

Escambia County Health Department Epidemiology Program Five Year Summary (Ending December 31, 2010)

Introduction

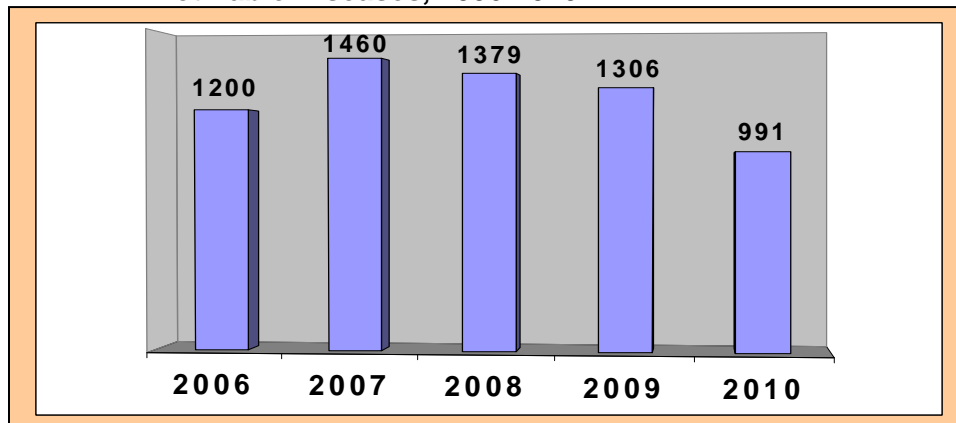
The mission of the Escambia County Health Department (ECHD) is to protect and promote the health of all residents and visitors in the state through organized state and community efforts, including cooperative agreements with counties. The ECHD leadership consists of: Director, John J. Lanza, MD, PhD, MPH, FAAP; Associate Director, Susan Turner, MD, MS; Public Health Nursing Director, Trena Webb, BSN, MS, RN, NCSN; and, Executive Community Health Nursing Director, Lamar Dunn RN, BSN. Other staff include: Pat Williams, BSN, MS; Casey Richards, BS, MPH; Nadia Kovacevich, BS, MPH; Patrick Lynch, BS, MPH; Candy Green, RN; and Meo Stovall, Staff Assistant.

Case Investigations

The Epidemiology (Epi) program is primarily charged with the reporting and control of communicable diseases and conditions that may significantly affect public health, as specified in Florida Administrative Code Chapter 64D-3. The program is under the Community Health Section in the Division of Public Health Nursing and is directly responsible for investigating over 60 reportable conditions with the exception of HIV/AIDS, tuberculosis, and sexually transmitted infections (STIs). The Epidemiology program collaborates with all ECHD Divisions regarding communicable disease surveillance, investigation, and control efforts.

The Epi program investigates reports of notifiable diseases. For each report received, an investigation is initiated and a determination is made whether the disease meets the surveillance case definition for entry into the Florida Department of Health (FDOH) Bureau of Epidemiology's (BOE) reporting system, Merlin. Since not all investigations result in the confirmation of actual cases of notifiable disease, the number of investigations exceeds the number of disease cases entered into Merlin. **Figure 1** represents the number of actual notifiable disease cases investigated by the ECHD Epi program during the 2006-2010 time period (these numbers do not include HIV/AIDS, TB or STI). Reported cases of notifiable diseases have been decreasing since 2007.

