



# Epi Update



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**Editor's Note:** As acting editor for *Epi Update*, I would like to invite you to submit articles and information for inclusion in *Epi Update* by June 15, 2007, for publication on June 25, 2007. I encourage you to submit reports of your work so others in the state can learn from your activities and about the great work we do in Florida. Please contact me if you have questions about the new submission guidelines.

Debora Campbell, MS, CHES, Acting Editor  
Training & Communications Administrator

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## ***Scombroid Fish Poisoning Associated with Escolar, Lee County, 2007***

***Robin Terzagian, BS***

**Introduction:** On March 30, 2007 the Lee County Health Department (CHD) received the initial complaint reported to the Department of Business and Professional Regulation (DBPR) of a possible food poisoning from an individual who consumed escolar at a local restaurant on March 23, 2007. The individual reported mild symptoms of itching in her mouth, and feet and flushing of skin after taking the first bite of the fish. She also reported that a member in her party also experienced the same symptoms after taking one bite of the fish. Based on the symptoms, time of onset, and the type of fish consumed (Lee County had a previous scombroid outbreak in 2001 associated with escolar), scombroid fish poisoning was suspected. The Lee CHD Epi team initiated an investigation.

**Methods:** On March 30, 2007 the Lee CHD interviewed the 2 individuals from the initial report. The first case, a 49 year old female, developed symptoms immediately after taking her first bite of fish. Her symptoms included nausea, diarrhea, abdominal cramps, headache, chills, fever, weakness, fatigue, numbness/tingling, sweating, dizziness, and increased heart rate. She sought medical help from a neighbor who gave her Benadryl and an epi-pen. The duration of symptoms was 4 hours. The second case, a 59 year old female, developed swelling in her throat and itchy mouth immediately after tasting a bite of the fish. She had underlying allergic responses, kept drinking ice water and her symptoms dissipated within 30 minutes. While dining, the 2 cases noted a female being taken out of the restaurant by ambulance. The Lee CHD checked their computer database linked to Emergency Medical Services and found the third case, a 36 year old female. She developed symptoms immediately after eating half of the fish of escolar. Her symptoms included headache, chills, weakness, fatigue, numbness/tingling of the lips, fingers and tongue, sweating, dizziness, and increased

heart rate. She was given Ativan and Benadryl in the Emergency Department. The duration of symptoms was 3 hours. The doctor's diagnosis was scombroid fish poisoning.

The Lee County Health Department conducted an onsite investigation at the local establishment on March 23, 2007. The restaurant sold 8 orders of escolar on March 23, 2007. The restaurant received ~17.35 lbs of fish fillets from a distributor in Orlando and returned the remainder of the fish after the incident occurred. Staff at the restaurant also ate some of the fish before the start of their shift with no ill effects. The fish arrived at the restaurant on ice, already filleted in a refrigerated delivery truck (37° F). The fish was stored on ice in a walk-in cooler at 38° F. No storage temperature abuses were observed at the restaurant.

On April 3, 2007 the Regional Environmental Epidemiologist (REE) contacted the distributor to find out the source of the fish and what they had done with the fish that had been returned. Approximately 12 lbs of fish was returned to the distributor in Orlando and stored in their freezer. The fish had been imported from Ecuador. The distributor bought 75 lbs. of whole fish on ice (32° F receiving) and had ~20 lbs of whole fish remaining. The distributor fillets the fish. Approximately 44.05 lbs (fillets) were sent to 3 restaurants in SW Florida (2 in Sarasota County and the one in Lee County). All remaining fish from the 3 restaurants have been picked up by the distributor and are being held in their freezer (~22.50 lbs). No other illnesses have been reported. FDA has been contacted and will make arrangements with the distributor to conduct laboratory analysis.

On April 4, 2007 the REE received a call from Food & Drug Administration (FDA) reporting that they were not going to test the fish since the distributor planned to voluntarily destroy all the fish, a process that will be witnessed by the FDA. The REE contacted the Florida Department of Agriculture and Consumer Services (FDOACS) to see if their lab would test the fish. FDOACS agreed to test the fish and arranged to have one of their inspectors pick up samples of the fish and meet the FDA representative prior to the destruction of the remaining fish.

**Results:** No other cases suggestive of scombroid poisoning were found. All 3 of the cases were females (100%). The age of the cases ranged from 36 - 59 years, median 49 years. The incubation period ranged from immediate to within minutes. Duration ranged from 30 minutes to 4 hours, median duration was 3 hours. Diagnosis of the illness is usually based on the patient's symptoms, time of onset and the effect of treatment with antihistamine medication, to which the 2 cases responded well.<sup>1</sup>

The onsite investigation of the restaurant did not reveal any problems with the handling or storage of the fish. Refrigeration units, personnel hygiene and sanitary practices were satisfactory.

On April 4, 2007 the FDOACS inspector collected 4 frozen samples from the distributor and shipped to their lab via Fed Ex. The FDA representative was present when the samples were collected. Samples were from the one product shipment of 75 lbs received by the Orlando distributor. The escolar was purchased from a Miami distributor. The escolar was a wild-caught product from Ecuador that the Miami distributor purchased from another distributor. Three of the samples collected were from returned product from the three restaurants in SW Florida. The fourth sample was from the original fish that the Orlando distributor had remaining in their freezer. The Orlando distributor voluntarily destroyed the remaining product.

Of the 4 samples that were tested by FDOACS food laboratory, only one sample was found to have an elevated histamine level. The other 3 samples were below decomposition levels. The 2 samples from the 2 Sarasota County restaurants both had histamine levels of 1 µg/g. The third sample from the restaurant in Lee County had an elevated histamine level of 216 µg/g. According to the FDOACS, the histamine level found in this product indicated that the product decomposed and was not fit for human consumption. The fourth sample from the Orlando distributor had a histamine level of 6 µg/g. According to the FDA guidelines, histamine levels of 500 ppm are considered to be poisonous.<sup>2</sup> According to the FDA guidelines, histamine concentrations near or above 100mg/100g are typically noted in actual illnesses. Regulatory guidelines have not been established for all the various fishes of concern, but 50mg/100g is inferred from the U.S. FDA's poisonous action level for tuna.<sup>2</sup> Units used to report histamine measurements do vary and can be confusion: µg/g=ppm, 100mg/100g = 1mg/g = 1000µg/g = 1000 ppm. In most cases histamine levels in illness-causing fish have been above 200 ppm, often above 500 ppm.<sup>3</sup>

**Conclusion:** The laboratory results confirmed the initial diagnosis of scombroid fish poisoning, which is caused by high histamine levels. Scombroid fish poisoning is a type of food intoxication caused by the ingestion of certain fish species that have begun to spoil with the growth of certain types of food bacteria. The toxin forms in a food when certain bacteria are present and time and temperature abuse permit their growth. The suspect toxin is an elevated level of histamine generated by bacterial degradation of substances in the muscle protein. Freezing, cooking, smoking, curing or canning, does not destroy the potential toxins. Distribution of the toxin within an individual fish fillet or between cans in a case lot can be uneven, with some sections of a product causing illnesses and others not. Fish that have been implicated in

scombroid poisoning include the tunas (e.g., skipjack and yellow fin), mahi-mahi, bluefish, sardines, mackerel, amberjack, and abalone. Common sensory examination by the consumer cannot ensure the absence or presence of the toxin. Chemical testing is the only reliable test for evaluation of a product.

