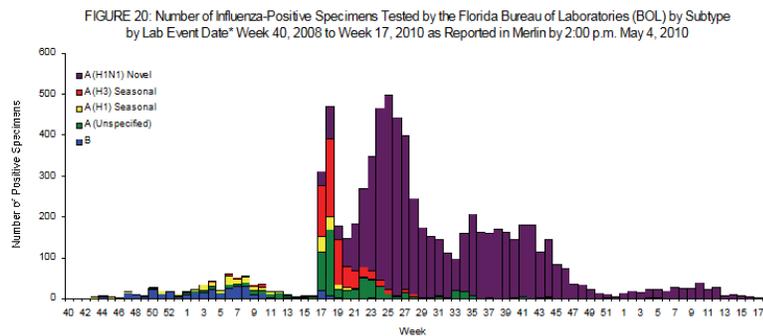


FIGURE 21: Number of Specimens Tested by Florida Bureau of Laboratories (BOL) and Percent Positive for Influenza by Lab Event Date* Week 40, 2008 to Week 17, 2010 as Reported in Merlin by 2:00 p.m. May 4, 2010

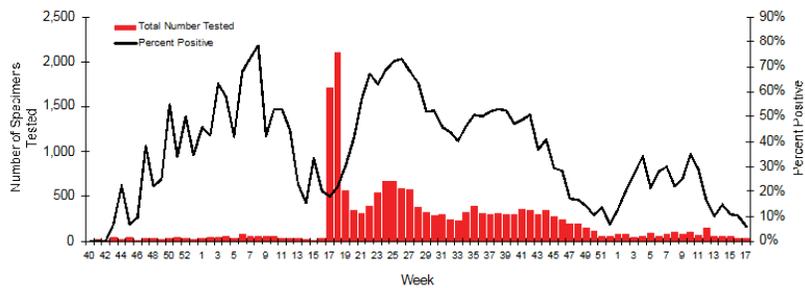
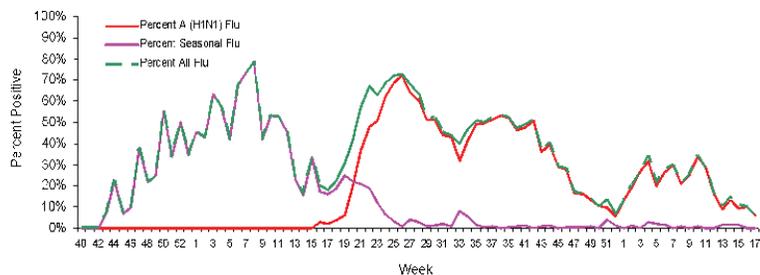


FIGURE 22: Percentage of Specimens Tested by Florida Bureau of Laboratories (BOL) Positive for Influenza by Subtype by Lab Event Date* Week 40, 2008 to Week 17, 2010 as Reported in Merlin by 2:00 p.m. May 4, 2010



*Please note that lab event date is defined as the earliest of the following dates associated with the lab: date collected, date received by the laboratory, date reported, or date inserted.

For county-specific laboratory data, please refer to the Flu Lab Report in Merlin.

For instructions on how to use the Flu Lab Report, please see the Guide to Flu Lab Report on the Bureau of Epidemiology website: http://www.doh.state.fl.us/disease_ctrl/epi/htopics/flu/FluLabReportGuide.pdf

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County Influenza Activity

page 7

As of 1:30 p.m. May 5, 2010 a total of 67 (100%) counties had reported their weekly level of influenza activity. This is the twenty-first week in a row we have achieved 100% reporting, thanks to enhanced follow-up with counties. Please note that data reported by counties after the deadline Tuesday at 5 p.m. are recorded but may not be included in the activity map for previous weeks.

TABLE 4: Weekly County Influenza Activity for Week 17 (ending May 1, 2010) as Reported by 1:30 p.m. May 5, 2010

Activity Level	Week 16 Number of Counties	Week 17 Number of Counties	Week 17 Counties
No Report	0	0	-
No Activity	38	36	Baker, Bradford, Calhoun, Collier, Columbia, Desoto, Dixie, Flagler, Franklin, Gadsden, Gulf, Hamilton, Hendry, Highlands, Holmes, Indian River, Jackson, Jefferson, Lafayette, Lake, Lee, Liberty, Madison, Manatee, Monroe, Okaloosa, Pasco, Putnam, St. Lucie, Sarasota, Sumter, Suwannee, Union, Wakulla, Walton, Washington
Sporadic	29	30	Alachua, Bay, Brevard, Broward, Charlotte, Citrus, Clay, Duval, Escambia, Gilchrist, Glades, Hardee, Hernando, Hillsborough, Leon, Levy, Marion, Martin, Nassau, Okeechobee, Orange, Osceola, Palm Beach, Pinellas, Polk, Santa Rosa, Seminole, St. Johns, Taylor, Volusia
Localized	0	1	Dade
Widespread	0	0	-

Map 3: Weekly County Influenza Activity for Week 17 as Reported by 1:30 p.m. May 5, 2010

One county reports localized activity, and no counties report widespread activity.

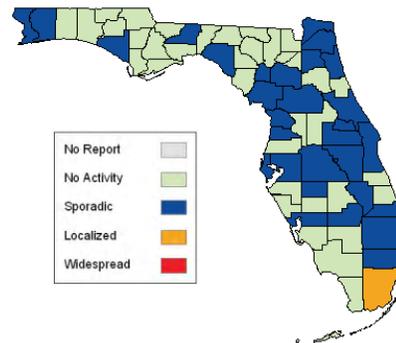


FIGURE 23: Number of Counties Reporting Localized or Widespread Activity, 2007-2008 (Weeks 40-23), 2008-2009 (Weeks 40-39), and 2009-2010 (Weeks 40-6) as Reported by 1:30 p.m. May 5, 2010

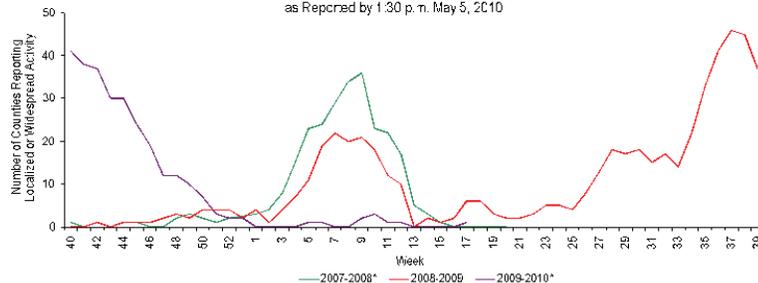


FIGURE 23 shows the number of counties reporting localized or widespread activity, 2007-2008, 2008-2009, and 2009-2010.

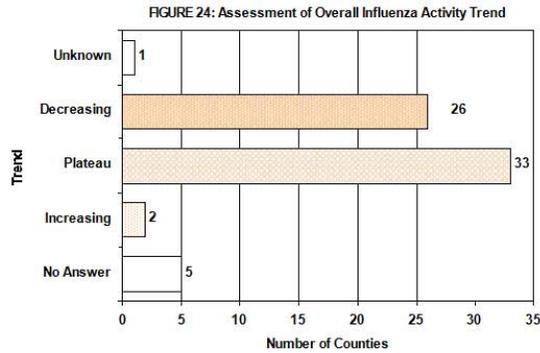
County flu activity level definitions are now available online at:
http://www.doh.state.fl.us/disease_ctrl/epi/FluActivityDef.htm

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New County Influenza Activity

County influenza activity data is reported to the Bureau of Epidemiology through EpiGateway on a weekly basis by the county influenza coordinator. Specific information is requested about laboratory results, outbreak reports, and surveillance system activity. Figures 24-33 displayed below reflect a county's assessment of influenza activity within their county as a whole as well as influenza activity within specific settings. For the week ending May 1st, 26 counties indicated that activity was decreasing, 33 indicated it was about the same, and 2 indicated that activity was increasing.

FIGURE 24 shows the assessment of Overall Influenza Activity Trend in County as Reported by County Health Department Flu Coordinators for week 17 as of 5:00 p.m. May 4, 2010.