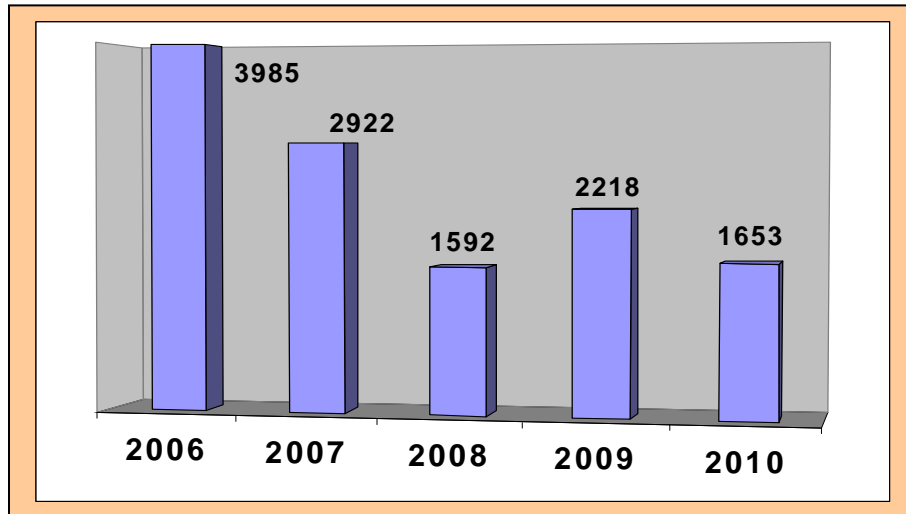
Figure 1: Total Number of Escambia County, FL Cases of Notifiable Diseases, 2006-2010



Data Source: FDOH Merlin® Frequency Report, Weeks 1-53 for years 2006-2010

Figure 2 shows the total number of disease reports made to the ECHD Epi Program. The totals shown are higher than those in Figure 1 because they include illnesses that were determined to be non-notifiable illnesses, cases that did not meet case definitions, and notifiable conditions that were referred to other County Health Departments (CHDs) and/or other programs.

Figure 2: Total Number of Disease Reports made to the ECHD Epidemiology Program, 2006-2010



Data Source: Epidemiology Program Communicable Disease Database for years 2006-2010

Table 1 identifies the ten most frequently reported notifiable diseases/conditions in Escambia County, Florida in 2010 (including HIV/AIDS, TB and STIs). During the investigation of each disease report, whether notifiable or non-notifiable, the epidemiology staff provided targeted information to the affected individuals about modes of transmission and prevention measures in order to reduce/stop the spread of the illnesses.

Table 1: Ten Most Frequently Reported Notifiable Infections/Conditions in Escambia County, FL, 2010

<i>Infection</i>	<i>Number of Cases</i>
Chlamydia	1677
Gonorrhea	530
Hepatitis C, Chronic	534
Salmonella	97
Hepatitis B, Chronic	86
HIV	76
Animal Bite PEP Recommended	62
Syphilis	60
Strep Pneumoniae, Invasive	57
AIDS	43

Data Source: FDOH Merlin® Frequency Report, (confirmed and probable), Weeks 1-53 for years 2010, PRISM, Bureau of HIV/AIDS.

Enteric Illnesses

A total of 150 notifiable enteric infections were reported in 2010 for Escambia County. This total consisted of the following case counts: 30 campylobacteriosis; 3 cryptosporidiosis; 1 E. coli infection (NON-0157:H7); 16 giardiasis; 96 salmonellosis; 3 shigellosis; and, 1 Typhoid fever. These infections accounted for 15.1% of all notifiable conditions reported by the ECHD Epi program in 2010, compared to 16% in 2009. Notifiable enteric infection counts and rates for Escambia County, FL, comparison Florida counties, and the State of Florida are shown in [Table 2](#) below.