The onset of intoxication symptoms is rapid, ranging from immediate to 30 minutes. The duration of the illness is usually 3 hours, but may last several days. Initial symptoms may include a tingling or burning sensation in the mouth, a rash on the upper body and a drop in blood pressure. Frequently, headaches and itching of the skin are encountered. The symptoms may progress to nausea, vomiting and diarrhea and may require hospitalization, particularly in the case of the elderly or impaired patients.<sup>1</sup>

This small cluster of scombroid fish poisoning was associated with the consumption of escolar fish, from Ecuador. Since the investigation of the restaurant did not reveal any mishandling of the fish and records from the Orlando distributor (HACCP plan) it is believed that the fish may have been mishandled (time/temperature abuse) some time during the catch or during the distribution chain. Studies have shown toxic histamine levels can be generated within less than 6 to 12 hours exposure without ice or refrigeration.<sup>2</sup>

**Recommendations:** To prevent histamine formation it is imperative that the fish be held below 41°F during all phases of handling, from the time the fish has been caught until preparation for consumption. Immediate freezing or irradiation will also prevent this spoilage. Ensure the fish is from an approved source. Check the temperature of the fish upon receiving and look for visible signs of spoilage (if the fish does not appear fresh or if the temperature is not within proper range, do not accept the product).

**Editorial Note:** Escolar, (*Lepidocybium flavobrunneum*) is an oily white-meat fish and is a member of the mackerel family, of which tuna is a distant cousin. Albacore (white tuna) is almost identical to escolar, and the two seem to be interchangeable. The fish has a velvety texture with a buttery taste but not a lot of fat. The oil from the fish is mostly wax esters, the same components found in the fat-substitute Olestra, which are thought to be indigestible. The Food and Drug Administration issued a warning that the fish seemed to act like a laxative. This fish is known to have purgative qualities. However, not all persons who eat this fish experience symptoms. The properties of this fish may be affected by season or other variables. Consuming smaller quantities may reduce the risk of illness, however if you are in a high-risk category you may want to avoid this fish.<sup>4,5</sup>

1 FDA/CFSAN Bad Bug Book Scombrototoxin <http://www.cfsan.fda.gov/~mow/chap38.html> (accessed 5/31/07)

2 FDA/CFSAN Prime Connection: Scombroid Poisoning <http://www.cfsan.fda.gov/~ear/FLSCROM.html> (accessed 5/31/07)

3 Sec. 540.525 Decomposition and Histamine Raw, Frozen Tuna and Mahi-Mahi; Canned Tuna; and Related Species (CPG 7108.24): [http://www.fda.gov/ora/compliance\\_ref/cpg/cpgfod/cpg540-525.html](http://www.fda.gov/ora/compliance_ref/cpg/cpgfod/cpg540-525.html) (accessed 4/24/07)

4 Karetnick Jen. The Great White Tuna, Unsolved Fish Mysteries, [miamiherald.com](http://miamiherald.com) Miami New Times, February 1, 2001.

5 Department of Human Services (SA Health Commission), Media Release-Illness reports associated with rudderfish, December 17, 1999.

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## ***Pandemic Influenza Response: County Health Department Employees' Knowledge, Perceptions, and Concerns***

***Nicole E Basta, MPhil Epidemiology; Sharlene Emmanuel, MPH; Joann Schulte, DO, MPH***

**Background:** Over the last several years, the Florida Department of Health has been planning the response and control protocols that will be implemented in the event of an influenza pandemic. Currently, county health department (CHD) employees are expected to play a significant role in carrying out these plans. However, little is known about how informed CHD employees are about their role in pandemic influenza response or how likely they are to carry out this role.

**Objective:** The main objectives of this survey was to assess CHD employees' knowledge about their role in an influenza

pandemic, to determine the likelihood that staff will report to work under various pandemic scenarios, and to identify what employees' concerns and competing priorities will be in the event of an influenza pandemic.

**Methods:** Survey participants were randomly selected using a stratified random cluster sample. Counties were grouped into three strata according to their total number of employees to ensure adequate representation from small, medium, and large county health departments. Counties were selected until each strata contained roughly 1/3 of the desired sample size. In total, twenty CHDs were randomly selected from the three strata, (14 small counties, 4 medium counties, and 2 large counties). The CHD directors and administrators in these counties were contacted and invited to participate. One county refused participation and the next willing county from the list of randomly selected alternates was invited and agreed to participate.

All 4,746 staff members employed by the randomly selected CHDs who had active DOH e-mail addresses were invited to take the survey. An anonymous, online survey link was e-mailed to study participants and made available online for a period of 4 weeks during November and December 2006. The questionnaire requested information about the respondent's demographics, prior attendance at a pan-flu training or exercise, knowledge of influenza pandemic response, willingness to report during a pandemic, willingness to perform specific tasks, and greatest concerns with respect to a pandemic; using a 5-point Likert scale where appropriate. For those questions where a 5-point Likert scale was used, answers were categorized as follows: 'likely' for those who answered "very likely" or "somewhat likely", 'neither' for those who answered "neither likely nor unlikely," and 'unlikely' for those who had answered "very unlikely" or "somewhat unlikely".

Several reminder e-mails were sent by the study investigators and by the County Health Department Directors. After the survey closed, there were reports that some had mistakenly submitted the survey more than once. We used a combination of 10 variables to identify and delete any duplicate responses. In total, 2,414 unique responses were received (51% response rate).

The individual responses were weighted based on the sampling fraction and the response rates to account for the complex sampling design. Here, we report the initial employee population estimates for the responses to the survey. Data were analyzed using SAS 9.1 statistical software.

**Results:** The following tables show the distribution of responses for 21 of the survey questions. In addition, each table shows the weighted population estimates, the percentage of the population for the weighted estimates, and the 95% confident interval for the percents. The weighted population estimates provide an approximation of the number of employees that would be expected to select a specific answer if the entire CHD employee population had been surveyed. The 95% confident interval for the percents gives the range of values within which the percentage would fall 95% of the time if we were to sample an infinite number of times from the same population.

These results are based on those responses that included the demographic data needed to assign the weights. Therefore, 2,370 responses were entered into the analysis. The weighted employee population estimates are based on a FL DOH County Health Department Employee population of 14,993. Not all respondents answered all questions and the number of respondents that did not choose an answer is also shown in the tables.

Demographically, respondents were primarily female (79%), 45 – 54 years old (32%), had a high school degree or less (48%), and did not have a nursing degree (79%) (questions 1-4). The weighted demographic estimates were similar, which provides evidence that the sample was representative of the employee population.

In terms of training, an estimated 56% of the employee population have attended at least one pandemic influenza presentation, training, or exercise in the last year; 8% have attended more than 3 (questions 5-5a). Fifty percent of the population has read all or part of the FL DOH pandemic influenza plan and 49% has read all or part of their CHDs pandemic influenza plan (questions 6-7). An estimated 44% of employees are confident that they could answer questions from the public during a pandemic event, 72% of employees believe they will be asked to participate in pandemic response and 64% think their role will be significant; however only 47% are familiar with what their specific job responsibilities may be during a pandemic (questions 9-12).