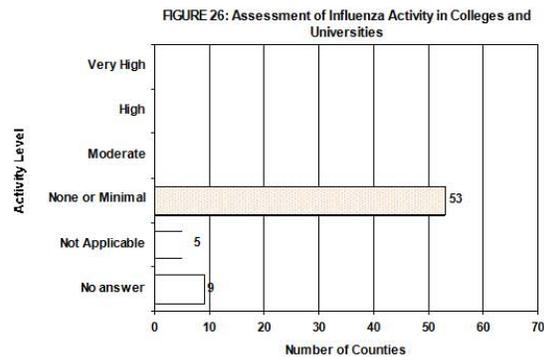
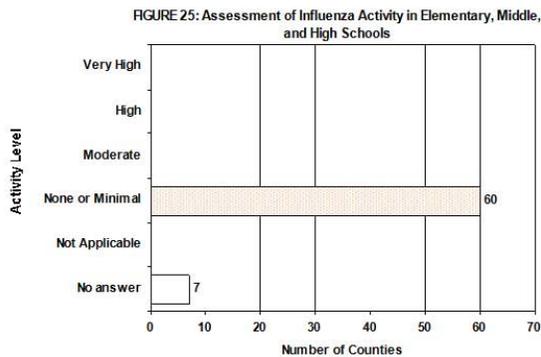
Definitions for the County Influenza Activity Trends are available at:
http://www.doh.state.fl.us/disease_ctrl/epi/CountyInfluenzaTrendGuide.html

Counties are asked to evaluate influenza activity in certain settings within their county. Each setting has a scale for activity that ranges from none or minimal activity to very high activity. What defines each of the values varies by facility type, but the example of the assessment in elementary, middle, and high schools is included below. More detailed information on the meanings of the levels for each setting can be found on the webpage also included below.

- No or very minimal activity -- Scattered cases of ILI with no increase in absenteeism or disruption of school activities.
- Moderate activity -- Absenteeism elevated above baseline (in range of 10 to 25%) in some but fewer than half of schools where it is known; occasional children sent home because of ILI.
- High activity -- Absenteeism elevated above baseline (in range of 10 to 25%) in more than half of schools; most schools sending several or many children home each day because of ILI.
- Very high activity -- Absenteeism high enough to force curtailment of some or all school activities.

County influenza settings assessment guides are available at:
http://www.doh.state.fl.us/disease_ctrl/epi/FluAssessment.htm

FIGURE 25 - FIGURE 26 show the activity levels in various facilities by county as reported by county health department flu coordinators for week 17 as of 5:00 p.m. May 4, 2010.

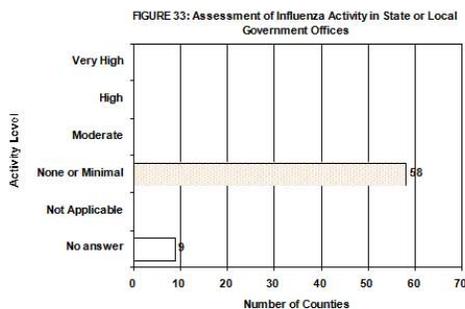
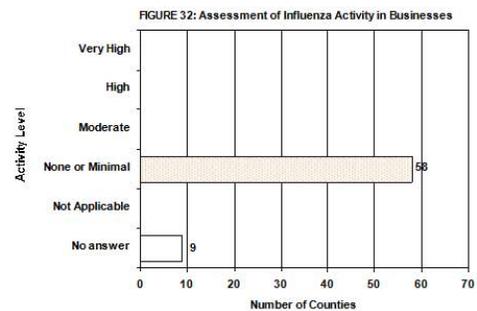
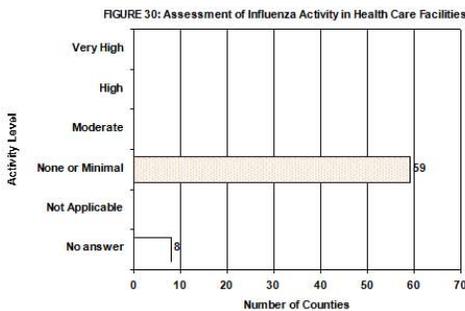
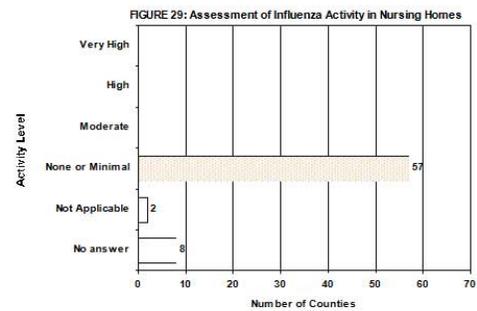
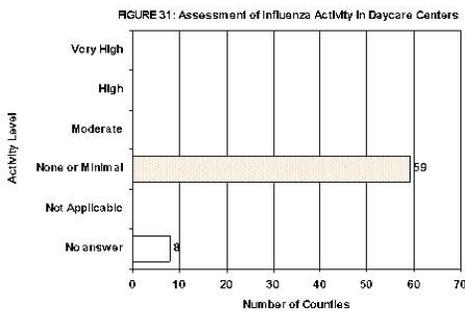
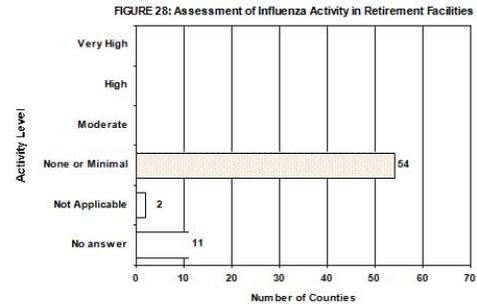
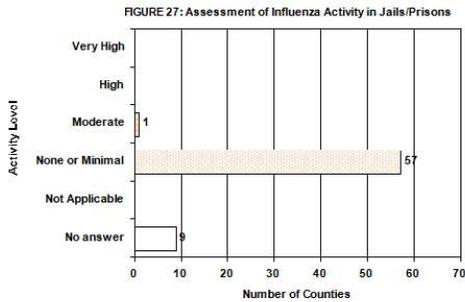


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New County Influenza Activity-Continued

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FIGURE 27 - FIGURE 32 show the activity levels in Various Facilities by county as reported by county health department flu coordinators for week 17 as of 5:00 p.m. May 4, 2010.



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Florida Pneumonia and Influenza Mortality Surveillance

page 10

The Florida Department of Health started the Florida Pneumonia and Influenza Mortality Surveillance System (FPIMSS) in 2006 in order to more timely assess the number of pneumonia and influenza deaths occurring in the state. This system was modeled on the CDC's 122 cities surveillance system. Each week, the vital statistics office in the 24 most populous counties in Florida manually reviews the death certificates received for the previous week. Any mention of pneumonia or influenza on the death certificate, with certain prescribed exceptions, is counted as a pneumonia or influenza death. These counts, by age group, are then reported to the state via the EpiGateway web-interface. Note that as of week 44 we are now using a Serfling model to more accurately calculate our predicted values for weekly pneumonia and influenza mortality. Expect continued updates in the coming weeks.

FIGURE 33 shows Pneumonia and Influenza Deaths for 24 Florida Counties, 2006-2007, 2007-2008, 2008-2009, and 2009-2010

- For week 17 (ending May 1, 2010) there were:
- **110 deaths reported**
 - **Upper bound of 95% confidence interval for prediction: 162 deaths**
 - **NO excess deaths**

The majority of the deaths are in those aged 45 years and older.

All 24 participating counties reported their data for week 17.