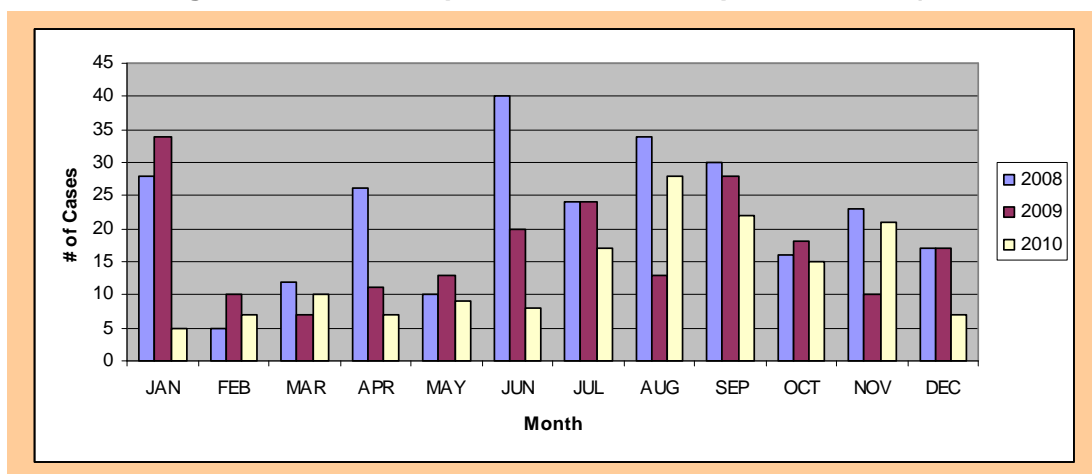
Table 2: Count and Incidence Rate Data and Three-year Averages for Enteric Infections for Escambia County, FL, Comparison Counties and Florida, 2008-10

	Escambia		Manatee		Pasco		Sarasota		Statewide	
	Cases	Rates†	Cases	Rates†	Cases	Rates†	Cases	Rates†	Cases	Rates†
2010	150	47.54	201	62.87	255	58.27	131	33.02	11751	62.17
2009	198	63.04	118	36.34	221	49.32	153	38.57	11153	58.34
2008	263	84.32	131	40.77	217	49.18	126	32.12	9411	49.80
3Yr Avg	204	64.97	150	46.66	231	52.26	137	34.57	10772	56.77

Data Source: FDOH Merlin® Enteric Disease Incidence Report, Weeks 1-53 for years 2008-2010 using the date that the case was entered into Merlin. †Incidence rates are per 100,000 population per year.

[Figure 3](#) shows the monthly variation of notifiable enteric infections during the years 2008-2010 in Escambia County.

Figure 3: Enteric Illnesses Reported January 2008 - December 2010 in Escambia County, FL by Month of Incident Date (onset date, diagnosis date, lab report date, or date reported to CHD)



Data Source: FDOH Merlin® Disease Enteric Disease Incidence Report by Month for years 2008-2010 based on all enteric cases (confirmed and probable) entered by county health departments.

Bacterial Invasive Diseases

Streptococcus pneumoniae infection can cause a wide range of symptoms including acute otitis media, meningitis, bacteremia, and pneumonia. Both resistant and susceptible strains are reportable in the State of Florida when collected from a normally sterile site, known as “invasive infection”. Over the past five years, the largest numbers of drug-susceptible cases were reported in 2008, followed by the number in 2010. **Figure 4** depicts the total number of reported cases, as well as a breakdown of the reported drug resistance and susceptibility. *S. pneumoniae* infections are more commonly reported during the cooler months, with the majority of cases occurring from November to April. **Figure 5** below shows the total number of invasive *S. pneumoniae* cases by month during 2010. The graph illustrates a decrease in the number of cases during the hot summer months of June through September, reflecting the expected seasonal variation for reports of invasive infections caused by this bacteria.

Figure 4: Number of Escambia County, FL *S. pneumoniae* Invasive Disease Cases, 2006-2010