The survey presented respondents with 4 pandemic scenarios (questions 16-19), where the level of risk of influenza infection increased from one to the next. An estimated 92% of employees indicated that they would be likely to report to work under the lowest risk scenario (question 16), while only 57% said they are likely to come to work under the highest risk scenario (question 19). As for concerns, 72% selected family health and safety over personal health and safety, job security, financial stability, and basic needs as their greatest concern during a pandemic (question 20). The tables include additional results of this preliminary analysis beyond those that have been highlighted here.

**Discussion:** These results indicate that over half of county health department employees in Florida have received information about Pandemic Influenza recently, though 44% have not had any training or attended any presentations or exercises in the past year. As knowledge of H5N1 influenza virus and the potential for a pandemic changes frequently, it is important to ensure that the public health workforce is aware of up-to-date information and recommendations.

While this survey indicates that the majority of employees believe that they will be asked to participate in pandemic response and that they will play a significant role in pandemic response, less than half of employees would be confident about answering questions from the public during a pandemic and less than half are familiar with what their job may entail during an event.

The public health workforce will play an integral role in pandemic influenza response. Our results indicate that only 57% of CHD employees would be willing to report to work under the most high risk scenario; during the peak of the pandemic when there is widespread person-to-person transmission and when job duties require face-to-face contact with potentially infectious individuals.

These initial results raise further questions about the individual level of preparedness and the expected availability of CHD employees during a pandemic event. Additional analyses of this survey data are underway, aiming to identify factors associated with knowledge of pandemic influenza and a willingness to respond to a pandemic event.

**Conclusions:** These results provide useful information about pandemic influenza knowledge, perceptions, and concerns of CHD employees in Florida. The findings indicate that steps need to be taken to increase the willingness of the public health workforce to respond during a pandemic. As the likelihood of an influenza pandemic has increased in recent years, so has the need to ensure that all levels of the public health workforce are prepared to respond. Identifying issues and potential challenges, such as those discussed here, will serve to better inform pandemic influenza response planners about the perceptions of the public health workforce, so that efforts can be undertaken to address concerns prior to an event.

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**Ethical Considerations:** This study received approval from the Florida Department of Health Institutional Review Board on 11/13/06 under protocol number H06094.

**Selected References:**

- 1 Balicer RD, Omer SB, Barnett DJ, Everly Jr. GS. Local Public Health Workers' Perceptions Toward Responding to an Influenza Pandemic. *BMC Public Health*. 2006; 6:99
- 2 Qureshi K, Gershon RRM, Sherman MF, *et al.* Health Care Workers' Ability and Willingness to Report to Duty During Catastrophic Disasters. *Journal of Urban Health*. 2005; 82(3): 378-388
- 3 Chaffee MW. Making the Decision to Report to Work in a Disaster: Nurses May Have Conflicting Obligations. *American Journal of Nursing* 2006; 106(9): 54-57
- 4 Roderman C, Tracy CS, Bensimon CM, *et al.* On Pandemics and the Duty to Care: Whose Duty? Who Cares? *BMC Medical Ethics* 2006; 7:5

**Pandemic Influenza Response Survey for CHD Employees  
Tables of Employee Population Estimates**

**Question #1: What department do you primarily work in?**

<b>Department</b>	<b>Responses (%)</b>	<b>Weighted Pop. Estimates (%)</b>	<b>95% CIs for the percents</b>
Administration	349 (14.73)	2282 (15.22)	13.65–16.79
Clinical/Dental	448 (18.90)	2760 (18.40)	15.66–21.16
Disease Control <sup>1</sup>	253 (10.68)	1837 (12.25)	8.45–16.06
Epidemiology	100 (4.22)	633 (4.22)	2.62–5.83
Environmental	307 (12.95)	1769 (11.79)	10.17–13.43
<b>Family Health<sup>2</sup></b>	<b>617 (26.03)</b>	<b>3860 (25.74)</b>	<b>22.83–28.66</b>
Human Resources	25 (1.05)	165 (1.10)	0.63–1.57
Information Technology	65 (2.74)	388 (2.58)	1.27–3.90
Medical Records	61 (2.57)	369 (2.46)	1.09–3.83
Vital Statistics	38 (1.60)	234 (1.55)	1.06–2.06
Other	76 (3.21)	486 (3.24)	2.30–4.19
No answer	31(1.31)	211 (1.40)	0.84–1.97

<sup>1</sup> Disease Control includes: Hepatitis, STDs/HIV, TB, Immunizations, and related departments

<sup>2</sup> Family Health includes: Health Promotion, Health Education, School Health, Healthy Start, Healthy Families, WIC

**Question #2: What is your highest level of education?**

<b>Education</b>	<b>Responses (%)</b>	<b>Weighted Pop. Estimates (%)</b>	<b>95% CIs for the percents</b>
<b>High School or Less</b>	<b>1136 (47.93)</b>	<b>7041 (46.95)</b>	<b>43.76–50.16</b>
Associates or Bachelors	717 (30.25)	4493 (29.96)	28.59–31.35
Masters or higher	438 (18.48)	2934 (19.56)	16.38–22.75
Other	39 (1.65)	256 (1.71)	1.36–2.07
No answer	40 (1.69)	269 (1.79)	1.21–2.38

**Question #2b: Are you a nurse?**

<b>Licensed nurse</b>	<b>Responses (%)</b>	<b>Weighted Pop. Estimates (%)</b>	<b>95% CIs for the percents</b>
Yes <sup>3</sup>	489 (20.63)	3151 (21.01)	18.72–23.31
<b>No</b>	<b>1862 (78.57)</b>	<b>11731 (78.24)</b>	<b>75.95–80.54</b>
No answer	19 (0.80)	111 (0.74)	0.48–1.01

<sup>3</sup> Includes all nurses with any type of nursing degree

**Question #3: What is your gender?**

<b>Sex</b>	<b>Responses (%)</b>	<b>Weighted Pop. Estimates (%)</b>	<b>95% CIs for the percents</b>
<b>Female</b>	<b>1872 (78.99)</b>	<b>11898 (79.36)</b>	<b>76.68–82.03</b>
Male	498 (21.01)	3095 (20.64)	17.97–23.32

**Question #4: What is your age?**

<b>Age group</b>	<b>Responses (%)</b>	<b>Weighted Pop. Estimates (%)</b>	<b>95% CIs for the percents</b>
24 years or younger	80 (3.38)	347 (2.32)	1.85–2.79
25 – 34 years	372 (15.70)	2132 (14.22)	12.81–15.64
35 – 44 years	528 (22.28)	3436 (22.91)	20.93–24.90
45 – 54 years	758 (31.98)	4398 (29.34)	27.86–30.81
<b>55 years or older</b>	<b>632 (26.67)</b>	<b>4679 (31.21)</b>	<b>28.08–34.33</b>

**Question #5: During the last 12 months, have you attended at least one Pandemic Influenza presentation, training, or exercise?**

<b>Attended training</b>	<b>Responses (%)</b>	<b>Weighted Pop. Estimates (%)</b>	<b>95% CIs for the percents</b>
Yes	1320 (55.70)	<b>8446 (56.33)</b>	41.13–71.54
No	887 (37.43)	5502 (36.70)	23.27-50.11
Not Sure	154 (6.50)	988 (6.59)	4.55-8.62
No answer	9 (0.38)	58 (0.38)	0.24–0.53

**Question #5a: If yes, how many presentations, trainings, and/or exercises have you attended in the last 12 months?**

<b>Number of trainings<sup>4</sup></b>	<b>Responses (%)</b>	<b>Weighted Pop. Estimates (%)</b>	<b>95% CIs for the percents</b>
1 – 3	1140 (86.36)	<b>7267 (48.47)</b>	36.20-60.74
4 – 6	110 (8.33)	745 (4.97)	2.85-7.09
More than 6	62 (4.70)	389 (2.60)	1.51-3.69
No answer	8 (0.61)	45 (0.30)	0.10-0.49

<sup>4</sup> Refers specifically to Pandemic Influenza presentations, trainings, and exercises; Table based on 1,320 people who responded “yes” to question 5.