FIGURE 34 shows Pneumonia and Influenza Deaths for 24 Florida Counties, week 1, 2008 - week 17, 2010 as reported to FPIMSS by 1:00 p.m. May 1, 2010

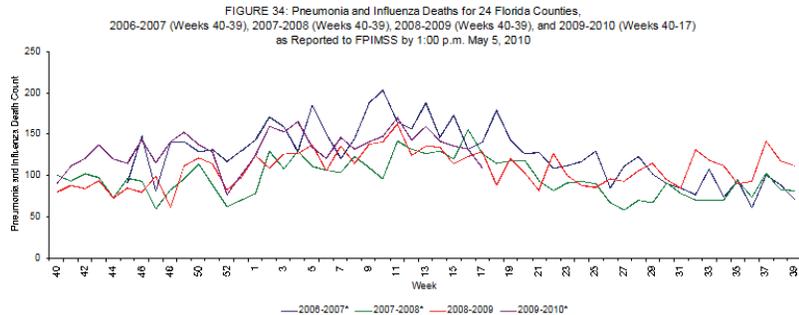


FIGURE 34: Pneumonia and Influenza Deaths for 24 Florida Counties, 2006-2007 (Weeks 40-39), 2007-2008 (Weeks 40-39), 2008-2009 (Weeks 40-39), and 2009-2010 (Weeks 40-17) as Reported to FPIMSS by 1:00 p.m. May 5, 2010

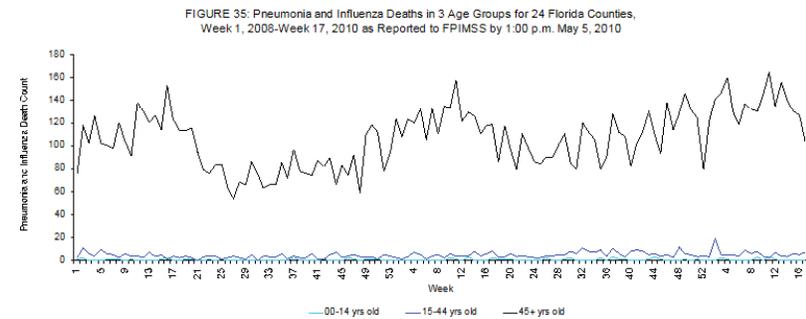


FIGURE 35: Pneumonia and Influenza Deaths in 3 Age Groups for 24 Florida Counties, Week 1, 2008-Week 17, 2010 as Reported to FPIMSS by 1:00 p.m. May 5, 2010

Figure 36: Pneumonia and Influenza Deaths for 24 Counties, Serfling Model January 24, 2009-May 1, 2010 as Reported to FPIMSS as of 1:00 p.m. May 5, 2010

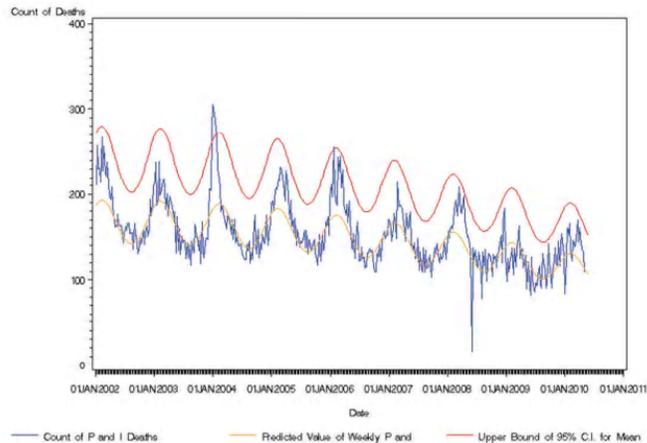


FIGURE 35 shows the reported count of pneumonia and influenza deaths for 24 Florida counties, the number of deaths predicted using the Serfling Model, and the upper bound of the 95% confidence interval for this prediction

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Summary of Notifiable Disease Reports and Outbreaks

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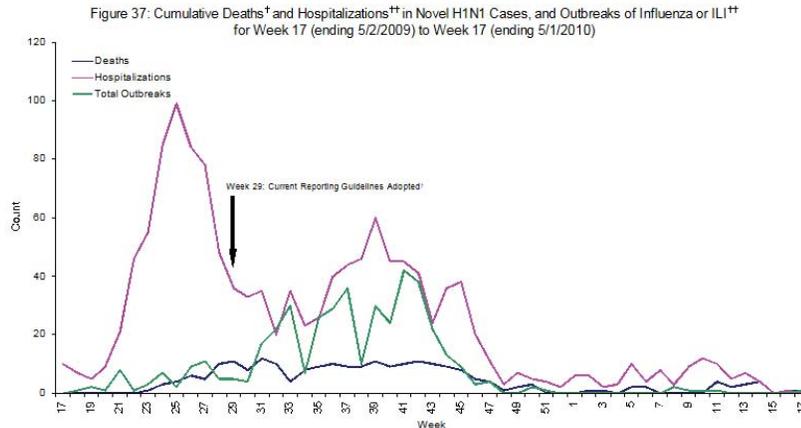
FIGURE 36 shows deaths in patients with novel H1N1*, hospitalizations due to H1N1**, and outbreaks of Influenza or ILI***, from week 17, when confirmed or probable cases of novel H1N1 in patients with life-threatening illness became reportable, to week 16, 2010

Deaths: Note that the exact contribution of H1N1 to the death is variable and may be unknown, as many of these deaths occur in people with complicated medical histories. Novel influenza A H1N1 infection would be coded as the underlying or primary cause on a death certificate for **some but not all** of these deaths. About 20 percent of deaths due to H1N1 are in persons with no underlying conditions.

The case definition for novel H1N1 deaths can be found at: http://www.doh.state.fl.us/disease_ctrl/epi/swineflu/ReportingDeaths8-11.pdf

Hospitalizations: Note that under the current surveillance strategy, case reporting is only required for confirmed or probable cases of novel H1N1 influenza in a) patients with life-threatening illness, b) pregnant women who are hospitalized, and c) deaths.

Use caution when interpreting hospitalization data, as only hospitalized patients with life-threatening illness are reportable and there is some variability in communities as to how "life-threatening illness" is interpreted.



* Deaths are classified by date of death.

** Hospitalizations are classified by event date which is defined as the earliest of the following dates associated with the case: date of onset, date of diagnosis, lab report date, or date reported to CDH.

*** Outbreaks are classified by when they are reported into EpiCom.

† In week 29 Florida stopped making all cases of lab-confirmed H1N1 influenza reportable, and adopted the current guidelines for reporting hospitalizations and deaths.

Notifiable Disease Reports: Influenza-Associated Pediatric Mortality

Influenza-associated deaths among those <18 years of age and/or post-influenza infection encephalitis are reportable; case report forms can be accessed at: http://www.doh.state.fl.us/disease_ctrl/epi/topicscrforms.htm.

Note that the case definition for pediatric influenza mortality is different than the case definition for mortality with novel H1N1. Pediatric influenza-associated mortality cases are only counted after influenza is determined to be the cause of death.

The case definition is available at: http://www.cdc.gov/ncphi/diss/nmdss/casedef/Influenza-Associated_current.htm

Influenza-Associated Pediatric Mortality

- **No** influenza-associated death among those <18 years of age was reported in week 17, for a total of 7 cases for the 2009-2010 season.
- **Seven** influenza-associated deaths among those <18 years of age were reported for the 2008-2009 influenza season (week 40, 2008 to week 39, 2009).

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Notifiable Disease Reports: Novel H1N1 Deaths

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TABLE 5 - TABLE 7 The number of deaths reported each week since July 26, 2009 has ranged from 0 (weeks 52, 1, 2, 4, 7, 8 and 10) to 13 (week 38), with an average of 4.6 deaths reported per week. ^As of week 41, underlying conditions include pregnancy unless otherwise noted. The case definition for novel H1N1 deaths can be found at: http://www.doh.state.fl.us/disease_ctrl/epi/swineflu/ReportingDeaths8-11.pdf

Note that the exact contribution of H1N1 to the death is variable and may be unknown, as many of these deaths occur in people with complicated medical histories. Novel influenza A H1N1 infection would be coded as the underlying or primary cause on a death certificate for **some but not all** of these deaths. About 20 percent of deaths due to H1N1 are in persons with no underlying conditions.

TABLE 6: Recent Deaths in Novel H1N1 Influenza Cases by County, 12:00 Noon April 27 to 12:00 Noon May 4, 2010

County	Number	Percent
Total	1	100.0
Palm Beach	1	100.0

TABLE 7: Cumulative deaths in Novel H1N1 Influenza Cases by Age as of 12:00 Noon May 4, 2010

Age	Number	Percent	Deaths per million population	NO underlying condition^
Total	226	100	11.8	36 (15.9)
0-4	6	2.7	5.3	1 (16.7)
5-24	24	10.6	5.0	8 (33.3)
25-49	90	39.8	14.5	20 (22.2)
50-64	82	36.3	22.4	7 (8.5)
65+	24	10.6	7.2	0 (0.0)

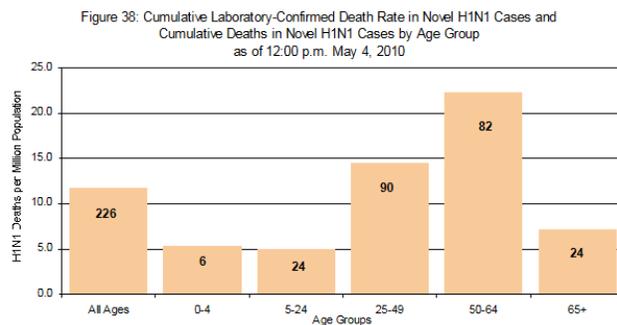


FIGURE 38 shows cumulative rates of H1N1 death by age group, per 1,000,000 population, and cumulative deaths in each age group.