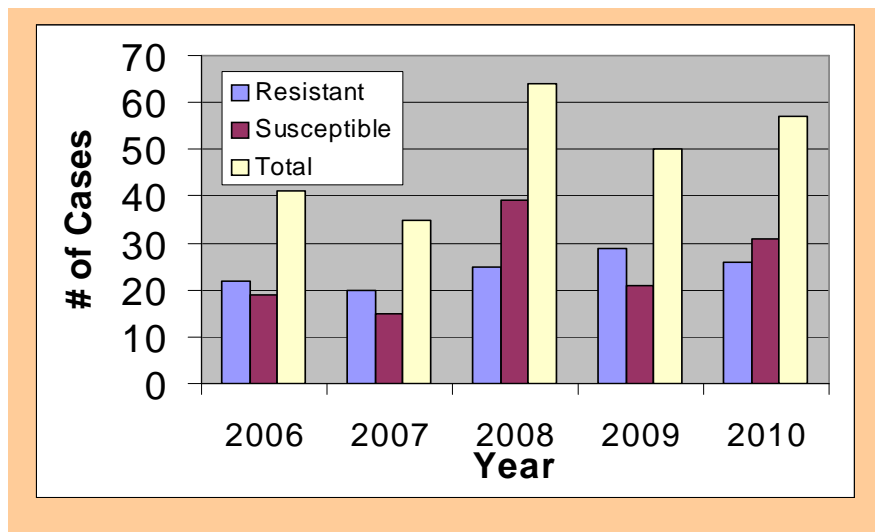


Figure 5: Number of Escambia County, FL invasive *S. pneumoniae* case reports by month, 2010

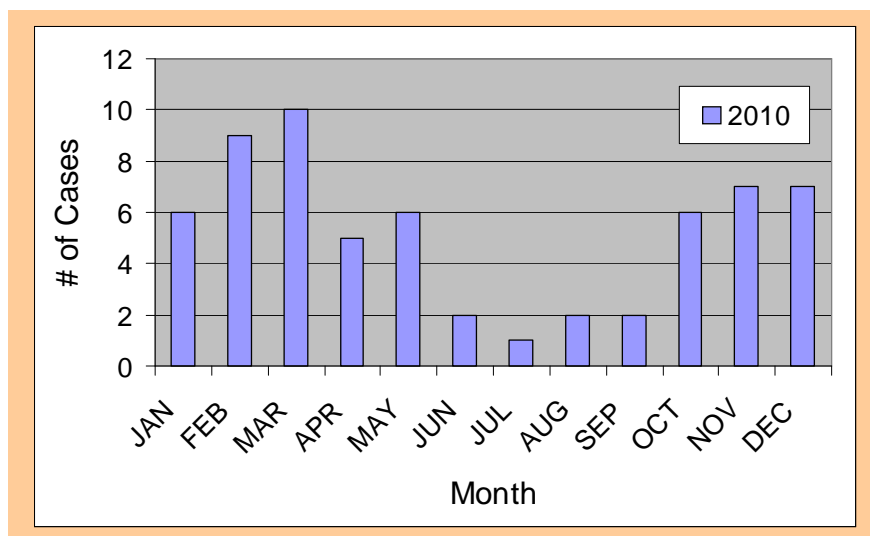


Figure 6 shows a comparison of the rates of reported drug resistant invasive *S. pneumoniae* cases in Escambia County, FL to the rates in comparison Florida counties and the State of Florida since 2006. The rates in Escambia County have been consistently higher compared to the comparison counties and the State of Florida, over the past five years. One hundred percent of reported cases in Escambia County were also immune compromised.

Figure 6: Rates of Invasive Drug-resistant *Streptococcus pneumoniae* Infection in Escambia County, FL, Three Comparison Counties and Florida, 2006-2010