**Question #6: Have you read all or part of the Florida Department of Health Pandemic Influenza Plan?**

<b>Read Florida plan</b>	<b>Responses (%)</b>	<b>Weighted Pop. Estimates (%)</b>	<b>95% CIs for the percents</b>
All/Part	1163 (49.07)	<b>7532 (50.23)</b>	42.32 – 58.14
None	788 (33.24)	4855 (32.38)	25.35 – 39.42
Not Sure	403 (17.00)	2502 (16.68)	15.35 – 18.02
No answer	16 (0.68)	105 (0.70)	0.36 – 1.04

**Question #7: Have you read all or part of your county health department’s Pandemic Influenza Plan?**

<b>Read CHD plan</b>	<b>Responses (%)</b>	<b>Weighted Pop. Estimates (%)</b>	<b>95% CIs for the percents</b>
All/Part	1099 (46.47)	<b>7291 (48.63)</b>	39.73–57.52
None	676 (28.52)	4102 (27.36)	21.39–33.32
Not Sure/No CHD plan <sup>5</sup>	581 (24.51)	3513 (23.43)	19.94–26.92
No answer	14 (0.59)	88 (0.59)	0.19–0.98

<sup>5</sup> ‘Not Sure/No CHD plan’ includes those who were not sure that they had read their CHD Pan Flu plan, those who were not sure that the their county had a plan, and those who indicated that their county did not have a plan.

**Question #8: How familiar are you with the kind of response activities that will be led by your county health department during an Influenza Pandemic?**

<b>Familiar with response</b>	<b>Responses (%)</b>	<b>Weighted Pop. Estimates (%)</b>	<b>95% CIs for the percents</b>
Familiar	1377 (58.10)	<b>8960 (59.76)</b>	49.59–69.92
Unfamiliar	581 (24.51)	3520 (23.47)	16.91–30.04
Neither	394 (16.62)	2392 (15.96)	11.88–20.03
No answer	18 (0.76)	122 (0.81)	0.42–1.21

**Question #9: Based on your current knowledge of Pandemic Influenza, how confident are you that you could answer questions from the community during an Influenza Pandemic?**

Confident about knowledge	Responses (%)	Weighted Pop. Estimates (%)	95% CIs for the percents
Confident	1005 (42.41)	<b>6629 (44.22)</b>	34.52–53.92
Unconfident	713 (30.08)	4377 (29.19)	22.15–36.24
Neither	634 (26.75)	3872 (25.83)	22.93–28.73
No answer	18 (0.76)	115 (0.76)	0.48–1.05

**Question #10: During an Influenza Pandemic, how likely do you think it is that you will be asked to participate in special response activities at your county health department?**

Likely asked to participate	Responses (%)	Weighted Pop. Estimates (%)	95% CIs for the percents
Likely	1690 (71.31)	<b>10794 (71.99)</b>	66.54–77.44
Unlikely	391 (16.50)	2417 (16.12)	12.41–19.83
Neither	268 (11.31)	1637 (10.92)	8.77–13.07
No answer	21 (0.89)	145 (0.97)	0.61–1.32

**Question #11: How significant do you think your role will be in your county health department's overall response to an Influenza Pandemic?**

Perceived significance of role	Responses (%)	Weighted Pop. Estimates (%)	95% CIs for the percents
Significant	1495 (63.08)	<b>9664 (64.46)</b>	57.60–71.32
Insignificant	349 (14.73)	2123 (14.16)	10.61–17.71
Neither	507 (21.39)	3078 (20.53)	16.66–24.40
No answer	19 (0.08)	128 (0.86)	0.46–1.25

**Question #12: How familiar are you with what your specific job responsibilities would be during your county health department's response to an Influenza Pandemic?**

Familiarity with job duties	Responses (%)	Weighted Pop. Estimates (%)	95% CIs for the percents
Familiar	1061 (44.77)	<b>7008 (46.74)</b>	37.67–55.81
Unfamiliar	769 (32.45)	4685 (31.25)	24.53–37.97
Neither	517 (21.81)	3151 (21.01)	18.22–23.81
No answer	23 (0.97)	150 (1.00)	0.64–1.36

**Question #13: If your risk of becoming infected with Pandemic Influenza is the same whether or not you report to work, how likely are you to report to work?**

Same risk, how likely to work	Responses (%)	Weighted Pop. Estimates (%)	95% CIs for the percents
Likely	1852 (78.14)	<b>11652 (77.71)</b>	76.23–79.19
Unlikely	238 (10.04)	1522 (10.15)	8.56–11.74
Neither	258 (10.89)	1668 (11.13)	9.42–12.84
No answer	22 (0.93)	152 (1.01)	0.50–1.52

**Question #14: If treatments to prevent infection and/or vaccinations are made available to you during an Influenza Pandemic, how likely are you to report to work?**

Treatment, how likely to work	Responses (%)	Weighted Pop. Estimates (%)	95% CIs for the percents
Likely	2100 (88.61)	<b>13302 (88.72)</b>	87.15–90.28
Unlikely	87 (3.67)	536 (3.57)	2.87–4.28
Neither	159 (6.71)	994 (6.63)	5.37–7.89
No answer	24 (1.01)	162 (1.08)	0.70–1.46

**Question #15: If all your work could be completed from home using a phone and/or computer during an Influenza Pandemic, how willing would you be to work from home?**

Work from home	Responses (%)	Weighted Pop. Estimates (%)	95% CIs for the percents
Willing	2180 (91.98)	<b>13837 (92.29)</b>	91.21–93.37
Unwilling	63 (2.66)	378 (2.52)	1.97–3.07
Neither	108 (4.56)	658 (4.39)	3.47–5.31
No answer	19 (0.80)	121 (0.81)	0.53–1.09

***Consider the following scenario for questions 16 and 17:***

Florida has identified its first human case of Pandemic Influenza, however at this time there is **NO** widespread human-to-human transmission.

**Question #16: If your work duties did not require you to have direct face-to-face contact with people who could be infected, how likely would you be to report to work?**

First case, no face-to-face contact	Responses (%)	Weighted Pop. Estimates (%)	95% CIs for the percents
Likely	2193 (92.53)	<b>13867 (92.49)</b>	91.08–93.89
Unlikely	57 (2.41)	359 (2.39)	1.77–3.02
Neither	100 (4.22)	647 (4.32)	3.25–5.38
No answer	20 (0.84)	121 (0.80)	0.54–1.07

**Question #17: If your work duties did require you to have direct face-to-face contact with people who could be infected, how likely would you be to report to work?**

First case, face-to-face contact	Responses (%)	Weighted Pop. Estimates (%)	95% CIs for the percents
Likely	1576 (66.50)	<b>10067 (67.14)</b>	65.05–69.24
Unlikely	474 (20.00)	2922 (19.49)	17.47–21.50
Neither	295 (12.45)	1839 (12.27)	10.79–13.74
No answer	25 (1.05)	166 (1.10)	0.80–1.41

***Consider the following scenario for questions 18 and 19:***

It is the peak of the Influenza Pandemic, when widespread human-to-human transmission **IS** occurring in Florida and worldwide.