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TABLE 5: Cumulative deaths in Novel H1N1 Influenza Cases by County as of 12:00 Noon May 4, 2010

County	Number	Percent
Total	226	100.0
Alachua	7	3.1
Baker	1	0.4
Brevard	5	2.2
Broward	13	5.8
Calhoun	1	0.4
Charlotte	2	0.9
Citrus	3	1.3
Clay	1	0.4
Dade	40	17.7
Desoto	1	0.4
Duval	13	5.8
Escambia	3	1.3
Hardee	1	0.4
Hernando	2	0.9
Highlands	2	0.9
Hillsborough	19	8.4
Indian River	2	0.9
Jackson	1	0.4
Lake	2	0.9
Lee	5	2.2
Levy	2	0.9
Manatee	3	1.3
Marion	2	0.9
Monroe	2	0.9
Nassau	1	0.4
Okaloosa	2	0.9
Okeechobee	2	0.9
Orange	13	5.8
Osceola	1	0.4
Palm Beach	14	6.2
Pasco	3	1.3
Pinellas	13	5.8
Polk	9	4.0
Putnam	1	0.4
Santa Rosa	2	0.9
Sarasota	7	3.1
Seminole	4	1.8
St. Johns	2	0.9
St. Lucie	8	3.5
Sumter	1	0.4
Taylor	1	0.4
Volusia	8	3.5
Walton	1	0.4

Notifiable Disease Reports: Novel H1N1 Hospitalizations

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TABLE 9 - TABLE 10 The number of hospitalizations reported weekly since July 26, 2009 ranges from 0 (week 17, 2010) to 54 (week 40, 2009), an average of 18.8 hospitalizations reported per week. ^As of week 41, underlying conditions include pregnancy unless otherwise noted.

*Please note that under the current surveillance strategy, case reporting is only required for confirmed or probable cases of novel H1N1 influenza in a) hospitalized pregnant women, b) deaths, and c) hospitalized patients with life-threatening illness. Note: there is some variability in communities as to how "life-threatening illness" is interpreted.

TABLE 8: Cumulative hospitalizations* in all Reported Novel H1N1 Influenza Cases by County as of 12:00 Noon May 4, 2010

County	Number	Percent	ICU (percent of hospitalized)
Total	1318	100.0	553 (42.0)
Alachua	16	1.2	13 (81.3)
Baker	2	0.2	2 (100.0)
Bay	3	0.2	0 (0.0)
Bradford	1	0.1	0 (0.0)
Brevard	15	1.1	9 (60.0)
Broward	92	7.0	36 (39.1)
Calhoun	2	0.2	0 (0.0)
Charlotte	6	0.5	2 (33.3)
Citrus	19	1.4	5 (26.3)
Clay	7	0.5	2 (28.6)
Collier	4	0.3	3 (75.0)
Columbia	3	0.2	0 (0.0)
Dade	485	36.8	150 (30.9)
Duval	67	5.1	39 (58.2)
Escambia	7	0.5	1 (14.3)
Flagler	1	0.1	0 (0.0)
Gadsden	4	0.3	1 (25.0)
Hardee	2	0.2	0 (0.0)
Hendry	3	0.2	0 (0.0)
Hernando	7	0.5	3 (42.9)
Highlands	10	0.8	2 (20.0)
Hillsborough	53	4.0	24 (45.3)
Indian River	8	0.6	2 (25.0)
Jackson	2	0.2	1 (50.0)
Lake	8	0.6	3 (37.5)
Lee	31	2.4	21 (67.7)
Levy	5	0.4	0 (0.0)
Manatee	15	1.1	6 (40.0)
Marion	13	1.0	5 (38.5)
Martin	7	0.5	4 (57.1)
Monroe	6	0.5	0 (0.0)
Nassau	6	0.5	6 (100.0)
Okaloosa	8	0.6	7 (87.5)
Okeechobee	5	0.4	0 (0.0)
Orange	114	8.6	50 (43.9)
Osceola	10	0.8	3 (30.0)
Palm Beach	95	7.2	48 (50.5)
Pasco	4	0.3	0 (0.0)
Pinellas	32	2.4	22 (68.8)
Polk	26	2.0	15 (57.7)
Putnam	5	0.4	4 (80.0)
Santa Rosa	6	0.5	2 (33.3)
Sarasota	17	1.3	11 (64.7)
Seminole	28	2.1	13 (46.4)
St. Johns	7	0.5	2 (28.6)
St. Lucie	12	0.9	8 (66.7)
Sumter	1	0.1	1 (100.0)
Taylor	3	0.2	1 (33.3)
Volusia	33	2.5	24 (72.7)
Walton	2	0.2	2 (100.0)

Note: Week 17 is the first week since H1N1 reporting began during which there were no reported H1N1 hospitalizations.

TABLE 9: Recent Hospitalizations* in Novel H1N1 Influenza Cases by County, 12:00 Noon April 27 to 12:00 Noon May 4, 2010

County	Number	Percent	ICU (percent of hospitalized)
Total	0	-	-

TABLE 10: Cumulative hospitalizations* in all Reported Novel H1N1 Influenza Cases by Age as of 12:00 Noon May 4, 2010

Age group	Number	Percent	Hospitalizations per million	NO underlying condition^	ICU
Total	1318	100.0	69.0	194 (14.7)	553 (42.0)
0-4	167	12.7	147.7	41 (24.6)	56 (33.5)
5-24	355	26.9	74.0	43 (12.1)	110 (31.0)
25-49	448	34.0	72.3	74 (16.5)	204 (45.5)
50-64	268	20.3	73.1	29 (10.8)	146 (54.5)
65+	80	6.1	24.1	7 (8.8)	37 (46.3)

TABLE 11: Cumulative hospitalizations* in all Pregnant Women with Novel H1N1 Influenza Cases by Status of Underlying Medical Conditions Other than Pregnancy as of 12:00 Noon May 4, 2010

Underlying medical condition status	Number	Percent	ICU	Death
Total	172	100.0	42 24.4	9 (5.2)
No underlying medical condition	96	55.8	21 21.9	3 (3.1)
Underlying medical condition	60	34.9	19 31.7	6 (10.0)
Unknown	16	9.3	2 12.5	0 (0.0)

Figure 39: Cumulative Laboratory-Confirmed Novel H1N1 Hospitalization Rate and Cumulative hospitalizations in Reported Novel H1N1 Cases by Age Group as of 12:00 p.m. May 4, 2010

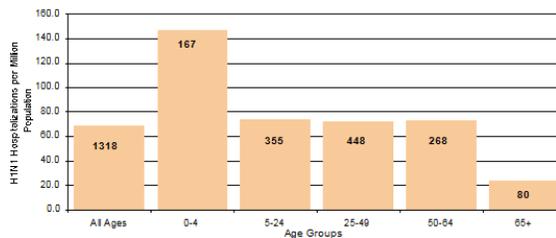


FIGURE 39 shows cumulative rates of H1N1 hospitalization by age group, per 1,000,000 population, and cumulative hospitalizations in each age group.

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Reports of Influenza or Influenza-like Illness (ILI) Outbreaks page 14

434 confirmed or suspect outbreaks of novel H1N1 influenza or ILI have been reported as of May 3, 2010

Schools have been the most heavily impacted setting with 257 (59.4%) of the 433 outbreaks. Summer camps accounted for 50 (11.5%) of the outbreaks, daycares accounted for 27 (6.2%), and correctional facilities accounted for 26 (56.0%).

1 confirmed or suspect outbreak of novel influenza A (H1N1) or ILI was reported during week 17 (ending May 1, 2010)

There were no outbreaks reported from the previous week, week 16, through week 12. At least one outbreak was reported into EpiCom during weeks 8-11. Before week 8, Florida saw a decline in the total number of new outbreaks reported per week, from approximately 30 new outbreaks per week down to no outbreaks reported during weeks 48, 49, and 52 through week 7.