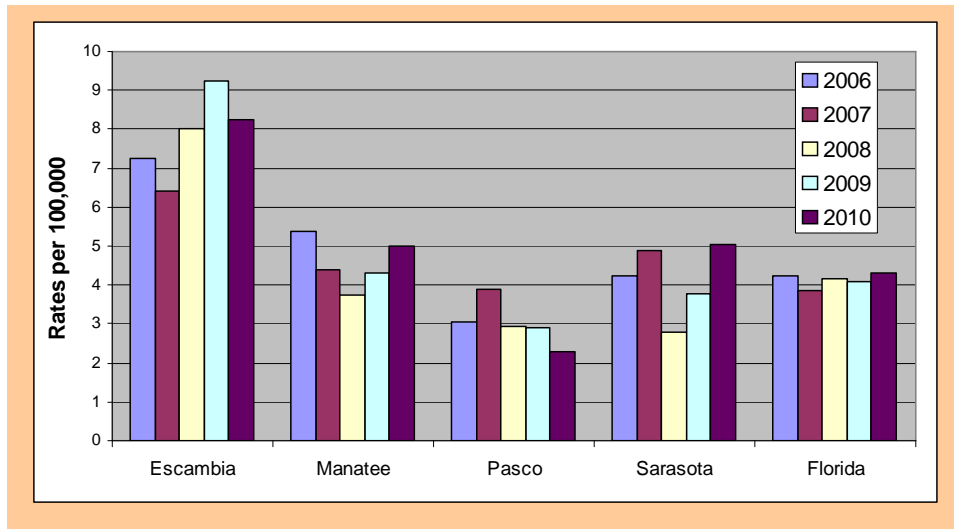
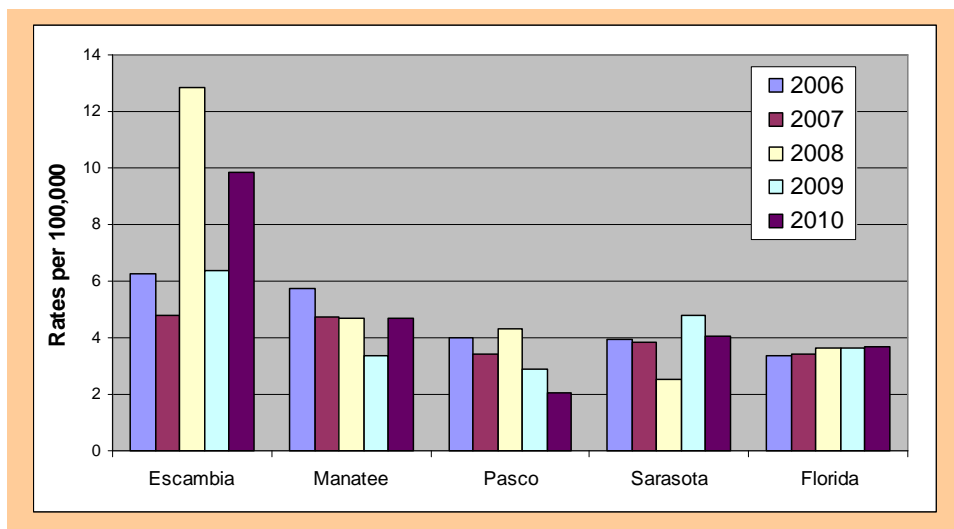


Figure 7 shows a comparison of the rates of reported drug susceptible *S.pneumoniae*.

Figure 7: Rates of Invasive Drug-susceptible *Streptococcus pneumoniae* Infection in Escambia County, FL, Three Comparison Counties, and Florida, 2006-2010



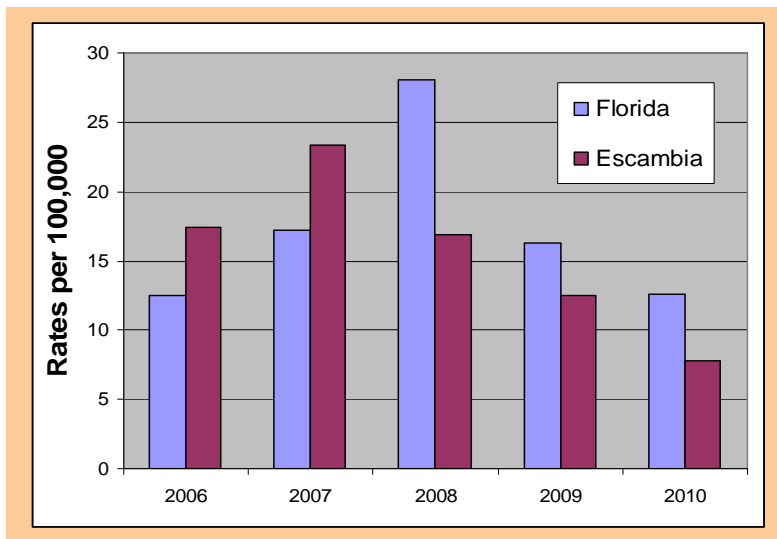
Data Source for Figures 4-7: FDOH Merlin® Disease *Streptococcus pneumoniae*, Incidence and Risk Factor Reports for years 2007-2010 based on all cases (confirmed and probable) entered by county health departments and are not considered official data.