**Question #18: If your work duties did not require you to have direct face-to-face contact with people who could be infected, how likely would you be to report to work?**

Peak, no face-to-face contact	Responses (%)	Weighted Pop. Estimates (%)	95% CIs for the percents
Likely	1965 (82.91)	<b>12448 (83.02)</b>	81.55–84.50
Unlikely	218 (9.2)	1376 (9.18)	7.87–10.48
Neither	156 (6.58)	981 (6.54)	5.48–7.60
No answer	31 (1.31)	189 (1.26)	0.77–1.75

**Question #19: If your work duties did require you to have direct face-to-face contact with people who could be infected, how likely would you be to report to work?**

Peak, face-to-face contact	Responses (%)	Weighted Pop. Estimates (%)	95% CIs for the percents
Likely	1330 (56.12)	<b>8505 (56.72)</b>	53.46–59.99
Unlikely	681 (28.73)	4262 (25.43)	25.75–31.11
Neither	335 (14.14)	2075 (13.84)	12.43–15.24
No answer	24 (1.01)	151 (1.01)	0.66–1.36

**Question #20: During the peak of an Influenza Pandemic when widespread human-to-human transmission is occurring worldwide, what will be your greatest concern?**

<b>Greatest concern</b>	<b>Responses (%)</b>	<b>Weighted Pop. Estimates (%)</b>	<b>95% CIs for the percents</b>
Personal health and safety	337 (14.22)	2156 (14.38)	13.45–15.31
<b>Family health and safety</b>	<b>1725 (72.78)</b>	<b>10810 (72.10)</b>	<b>70.64–73.55</b>
Job security	18 (0.76)	108 (0.72)	0.58–0.86
Financial stability	33 (1.39)	226 (1.51)	1.15–1.86
Basic needs (food and water)	89 (3.76)	589 (3.93)	3.05–4.80
Other	111 (4.68)	735 (4.90)	4.13–5.68
No answer	57 (2.41)	370 (2.47)	1.70–3.24

**Question #21: What is the single most important thing the Health Department could do to increase your likelihood of reporting to work during an Influenza Pandemic?**

<b>What can health department do</b>	<b>Responses (%)</b>	<b>Weighted Pop. Estimates (%)</b>	<b>95% CIs for the percents</b>
Provide additional information and training about Pandemic Influenza response	137 (5.78)	895 (5.97)	4.63–7.24
Ensure the health and safety of all staff by providing necessary resources	417 (17.59)	2661 (17.75)	16.53–18.95
Provide support for staff families (childcare, basic needs, etc)	155 (6.54)	970 (6.47)	5.32–7.63
<b>All of the above</b>	<b>1468</b>	<b>9296 (62.00)</b>	<b>60.42–63.58</b>
There is nothing the Health Department could do to increase the likelihood	83 (3.50)	494 (3.30)	2.44–4.15
Other	49 (2.07)	301 (2.01)	1.18–2.84
No answer	61 (2.57)	376 (2.51)	1.84–3.18

*Nicole Basta is the Florida Epidemic Intelligence Service Fellow assigned to the Collier and Hendry/Glades County Health Departments. She can be reached at 239.774.8234. Sharlene Emmanuel is the Florida Epidemic Intelligence Service Fellow assigned to the Polk County Health Department. She can be reached at 863.519.8300 ext. 1213. Joann Schulte, DO, MPH, formerly the CDC assignee to the Florida Department of Health, is now the CDC assignee to the Texas Department of Health.*

## **Rash Illness Among Hospital Staff**

**Undisclosed**

On February 5, 2007, a county health department was notified by a hospital infection control practitioner (ICP) of rash illness at a local hospital involving intensive care unit (ICU) employees (12 nurses and 1 physician). The rash was variably noted on the underside of the arm, the inner-aspect of the wrist, under the breast, and on the abdomen. The first rash episode began with an employee on 01/25/07. Scabies was suspected, which is a parasitic infestation of the skin caused by mites of the genus *Sarcoptes*. All ICU employees were treated empirically for scabies with Kwell on recommendation of their hospital infectious disease physician. The county provided educational material regarding scabies to the ICP.

By February 8, 2007, a total of 18 employees had reported an itchy rash. No new cases of rash illness were reported after 02/08/07. All cases involved employees who either worked full-time in the ICU or performed services on the unit, (i.e. cardiopulmonary, radiology). On 02/09/07 the ICP obtained scrapings on 4 employees with rash symptoms. Three were positive for “mites” as “a leg of an arthropod” was noted microscopically by a hospital pathologist. The mite was not positively identified as *Sarcoptes spp*. When the slides were later evaluated by a dermatologist, another pathologist and an ID doctor, “only skin cells and debris” were noted....no signs of mites. A punch biopsy of one employee taken on 02/05/07 came back, “No mite or its product is seen.”

On February 20, 2007, a team from the county health department, including epidemiology and environmental health staff, made an on-site inspection of the facility. Deep cleaning in the ICU was recommended with cleaning and bug spraying of

the nurses' lockers. Air conditioning coils were to be cleaned.

Although the cause of the outbreak was not identified, some common practices in an ICU setting may contribute to rash illness. Hand washing and glove use are two common practices of a hospital ICU. Frequent hand washing in the ICU setting is necessary to prevent the spread of pathogens, but frequent hand washing may result in dry, irritated skin, or dermatitis. Glove allergies also may cause allergic dermatitis presenting as a rash illness. Frequent close patient contact in the ICU setting may increase the possibility of spread, from patient to healthcare worker, of agents causing rash illness. In this recent outbreak, no index patient was identified. Finally, use of surgical scrubs or gowns provided by a common laundry service may result in allergic reaction to detergents used in cleaning these items. In this recent outbreak, no specific link was established between the rash illness observed and the laundry service.

Scabies due to infestation with *Sarcoptes spp.* should be diagnosed microscopically prior to initiating mass treatment. Unnecessary treatment or over-treatment should be avoided due to the toxicity of agents used to treat scabies.

***This article was included in the May issue of Epi Update with no author or identifying information to protect the integrity of the investigation.***

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## Florida Epidemiology Conference a Huge Success

Debora Campbell, MS, CHES



The 2007 Florida Epidemiology Conference was a huge success! One hundred eighty-eight participants attended the conference and engaged in educational and networking activities over the course of the 3 days.