County health department epidemiologists should report influenza and ILI outbreaks via the Influenza Forum in EpiCom: <https://fdens.com/vabtrrs/GateStart.aspx>

TABLE 12: Cumulative outbreaks Reported via EpiCom by County as of Week 16 (Ending May 1, 2010)

County	Number	Percent
Total	434	100.0%
Alachua	2	0.5%
Baker	2	0.5%
Bradford	1	0.2%
Brevard	1	0.2%
Clay	4	0.9%
Collier	28	6.5%
Columbia	2	0.5%
Duval	11	2.5%
Escambia	42	9.7%
Glades	1	0.2%
Hamilton	1	0.2%
Hendry	3	0.7%
Hernando	1	0.2%
Hillsborough	56	12.9%
Holmes	1	0.2%
Indian River	3	0.7%
Jackson	2	0.5%
Lake	64	14.7%
Madison	1	0.2%
Marion	4	0.9%
Martin	1	0.2%
Miami-Dade	25	5.8%
Nassau	21	4.8%
Okaloosa	5	1.2%
Orange	43	9.9%
Osceola	28	6.5%
Palm Beach	49	11.3%
Pasco	7	1.6%
Pinellas	3	0.7%
Polk	2	0.5%
Putnam	1	0.2%
Sarasota	7	1.6%
Seminole	5	1.2%
St. Johns	5	1.2%
St Lucie	1	0.2%
Volusia	1	0.2%

TABLE 13: Cumulative outbreaks Reported via EpiCom by Setting as of Week 16 (Ending May 1, 2010)

Setting	Number	Percent
Total	434	100.0%
Athletics	3	0.7%
Church	1	0.2%
College/University	3	0.7%
Community Center	5	1.2%
Correctional Facility	27	6.2%
Day Care	27	6.2%
Group/Foster Home	2	0.5%
Healthcare Facility	12	2.8%
Home	4	0.9%
Home/School	1	0.2%
Long-term Care Facility	4	0.9%
Military Facility	3	0.7%
Out of State Trip	5	1.2%
School	257	59.2%
Special Needs Facility	14	3.2%
Summer Camp	50	11.5%
Work	13	3.0%
Work/Home	3	0.7%

TABLE 14: Recent Outbreaks Reported via EpiCom by Setting during Week 16 (Ending May 1, 2010)

Setting	Number	Percent
Total	1	100.0%
Correctional Facility	1	100.0%

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Enclosure 2: Distribution of Calls to the Florida Flu Information Line

In August, 2009, the Florida Department of Health, Florida Flu Information Line was established to answer questions and concerns from the public. Through an innovative agreement with the Florida Poison Information Center Network (FPICN), the information line was expanded in early October to include call centers for healthcare providers and persons with possible adverse vaccine reactions.

Beginning October 1, 2009, the Florida Poison Information Center Network staffed with experienced physicians, nurses and pharmacists answered questions from the healthcare community statewide for the Healthcare Call Center. Comprised of the Jacksonville, Tampa and Miami Poison Control Centers, the FPICN provided guidance and consultation on H1N1 testing and treatment, when and how to report H1N1 outbreaks, information on specimen collection, shipping and packaging, and H1N1 vaccine distribution and safety.

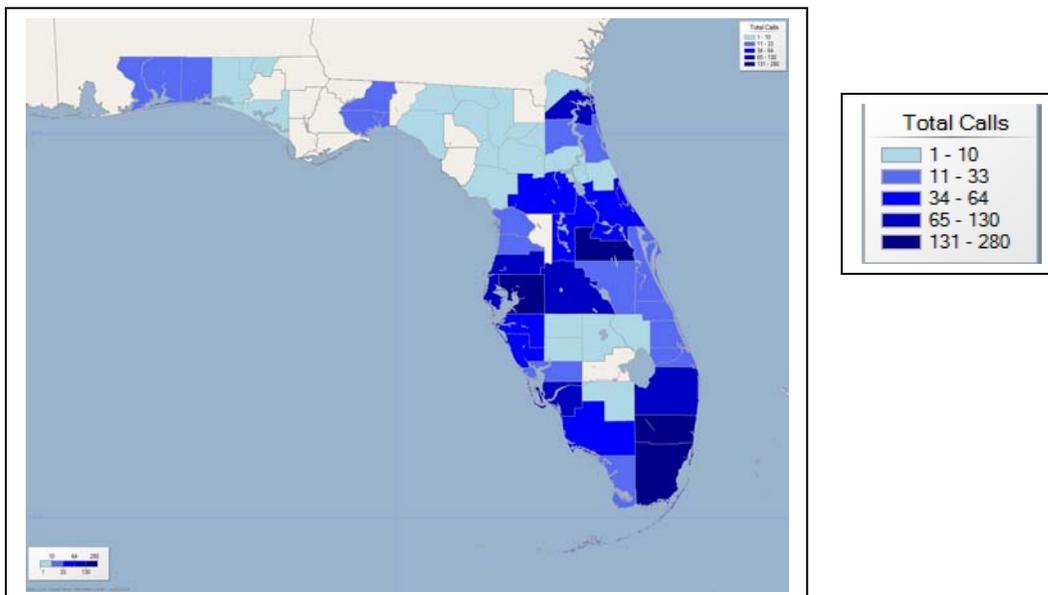
The FPICN's collaborative partnership with the Department of Health also included the activation of an Adverse Reactions Call Center beginning on October 15, 2009. Operated 24 hours, seven days a week, this call center provided medical assessment, triage, and management of vaccine adverse effects for those who thought they might have been having medical problems post-vaccination.

The two map depictions that follow contain the GIS (Geographic Information System) rendering of calls routed to the FPICN from the Florida Department of Health Flu Information Line.

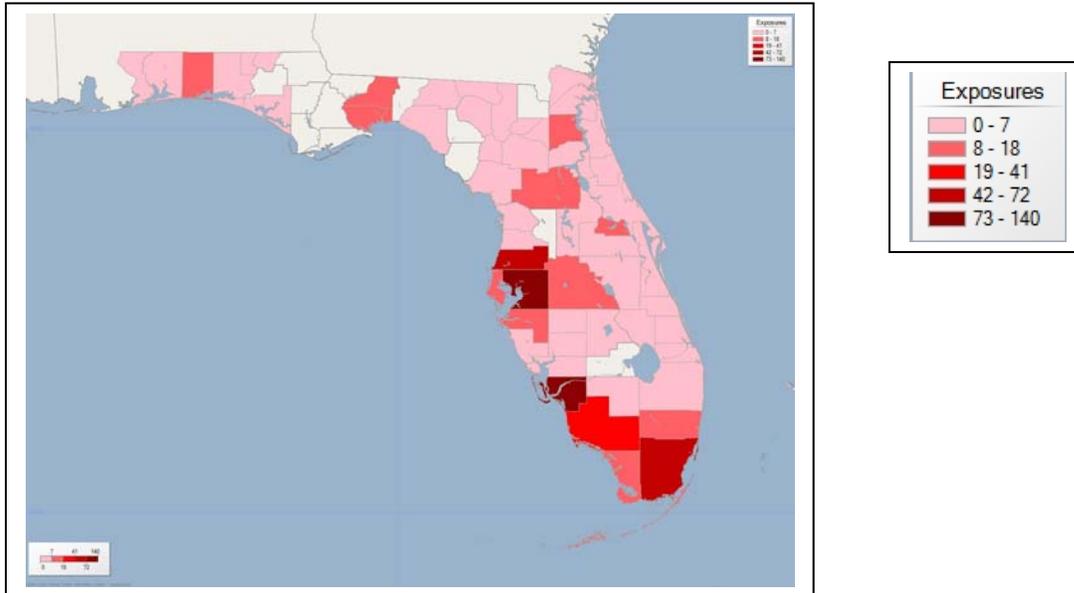
As expected, the distribution of calls as well as call volume for both the Healthcare Call Center and the Adverse Reactions Call Center correlate with the state's population.

Data on calls to the Healthcare Call Center and Adverse Reactions Call Center will continue to be collected through the July 31, 2010 extension of the Florida Flu Information Line.

The map below shows the distribution of calls received by the Florida Flu Information Line Healthcare Call Center from October 1, 2009 to May 31, 2010. The total number of calls to the Healthcare Call Center during this time period was 1,740.