There were 35 posters presented at this year's conference, displayed in seven categories. Congratulations to the winner in each category:

**Chronic Disease:** *How Much the Changes in Major Chronic disease Mortality Contributed to the Increase of Life Expectancy in Florida* by Youjie Huang, MD, DrPH, MPH

**Communicable Disease:** *Legionella Investigation aboard a Cruise Ship* by Barry Inman, BA/BS, CIC, CHE; Olga Emgushov, MD, MPH

**County Health Department:** *Violence Data: Considerations and Inconsistencies* by Rebecca T. Filipowicz, MPH, MS, CHES; Bill Livingood, PhD.; Nancy Winterbauer, PhD; Susan Coughlin, MPH; Ryan Marie Diduk, MPH, CHES; Kristi Stowers, BSH

**Environmental Health:** *Descriptive analysis of childhood lead poisoning in Pinellas County, 1996-2005* by Andrea Dopico, MPH; Kyla Shelton, MPH

**Florida Epidemic Intelligence Service:** *Investigation of Chicken Pox at Manatee County Jail – November, 2006* by Karen Alelis, MPH; Sharlene Emmanuel, MPH; Roger Sanderson, MA, BSN

**Early Detection/Preparedness:** *A Data Quality Evaluation of the BioDefend Syndromic Surveillance System, Duval County* by Sharleen Traynor, MPH; Luis E. Rios, Jr., MD, MPH; Sarah K. Winn, MPH; Sa'ad Zaheer, MD, FACE

**Other: Maternal/Child Health, Injury, etc.:** *Motor Vehicle Crashes and Injury Among High School and College Aged Drivers: Miami-Dade County, FL 2005* by Maria Bustamante, MPH; Guoyan Zhang, MD, MPH; Erin O'Connell, MPH; Diana Rodriguez, MPH; Rene Borroto-Ponce, BS; Fermin Leguen, MD, MPH

There were several great nominations for this year's Golden Partnership Awards. Congratulations to this year's winners:

**CDC Miami Quarantine Station** – nominated by Dr. Richard Hopkins – “Tony Drew and the entire staff at the Miami Quarantine Station have been a valued partner to the Department of Health and epidemiology in Florida. They help track travelers with infectious diseases on international and domestic flights, assist in investigations of outbreaks on cruise ships, and collaborate with us in our pandemic influenza and public health preparedness planning.” The award was accepted by Annelisa Casano.

**Bureau of Laboratories** – nominated by Robyn Kay, MPH – “The Bureau of Laboratories' collaboration is multi-faceted. From outbreak investigation assistance to diagnostic quality and leadership, the Bureau of Laboratories' continued collaboration and work toward excellence makes them a valuable partner. Two specific examples of their collaboration with the Bureau of Epidemiology include their expertise that aided our ability to rapidly identify those with *Bordetella Pertussis* in the state, and the laboratory testing on specimens for a probable case of Diphtheria in Duval County on Christmas Day.” The award was accepted by Dr. Max Salfinger, Dr. Lillian Stark, and Dr. Leah Gillis.

**Highlands County Health Department, Epidemiology Program** – nominated by Dean Bodager, RS, MPA – An innovative “Meet and Greet” collaboration program with the local health care community has increased the percent of new reportable diseases reported within 72 hours. Stephani Gray and staff met with health care personnel responsible

for reporting diseases to the health department and provided clipboards with the Reportable Diseases/Conditions in Florida Practitioner Guide and CHD contact information. These clipboards allowed the physician and staff to have the necessary information readily accessible when a potential reportable disease/condition was encountered. Prior to the "Meet and Greet" program, the percent of new reportable diseases reported within 72 hours of laboratory report was a dismal 20%. Subsequent to the program's implementation, the reporting rate has increased to 67.3% in just 3 months. The epidemiology department has also experienced an increase in disease reporting from partnering agencies. During a recent Norovirus outbreak in an assisted living facility, the Department received reports from the head of EMS. This growing partnership between the local physicians and healthcare providers is helping to move the Highlands County Health Department towards excellence in public health epidemiology. The award was accepted by Stephani Gray.

**Agency for Health Care Administration (AHCA), Center for Health Information and Policy Analysis** – nominated by Dr. Youjie Huang – AHCA has provided hospital inpatient date and ambulatory data collected through their agency, which has aided various bureau programs/projects. The AHCA hospital discharge data were utilized by the regional epidemiologist in conducting analyses on hospitalizations for *Clostridium difficile* infection. In addition, AHCA data were instrumental to disease surveillance and a special study regarding the "Chrohn's and Colitis Disease Research Act". AHCA also provides data annually to aid the statewide cancer registry in order to identify potentially missed cases that were not directly reported to the Florida Cancer Data System. The partnership between the bureau and the AHCA is an example of collaboration among state agencies to integrate resources (i.e., data) to better address the needs of Floridians. The award was accepted by Jerome Todd.

**Quest Diagnostic Laboratories** – nominated by Dr. Richard Hopkins – Quest Laboratories has provided essential data for surveillance of community-acquired *Staphylococcus aureus* infections, both drug-sensitive and drug-resistant. They provided requested data in a timely, cooperative way and did extensive data cleaning before supplying the dataset. Quest is a true partner with the Department of Health and has demonstrated long-term collaboration on laboratory testing issues and service to the public. The award was accepted by Ann Maddo.

Special thanks to all the staff at the Bureau of Epidemiology for their hard work in helping plan and deliver an outstanding Conference. Planning for the 2008 Florida Epidemiology Conference will begin in September 2007.

**Debora Campbell is the Training and Communications Section administrator at the Bureau of Epidemiology in Tallahassee. She can be reached at 850.245.4409.**

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## **Florida Epidemic Intelligence Service Program Match Day & Graduation 2007**

**Patti Ragan, PhD, MPH, PA-C**

May has been a busy month for the Florida Epidemic Intelligence Service (FL-EIS) Program! Following a very successful recruiting and selection process for both county health department host sites and fellows, "Match Day", an opportunity to determine assignments for the fellows, was held at the Department of Health in Tallahassee on Monday, May 7, 2007.

The Program is pleased to welcome the following county health department host sites and fellows for 2007-2009:

- Brevard County – Racquel Stephenson, MPH (Emory University)
- Collier and Hendry/Glades Consortium – Pedro (Paco) Castellon, MPH (Florida International University)
- Duval County – Taj Azarian, MPH (University of Florida)
- Leon County – Catherine Kroll, MPH (Emory University)
- Polk County – Sericea Smith, MPH (University of Tennessee)

The new fellows will be reporting to their assignments in June and July and look forward to an exciting and productive two years to gain experience in applied epidemiology!

Graduation for the Florida EIS class of 2005-2007 was held on May 22, 2007 during the 12<sup>th</sup> Florida Epidemiology Conference. Graduates include Nicole Basta, MPhil Epi (Collier Consortium), Sharlene Emmanuel, MPH (Polk County), Aaron Kite-Powell, MPH (Broward County), Patti Ragan, PhD, MPH, PA-C (Northwest Consortium) and Sharleen Traynor, MPH (Duval County). Preceptors and mentors of the graduates also were honored for their many contributions by receiving certificates of appreciation. Future plans for the graduates include pursuing a PhD in epidemiology at the University of Washington – Seattle (Nicole), MAPP coordinator at Polk County Health Department (Sharlene), Surveillance Epidemiologist at the Department of Health in Tallahassee (Aaron), Administrator of the FL-EIS Program (Patti), and Epidemiology Program Manager at Charlotte County Health Department (Sharleen).

Lastly, during the conference, program fellows participated in both oral and poster presentation sessions, reporting on many interesting investigations, studies and projects conducted with colleagues over the past year. Three of the upcoming second year fellows, Becky Lazensky, Leah Eisenstein and Erin O'Connell also will be traveling to the Council of State and Territorial Epidemiologists (CSTE) annual conference in New Jersey in June to present their work.

***Dr. Patti Ragan is the administrator for the Florida Epidemic Intelligence Service Program in the Bureau of Epidemiology. She can be reached at 850.245.4406.***

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## ***Wildfires and Health – Frequently Asked Questions***

***Department of Health Communications Office***

### **What is the health threat from wildfire smoke?**

Smoke from wildfires is a mixture of gases and fine particles from burning trees and other plant materials. Smoke can hurt your eyes, irritate your respiratory system, and worsen chronic heart and lung diseases. Fortunately, most persons who are exposed to thick smoke will not have health problems. How much and how long you are exposed to the smoke, as well as your age and degree of susceptibility play a role in determining whether or not someone will experience smoke-related problems. If you are experiencing serious medical problems for any reason, seek medical treatment immediately.

### **How can I tell if the smoke is affecting my family or me?**

- Smoke can cause coughing, scratchy throat, irritated sinuses, shortness of breath, chest pain, headaches, stinging eyes and runny nose.
- If you have heart or lung disease, smoke might make your symptoms worse.
- People who have heart disease might experience chest pain, rapid heartbeat, shortness of breath and fatigue
- Smoke may worsen symptoms for people who have pre-existing respiratory conditions, such as respiratory allergies, asthma, and chronic obstructive pulmonary disease (COPD), in the following ways:
  - Inability to breathe normally
  - Cough with or without mucus
  - Chest discomfort
  - Wheezing and shortness of breath
- When smoke levels are high enough, even healthy people may experience some of these symptoms.

### **How can I protect myself and my family from the harmful effects of smoke?**

The best thing to do is to limit your exposure to the smoke. Specific strategies to decrease exposure to smoke include staying indoors whenever possible, using air conditioners (air conditioned homes usually have lower air exchange rates than homes that use open windows for ventilation), using mechanical air cleaners, keeping windows closed while driving in a vehicle, and minimizing other sources of air pollution (e.g., smoking tobacco, using wood burning stoves, burning candles or incense and vacuuming).

### **Will I suffocate in my house?**

No. The most common call for evacuation during a wildfire is due to the direct threat of the fire, not smoke. Leaving the area of thick smoke may be an option for those who are sensitive to smoke. But it is often difficult to predict the duration, intensity and direction of smoke, making this an unattractive choice to many people.

During severe smoke events, local clean air shelters may be designated to provide residents with a cool place to get out of the smoke, or individuals may choose to visit these locations on their own. These places may include large commercial buildings, educational facilities, shopping malls, movie theaters or any place with effective air conditioning and particle filtration.

### **What about “N95” respirators?**

N95 respirators look like paper masks but have been tested and certified by the National Institute for Occupational Safety and Health (NIOSH). They are good enough to filter out 95% of the small particles that may be found in smoke. Of course, like any filtering face-piece respirator, they must fit properly to the wearer's face to work correctly. It is also important to know that N95 particulate respirators only filter particles, and not toxic gases and vapors.

### **Should I wear a mask or N95 respirator?**

The Department of Health does not recommend the wearing of any masks or respirators at this time. There are several drawbacks to recommending widespread respirator use in an area affected by wildfire smoke. Most people may not use the respirators correctly and may not understand the importance of having an airtight seal between the respirator and the face. For instance, it is impossible to get a good seal on individuals with facial hair. As a result, the respirator will provide little if any protection, and may offer the wearer a false sense of protection.

Filtering face-piece respirators are also uncomfortable since they can make breathing more difficult which can lead to physiological stresses such as increased respiratory rates and heart rates. Respirators can also contribute to heat stress.

**Because of this, respirator use by those with cardiopulmonary and respiratory diseases can be dangerous, and should only be done under a doctor's supervision.** Even healthy adults may find that the increased effort required for breathing makes it uncomfortable to wear a respirator for more than short periods of time.

**Will a wet towel or bandana provide any help?**

The Department of Health does not recommend using wet towels or bandanas. Since wet towels or bandanas may not be sealed to the face and their capacity to filter very small particles is unknown, they will likely provide little to no protection. They are also not certified as effective respirators by National Institute for Occupational Safety and Health (NIOSH).

**What should I do if I must drive to work?**

Individuals can reduce the amount of smoke particles in their vehicles by keeping the windows closed. The car's ventilation systems typically remove a portion of the particulate coming in from outside. For best results, individuals may want to use the recirculate air feature found in most cars, which will help keep the particulate levels lower.

**Our community has an outdoor game scheduled for this evening, should we cancel it?**

All persons in areas affected by the wildfire smoke are being advised to limit outdoor activity and stay indoors whenever possible to minimize exposure to the smoke. Contact your local emergency management officials for more guidance.

**Do air-purifying machines help remove smoke particles inside buildings?**

Some air cleaners may be effective at reducing indoor particle levels, but most are not effective at removing gases and odors, and also tend to be expensive. Some devices, known as ozone generators, personal ozone devices, "energized oxygen", "triatomic oxygen", "activated oxygen" and "pure air" generators are sold as air cleaners, but they are not recommended for use in occupied buildings. Ozone does not remove particles from the air, and would not be effective during smoke events. Ozone itself is toxic and a regulated outside air pollutant. We advise the public to avoid exposure to ozone indoors by not using air cleaners that produce ozone. For additional information consider reviewing the US Environmental Protection Agency document: "Ozone Generators That Are Sold As Air Cleaners" available at <http://www.epa.gov/iaq/pubs/ozonegen.html>

Also, humidifiers or de-humidifiers are not technically air cleaners and will not significantly reduce the amount of particles in the air during a smoke event.

**What should I do about closing up my house when it is so hot in there?**

If you do not have an air conditioner and if it is too warm to stay inside with the windows closed, seek alternative shelter.

**If I have respiratory problems and can't reach my doctor, where should I go?**

If you have a medical emergency you should call 911 or go the hospital emergency room immediately.

**What do I bring if I'm told to evacuate my home?**

If asked or instructed to evacuate your home make sure to bring your important family documents (birth certificates, wills, insurance policies, etc), any valuables and your family disaster supply kit. Your disaster supply kit should contain enough food, water and supplies to sustain your family for at least 3 days. Don't forget any medications or special items such as a first aid kit. For additional information on how to prepare your family for disasters consider reviewing the "Family Preparedness Guide" available at: [http://www.doh.state.fl.us/rw\\_webmaster/prepareenglish06.pdf](http://www.doh.state.fl.us/rw_webmaster/prepareenglish06.pdf) It is extremely important for families to create their own disaster plan before a disaster strikes so they are quickly able to determine what valuables they may want to bring, what items need to be stored, how to preserve keepsakes, etc.

**I operate a nonresidential building with outside air intakes. Should I close the outside air intakes during a wildfire smoke event?**

Every nonresidential building has a uniquely designed ventilation system, where any changes even temporary ones, can have an impact on building occupants and indoor air quality. We recommend you consult with a heating, ventilation and air-conditioning professional for guidance on this issue.

**Where can I find information about the air quality in the area I live?**

The Florida Department of Environmental Protection provides updated information on outdoor air quality in Florida. You can access this information by logging into the following website: <http://www.floridadep.org/air/airquality.htm>

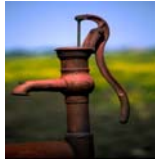
**As an employee or volunteer, I am working in an area where I am exposed to wildfire smoke. What type of respiratory protection should I use?**

Consult with your employer or the agency to which you are volunteering. The U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) requires all employers to establish respiratory protection programs for their employees to use when it is deemed necessary. If respirators are deemed necessary to limit exposures to airborne contaminants, the employer is required to provide the selected the appropriate respirator based on the respiratory hazard the employee is expected to experience during work. The employer then provides respirators, training and medical evaluations at no cost to the employee.