The map below shows adverse event exposures based on calls that were routed to the Adverse Reactions Call Center from its activation on October 15, 2009 to May 30, 2010. The total number of calls to the Adverse Reaction Call Center during that time period was 427. All of these calls were followed up and classified as non-serious events.



Note: The GIS mapping system has the ability to normalize the exposures in the county by population (i.e. # of exposures per 1000 population). As it can do this, then it is possible that an incidence can actually be a small number...like 0.023, in the county. Therefore anything BETWEEN 0 and 7 (which means in real terms....NOT ZERO, but BETWEEN ZERO and 7) gets a color where actual EXPOSURES = 0 in the county gets no color.

Enclosure 3: H1N1 Public Health Nurse Survey

The Florida Department of Health, Office of Public Health Nursing, conducted a survey for the County Health Department (CHD) Community Health Nursing leaders after the implementation of the Florida H1N1 vaccination campaign. The primary goal was to compile and document the range and scope of roles filled by our public health nurses. The survey provided detail with regard to the critical roles and responsibilities public health nurses played in the planning and implementation of the H1N1 vaccination campaign. Responses were received from fifty-seven of the sixty-seven counties with more than one submission from a few counties. This is an 85% response rate. This is a summary of the findings from the survey.

Key Roles Identified in the Planning, Logistics, and Implementation Process

Due to the length and complexity of the campaign, public health nurses performed a variety of leadership and support functions. In the survey, the respondents were to select "all that apply". Average responses to key roles noted that public health nurses performed functions as indicated below:

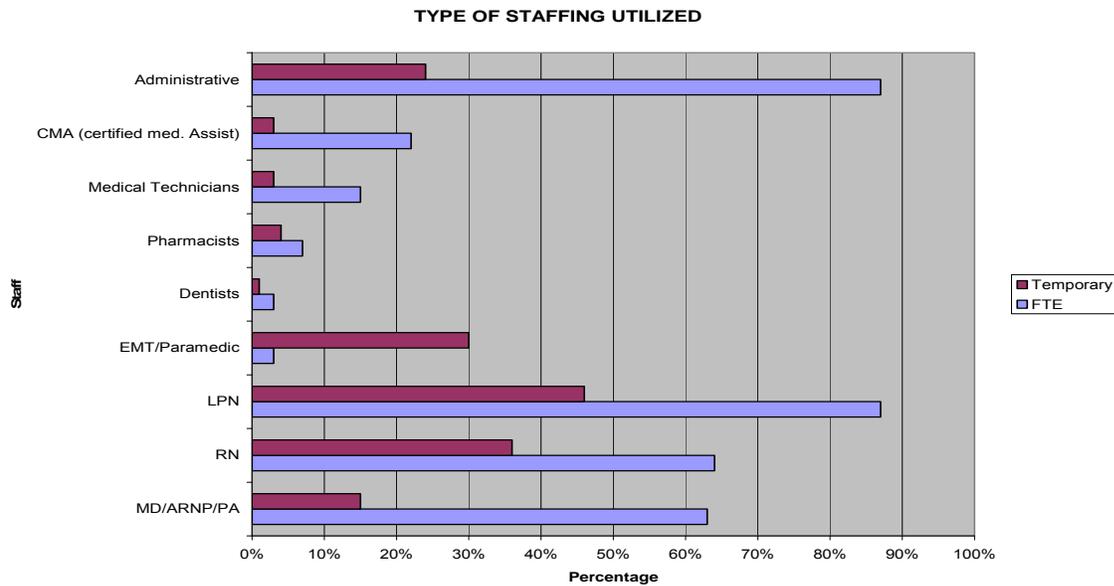
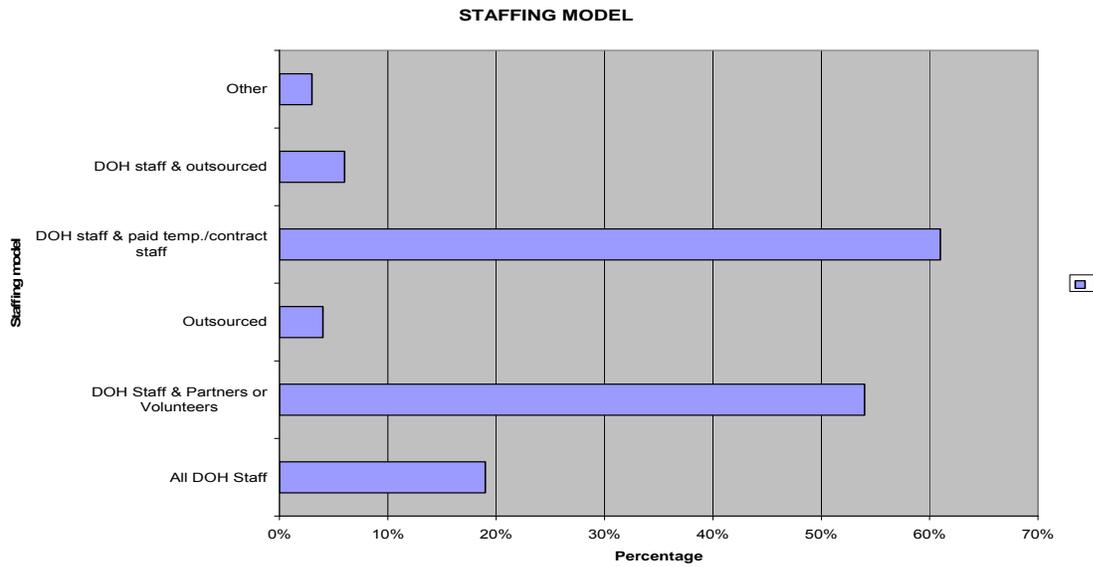
Leadership	58%
Support	48%
None	38%
No Answer	5%

H1N1 Influenza Vaccination Planning

Each county health department planned and implemented their own H1N1 Influenza vaccination campaign based on local needs, populations and resources. Seventy-five (75%) of the county health departments established an incident command structure (ICS). The nurses' roles in these command structures included incident commander, operations, logistics, planning, safety, support, and public information activities. Although not every county health department established an ICS, nurses continued to play key roles in the campaign statewide. Public health nursing roles also involved planning, training, implementation, administration of vaccine, adverse events reporting, review of documentation and vaccine transport and storage. Whether in the ICS or not, nursing roles were reported to be vital to the planning and implementation of the established CHD plans. Nurses worked closely with preparedness planners, pharmacists, directors, administrators and community partners to ensure each county health department reached the goal for H1N1 vaccinations.

Staffing

The following charts illustrate the staffing models used and the percentage of staff mix utilized by the local health departments.



The majority of the reporting county health departments utilized their staff during the response. A few county health departments supplemented their staff with nursing professionals from temporary staffing agencies such as Maxim, hospitals, student nurses from local schools and emergency medical techs/paramedics from the local county Fire/Rescue. County health department nurses trained supplemental staff in proper clinic or POD procedures to ensure high quality of care and decreased waiting times to receive the H1N1 vaccine.

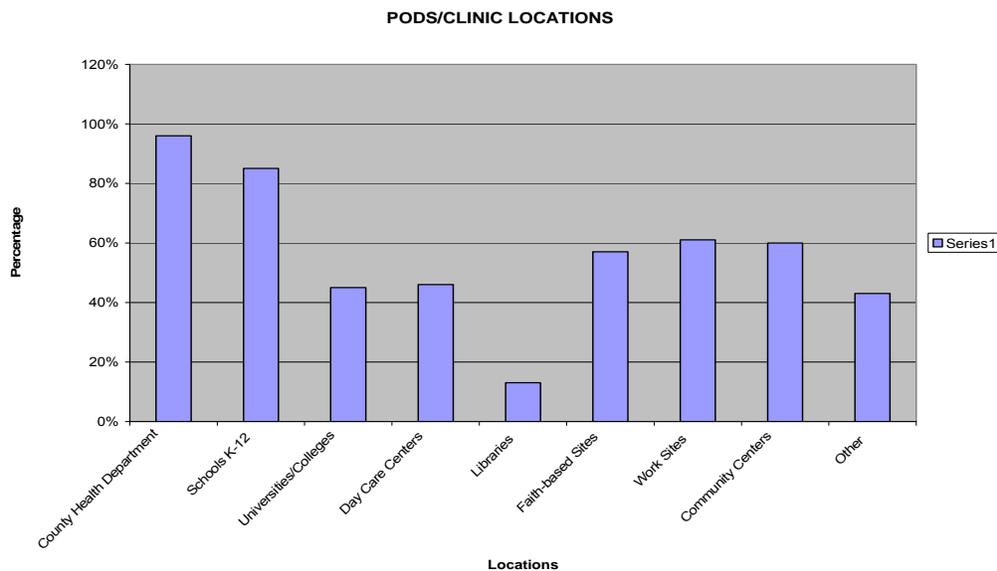
Volunteers were utilized in several county health departments. These volunteers were recruited by community partners and the human resources departments. Again, nursing leaders reported taking a strong leadership role in this process.