For additional information about the respiratory protection standards, log on to [www.OSHA.gov](http://www.OSHA.gov) and click "r" on the site index alphabet, or call OSHA at 1-800-321-OSHA or the National Institute for Occupational Safety & Health (NIOSH) at 1-800-35-NIOSH.

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## Upcoming Events



### 2007 CSTE Annual Conference

*“Eliminating Health Disparities: Data to Action”*

**June 24-28 • Atlantic City, New Jersey**

The deadline to pre-register on-line for “On-Site Registration” is **Wednesday, June 20 at 11:59 PM Eastern Standard Time (EST)**. The cost to attend this conference is \$550. Visit <http://www.cste.org/annualconference/index.asp> for more information.



The Florida Department of Health, Division of Environmental Health is holding the **2007 Florida Zoonosis Summit** on July 24-25, 2007, in Celebration, Florida at the Radisson Resort – Orlando.

The purpose of the 2007 Zoonosis Summit is to facilitate information exchange among the network of professionals involved in responding to zoonotic disease outbreaks, and prevention and/or reduction of outbreak-related financial losses. The theme of the 2007 Florida Zoonosis Summit is the connection between wildlife, domestic animal and human health. This summit will bring together a wide variety of stakeholders, thus providing a comprehensive perspective of the problems we face.

For additional information about the Summit, including registration, please visit <http://fzds.orlandomeetinginfo.com/>.



**The Florida Public Health Association (FPHA) Annual Education Conference** is scheduled for July 31 – August 3, 2007, at the Tampa Grand Hyatt in Tampa, Florida. This year’s theme is **Under the Big Top: Florida Public Health - The Greatest Show on Earth**. The registration fee for this conference for FPHA members is \$150 (before July 1, 2007). To register for the conference, or for more information, visit <http://www.fpha.org/index.html> or contact FPHA via e-mail at [floridapha@bellsouth.net](mailto:floridapha@bellsouth.net).



The Office of Public Health Research Announces the Florida Center for Universal Research to Eradicate Disease (FL CURED) 2007 SUMMIT August 6-8, 2007 at the Gaylord Palms Resort in Kissimmee has a special room rate for participants: \$144 S/D. Call 407.586.2000 and reserve your room under FL CURED Annual Summit.

Registration for this event is \$295 and will increase to \$375 after July 5, 2007.

For details and registration information, please visit [www.FLCURED.org](http://www.FLCURED.org) or call Judy Taylor-Fisher, marketing and public events manager, at the Office of Public Health Research in Tallahassee at 850.245.4444, ext. 3581.

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## Mosquito-borne Disease Summary May 20-26, 2007

**Rebecca Shultz, MPH; Caroline Collins; Daneshia Roberts; Carina Blackmore, DVM, PhD**

During the period May 20-26, 2007, the following arboviral activity (St. Louis encephalitis virus [SLEV], Eastern equine encephalitis virus [EEEV], Highlands J virus [HJV], West Nile virus [WNV], California encephalitis group viruses [CEV]) was recorded in Florida:

**EEEV activity:** One seroconversion to EEEV was reported in a sentinel chicken from Putnam County. Two out of 9 live birds (a Cardinal and a Blue Jay) captured from Santa Rosa County tested positive for antibodies to EEEV.

**WNV/SLEV activity:** The Blue Jay captured from Santa Rosa County which tested positive for antibodies to EEEV was also reactive to indeterminate flavivirus (could be WNV or SLEV).

HJV activity: None.

**Dead Bird Reports:**

The Fish and Wildlife Conservation Commission (FWC) collects reports of dead birds, which can be an indication of arbovirus circulation in an area. This week, 28 reports representing 62 dead birds were received from 14 counties. One bird was identified as a jay, 1 was identified as a raptor and 60 were identified as other species. Please note that FWC collects reports of birds that have died from a variety of causes, not only arboviruses. Dead birds should be reported to [www.myfwc.com/bird/](http://www.myfwc.com/bird/).

**Year-to-Date Summary:**

Since January 1<sup>st</sup>, 12 counties have reported EEEV activity, 4 have reported WNV activity, 2 have reported HJV activity, 1 has reported SLEV activity and 1 has reported CEV activity. No locally-acquired human cases of arboviral infection have been reported this year.

See the web page for more information: <http://www.doh.state.fl.us/environment/community/arboviral/index.html> . The Disease Outbreak Information Hotline offers recorded updates on medical alert status and surveillance at 888.880.5782.

**Rebecca Shultz is the arbovirus program coordinator at the Division of Environmental Health in Tallahassee. She can be reached at 850.245.4444, ext. 2437.**

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## Weekly Disease Table

D’Juan Harris, MSP

Go to [http://www.doh.state.fl.us/disease\\_ctrl/epi/Disease\\_Table/2007\\_Weeks/dt\\_index.htm](http://www.doh.state.fl.us/disease_ctrl/epi/Disease_Table/2007_Weeks/dt_index.htm) to review the most recent disease figures provided by the Florida Department of Health, Bureau of Epidemiology.

**D’Juan Harris is the systems project analyst in the Surveillance Systems Section of the Bureau of Epidemiology. He can be reached at 850.245.4444, ext. 2435.**

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## This Month on EpiCom

by Christie Luce



The Bureau of Epidemiology encourages *Epi Update* readers to not only register on the EpiCom system at <https://www.epicomfl.net>, but to sign up for features such as automatic notification of certain events at [EpiCom\\_Administrator@doh.state.fl.us](mailto:EpiCom_Administrator@doh.state.fl.us) and contribute appropriate public health observations related to any suspicious or unusual occurrences or circumstances. EpiCom is the primary method of communication between the Bureau of Epidemiology and other state medical agencies during emergency situations.

- GI-illness outbreak associated with food festival in Nassau County
- Confirmed meningococcal disease in Escambia County
- Wound Vibrio vulnificus Reported in Martin County
- Broward County Investigating 2 Cases of Legionella
- 3 measles cases confirmed in Alachua County
- Varicella outbreak in a school in Okaloosa County
- Shigella outbreak in daycare centers, Citrus County
- Brucellosis in Hernando County
- Chagas Disease Case in Palm Beach County

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**Epi Update** is the peer-reviewed journal of the Florida Department of Health, Bureau of Epidemiology, and is published monthly on the Internet. Current and past issues of Epi Update are available at [http://www.doh.state.fl.us/disease\\_ctrl/epi/Epi\\_Updates/index.html](http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/index.html). The Current issue of Epi Update is available at [http://www.doh.state.fl.us/disease\\_ctrl/epi/Epi\\_Updates/2007/April2007EpiUpdate.pdf](http://www.doh.state.fl.us/disease_ctrl/epi/Epi_Updates/2007/April2007EpiUpdate.pdf). It is published at the end of each month.

To receive an email reminder, simply send an email request to [HSD\\_EpiUpdate@doh.state.fl.us](mailto:HSD_EpiUpdate@doh.state.fl.us). To submit an article or to obtain information about Epi Update, call Debora Campbell, administrator for the Training and Communications Section, at 850.245.4409.

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