Some county health departments had established volunteer programs and these individuals were recruited for the H1N1 campaign. Public health nurses also played a leadership role in training these volunteers for their assignments in the mass vaccination program.

The use of commercial vaccinators was limited to a small number of county health departments. The nursing leaders worked with these commercial vaccinators to assure minimum standards for vaccine administration, record keeping and quality assurance for all aspects of the program.

PODS and Clinics

Locations utilized by county health departments for PODS/vaccination clinics:



Public health nurses played a major role in developing the plans and implementing the plans for PODS and/or clinics. Many of the nursing leaders reported working in these PODS/clinics as vaccinators, reviewers, and triage. The responsibility of overseeing the PODS/clinic activities was routinely undertaken by public health nurses.

A major responsibility of public health nurses in the H1N1 program was the development of guidelines, protocols, vaccination skills checklists and screening questionnaires. The development of memorandums of understanding (MOUs)/memorandums of agreement (MOAs) with community partners and organizations was a team effort with the nursing leaders and health department administration.

Promoting vaccinations

The majority of the health departments reported working with local businesses, churches, schools and healthcare providers to promote vaccinations. Meetings were held with nursing leadership involvement in these processes. Public health nursing leadership was instrumental in identifying the targeted populations and arranging for PODS/clinics for vaccinations.

Calls and Questions, Vaccine Adverse Events Reporting System (VAERS)

The majority of responses noted major involvement from public health nurses in the leadership of this task. There was a statewide toll-free number established but many health departments managed the questions locally. The responses to the questionnaire indicated major input into the script development from public health nurses. Also, support from nursing played a major role in training the staff to answer the local call number. The majority of VAERS reporting was handled by the public health nurses and/or the local epidemiology department. At the local level, the public health nurses routinely followed-up VAERS.

Vaccine Tracking and Data Entry

Public health nurses played a valuable support function in these procedures. This was noted to be a team effort with nurses, IT departments, preparedness planner, and non-nursing support staff.

Participation in Conference Calls/Other Activities

Nurses reported leadership participation in the local, state and regional conference calls. Activities related to press conferences and incident reporting also included public health nurse involvement.

Lessons Learned

Overall, the nursing leaders identified a theme of great teamwork within the local health department and with community partners. The success of the program was due largely to this team effort from every level of these organizations. In this large scale effort to provide H1N1 vaccinations to targeted populations, public health nurses filled various leadership and support roles. Public health nurses have many talents and provided service to the internal and external customers. As patient advocates, the public health nurses ensured the best possible vaccination process with high safety standards. Thorough follow up was provided for any VAERS reporting or questions received from the public or press. Recommendations were made to improve county to county communications with nursing leaders. Sharing best practices and lessons learned would be valuable in assisting with the planning and implementation process. The nurses were instrumental in ensuring the targeted populations were identified and offered the vaccination as soon as possible. With a great team effort, vaccination waiting times were decreased. The public health nurses demonstrated professionalism, flexibility, and extensive experience to meet the demands of this rigorous process. While there was lower than anticipated participation in the H1N1 vaccination campaign at the national and state level, local clinics and pods were well received and participants provided positive feedback.

For additional information about this survey contact Connie Wolfe, Nurse Practice Council Research Committee, Connie.Wolfe@doh.state.fl.us

Enclosure 4: H1N1 Response and the Florida MRC Network

April 2009 – April 2010

Alachua Area Medical Reserve Corps (Gainesville, FL)

- In November and December, ten members of the Alachua Area MRC assisted the local Health Department by participating in twenty school vaccination clinics and in seven H1N1 flu vaccination point of dispensing sites for county citizens in support of the Public Health initiatives.

Bay County Area Medical Reserve Corps (Panama City, FL)

- In September, the Bay County Area MRC conducted one of the largest trainings in Florida for H1N1 Vaccine POD using a tailor-made course based on the latest guidelines from the CDC and the State. Fifty members of the Bay County Area MRC participated in the training.

Broward County Medical Reserve Corps (Fort Lauderdale, FL)

- In October, forty-four members of the participated in a meeting to discuss H1N1 Mass vaccination campaigns and to provide identification to MRC members.

Central Florida MRC (Orlando, FL)

- In December, eleven members of the Central Florida MRC assisted local Health Dept with an all day vaccination clinic. The MRC member's participation helped the clinic to give almost 1800 vaccinations.

Collier County Medical Reserve Corps (Naples, FL)

- In May, ten members of the Collier County MRC assisted the local Health Department in their H1N1 related response activities such as providing staff for an informational phone bank and assisting their epidemiology staff.
- In November and December, seven members of the Collier County MRC, credentialed and trained medical and non-medical, participated on a weekly basis in our local H1N1 Mass Vaccination Clinics. Total MRC Volunteer hours worked in this event thus far is 125.
- In October, fifteen members of the Collier County MRC held a H1N1 Mass Vaccination Clinic Orientation Training and Credentialing sessions for interested MRC and MOU related Red Cross Volunteers.

Escambia County MRC (Pensacola, FL)

- In May, the MRC of Escambia County conducted a combined on-site game exercise with the MRC-Santa Rosa as part of a Point of Dispensing (POD) exercise.
- In April, the MRC of Escambia County participated in the Florida Emergency Healthcare Volunteer Registry (FEHVR) workshop to test the electronic notification system.

Flagler County Medical Reserve Corps (Bunnell, FL)

- In May, ten members of the Flagler County MRC assisted the local department of health in their outreach efforts to reach faith based organizations on issues related to H1N1 and seasonal influenza and to provide the with educational material, CDC faith-based checklists, Point of Dispensing site information, and pandemic influenza materials and videos.

- In December, fourteen members of the Flagler County MRC assisted at a H1N1 Point of Dispensing site held at a local high school.
- In November, three members of the Flagler County MRC educated residents regarding health precautions and provided an arena for questions/answers regarding H1N1 concerns
- In October, five members of the Flagler County MRC staffed a health fair at a local church and distributed H1N1 informational material including informational pandemic CDs, handbooks, and "Cover your cough" bookmarks. Thirty members of the members of the Flagler County MRC participated in a H1N1 emergency response Point of Dispensing site.
- In September, four members of the Flagler County MRC presented to a local church women's club on H1N1 preparedness and universal precautions.

Florida Keys Medical Reserve Corps (Marathon, FL)

- In December, seventeen members of the Florida Keys MRC participated in nine H1N1 flu vaccination point of dispensing sites for county citizens.
- In November, twenty-five members of the Florida Keys MRC participated in ten H1N1 flu vaccination point of dispensing sites for county citizens.
- In September, ten members of the Florida Keys MRC met to coordinate training for mass vaccinations to be done for H1N1 qualifying recipients.

Indian River MRC (Vero Beach, FL)

- In December, six volunteers from the Indian River MRC participated in four H1N1 Mass Vaccination clinics. Both medical and non medical volunteers help support vaccinating over 3,300 people in 16 hours.
- In November, fourteen volunteers from the Indian River MRC participated in four H1N1 Mass Vaccination clinics. Both medical and non medical volunteers help support vaccinating over 2,030 people in 17 hours.
- In October, two members of the Indian River MRC sponsored an H1N1 Symposium to provide an educational forum for businesses about H1N1.
- In August, the Indian River MRC volunteers worked side by side with public health employees in providing the community with vaccines and dental screenings. Five members of the MRC also participated in training to prepare them for engaging the community through educational programs as well as through mass vaccination clinics.

Lake County Medical Reserve Corps (Tavares, FL)

- In December, four members of the Lake County MRC assisted the County Health Department with vaccine administration in four H1N1 Mass Vaccination clinics. Both medical and non medical volunteers help provide 1,447 vaccinations.
- In November, a nurse member of the Lake County MRC supported the County Health Department Epidemiology Department support increased activity due to H1N1. Seven members of the Lake County MRC assisted the County Health Department with vaccine administration in five H1N1 Mass Vaccination clinics. Both medical and non medical volunteers help provide 1,586 vaccinations.

Levy County Medical Reserve Corps (Gainesville, FL)

- In November and December, six members of the Levy County MRC assisted the local Health Department by participating in thirteen H1N1 vaccination clinics in support of the Public Health initiatives.

- In September, a member of the Levy County MRC participated in a two day training program regarding effective set-up and maintenance of Points of Dispensing sites.

Marion County Medical Reserve Corps (Ocala, FL)

- In October thru December, sixty-five members of the Marion County MRC assisted the County Health Department with their H1N1 response activities contributing over 600 hours of time.
- In September, ten Marion County MRC members helped the County Health Department put together medical and clerical supply bins for preparation for the H1N1 vaccine Point of Dispensing sites.
- In August, six Marion County MRC members helped the County Health Department sort letters to 3000 parents of private and home schools to inform them about H1N1 meetings.

Martin County Medical Reserve Corps (Stuart, FL)

- In December, forty-six members of the Martin County Medical Reserve Corps participated in eight Point of Dispensing sites with the Health department and gave over 8,000 doses including four pods in a rural underserved area.
- In November, the Martin County Medical Reserve Corps administered 3,540 H1N1 vaccines which were dispensed in five distribution sites.
- In September, twelve members of the Martin County Medical Reserve Corps along with the Staff of MCHD conducted strategic planning for H1N1 response.

Medical Reserve Corps - Santa Rosa (Milton, FL)

- In November, seven members of the Medical Reserve Corps - Santa Rosa submitted their fingerprints for background checks and received H1N1 vaccine along with having photo taken for new MRC badge. They also submitted their names and occupation to Operations Officer and Planners for utilization as volunteers in H1N1 clinics.

Medical Reserve Corps of Escambia County (Pensacola, FL)

- In December, three members of the Medical Reserve Corps of Escambia County donated 7 hours by participating in the site preparation to be used by the County Health Department for the upcoming H1N1 Mass Vaccination Clinic. They assisted in disinfection, the cleaning of floors and the parking lot at the school location as well as other types of related assistance requested at the site. Six members contributed 42 hours at the H1N1 Mass Vaccination Clinic when activated. Volunteers were used as triage RNs, logistical supply support, clerical assistance, camera operation for documentation purposes and a command staff function.

Medical Reserve Corps of Sarasota County (Sarasota, FL)

- In May, three Medical Reserve Corps of Sarasota County nurses staffed a H1N1 triage phone line for a total of 27 hours over a period of six work days at two sites.

Miami-Dade MRC (Miami, FL)

- In May, twenty-two members of the Miami-Dade MRC participated in a H1N1 workshop in preparation for potential H1N1 pandemic activates.
- In November, forty-seven members of the Miami-Dade MRC vaccinated 4,000 people at a health department led H1N1 vaccination clinic.
- In December, thirty-two members of the Miami-Dade MRC vaccinated 752 people at a health department led H1N1 vaccination clinic.

Okeechobee Medical Reserve Corps (Okeechobee, FL)

- In April, three members of the Okeechobee Medical Reserve Corps participated in the Region 6 Pandemic Flu Exercise designed to test a Regional response to a Pandemic influenza threat in central and south west Florida counties.
- In December, five members of the Okeechobee Medical Reserve Corps supported the for Okeechobee County H1N1 operational response.

Palm Beach County Medical Reserve Corps (West Palm Beach, FL)

- In May, thirteen members of the Palm Beach County Medical Reserve Corps served on public education phone hot line taking calls on H1N1.

Pinellas County Medical Reserve Corps (St. Petersburg, FL)

- In April, a Registered Nurse volunteer from the Pinellas County Medical Reserve Corps, with experience, was added to the Epidemiology Department to assist with monitoring H1N1 influenza. Forty MRC volunteers from the Pinellas County Medical Reserve Corps were put on standby to assist the Health Department as needed.
- In September, thirty-six members of the Pinellas County Medical Reserve Corps joined others to complete a mass mailing and to staff a phone bank. The volunteers called all private practice physicians in the county to ensure they know how to order the H1N1 vaccine. A total of 260 hours was contributed to these efforts.
- In November, twenty volunteers from the Pinellas County Medical Reserve Corps assisted for two weeks with the preparation of supplies for H1N1 vaccinations for the county schools.
- In December, twelve nurse members of the Pinellas County Medical Reserve Corps assisted public health nurses in giving H1N1 vaccinations to school children and in a Saturday morning clinic. Six members H1N1 vaccinators and support for a special weekend clinic sponsored by the local health department. Twenty-four members of the Pinellas County Medical Reserve Corps partnered with the local Pharmacy Students to support H1N1 activities. They replenished the medical totes so they were ready for the schools and alphabetized school consent forms.

Polk County Medical Reserve Corps (Bartow, FL)

- In December, ninety-two members of the Polk County Medical Reserve Corps administered H1N1 vaccines at the six locations in the community.

Seminole County Medical Reserve Corps (Lake Mary, FL)

- In April thru June, the Seminole County Medical Reserve Corps was in stand-by mode and maintained a roster of volunteers that were able to respond if called upon to support local H1N1 activities.

Southwest Florida Medical Reserve Corps (Cape Coral, FL)

- In October, thirty-two members of the Southwest Florida Medical Reserve Corps held and managed its own H1N1 Pandemic Flu Clinic on an island, providing 807 doses in 3 hours.
- In November, twenty-eight members of the Southwest Florida Medical Reserve Corps participated in 11 H1N1 Vaccine Clinics conducted by the County Health Department. Members worked as greeters, screeners, vaccinators, and exit interviewers.

St Lucie County Medical Reserve Corps (Port St. Lucie, FL)

- In December, two members of the Southwest St Lucie County Medical Reserve Corps participated in a H1N1 Pandemic Flu Clinic. Both medical and non medical volunteers help support vaccinating over 1100 people in 8 hours. One nurse member of the St Lucie County Medical Reserve Corps provided H1N1 immunizations to a group of Homeless individuals.
- In November, nine members of the St Lucie County Medical Reserve Corps helped to staff two H1N1 Mass Vaccination clinic. Both medical and non medical volunteers help support vaccinating over 3500 people in 16 hours.
- In October, two members of the St Lucie County Medical Reserve Corps sponsored an H1N1 Symposium to provide an educational forum to local businesses.
- In August, six members of the St Lucie County Medical Reserve Corps attended training on the current DOH H1N1 Initiatives and the role of MRC in preparing citizens as well as the Medical Reserve Corps's Role in the Mass Vaccination Campaign.

St. Johns County Medical Reserve Corps (St. Augustine, FL)

- In December, six members of the St. Johns County Medical Reserve Corps assisted with vaccination stations/points of dispensing for H1N1 influenza
- In October, six members of the St. Johns County Medical Reserve Corps assisted with vaccination stations/points of dispensing for H1N1 influenza.

Volusia County Medical Reserve Corps (Daytona Beach, FL)

- In October thru December, the Volusia County Medical Reserve Corps staffed five Point of Dispensing sites and vaccinated over 9,000 residents. In October, two members of the Volusia County Medical Reserve Corps went to the local High School to recruit students to serve as translators, greeters and runners for the H1N1 Clinic that was to be held at their school. The staff was able to administer 1,000 doses of vaccine in just less than 1 hour. In November, two members of the Volusia County Medical Reserve Corps approached the local school where their Point of Dispensing site was to be held and asked for instructor and student volunteers. Approximately 60 volunteers assisted the Medical Reserve Corps at the Point of Dispensing site.
- In July, four members of the Volusia County Medical Reserve Corps, who are both Medical Reserve Corps volunteers and County Health Department staff, began working on plans for a H1N1 influenza drive thru Point of Dispensing site.
- In April, four members of the Volusia County Medical Reserve Corps, who are both Medical Reserve Corps volunteers and County Health Department staff, participated in a H1N1 Influenza planning conference call.

West Central Florida Medical Reserve Corps (Dade City, FL)

- In December, sixteen West Central Florida Medical Reserve Corps volunteers administered vaccine and assisted in setting up facilities, crowd control, and triage at three local Point of Dispensing sites.
- In November, eighteen West Central Florida Medical Reserve Corps volunteers administered vaccine and assisted in setting up facilities, crowd control, and triage at three local Point of Dispensing sites.