Hepatitis

Prenatal Hepatitis B

Figure 8 shows the rates of prenatal hepatitis B in women 13 to 44 years old for Escambia County, FL compared to the State of Florida per 100,000 women within the same age range. In 2007 and 2008, Escambia County had a higher incidence rate of prenatal hepatitis than Florida. Since 2008, Escambia's rates have dropped significantly. During 2009 and 2010, Escambia County's prenatal hepatitis rates fell below the Florida's rates. Prevention efforts for prenatal hepatitis B have included dedicating a staff member to case management, patient education, and testing and vaccination of sexual and needle-sharing partners.

**Figure 8: Prenatal Hepatitis B in Pregnant Women
Rates, per 100,000 Women 13-44 Years of
Age, State of Florida and Escambia County,
FL, 2006-2010**



Data Source: FDOH Merlin®
Disease Hepatitis B-pregnant
women Incidence Report for years
2006-2010 based on all cases
(confirmed and probable) entered by
county health departments.

Hepatitis B and C, Chronic

In 2002, chronic hepatitis B virus infection (HBV) and chronic hepatitis C virus infection (HCV) became notifiable conditions. Reports of these infections continue to present challenges for the epidemiology staff due to the frequent absence of demographic and risk factor data. According to the CDC, an estimated 4.4 million Americans are living with chronic hepatitis and about 80,000 new infections occur each year. Most infected individuals do not know they have hepatitis because they do not have symptoms. A cumulative total of 3,257 cases of chronic HCV and 441 cases of chronic HBV were reported during 2006-2010 in Escambia County, which is estimated to be only a small portion of the actual hepatitis burden.

Figure 9 shows the number of Escambia County, FL chronic HCV infection reports per 100,000 population compared to State of Florida reports during the years 2007-2010. As depicted, Escambia County's rates of reported chronic HCV infection remain significantly higher than the state, however, over the past four years, there is a general trend downward. **Figure 10** shows chronic HBV infection reports per 100,000 population in Escambia County and that they are consistently higher than the state over the past five years.

Figure 9: Chronic Hepatitis C Reports per 100,000 in Escambia County, FL and the State of Florida, 2006-2010.

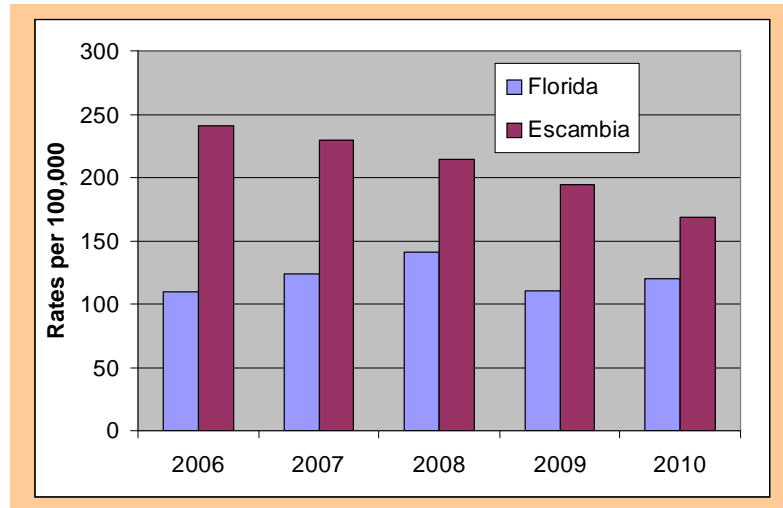


Figure 10: Chronic Hepatitis B Reports, per 100,000 in Escambia County, FL and the State of Florida 2006-2010.

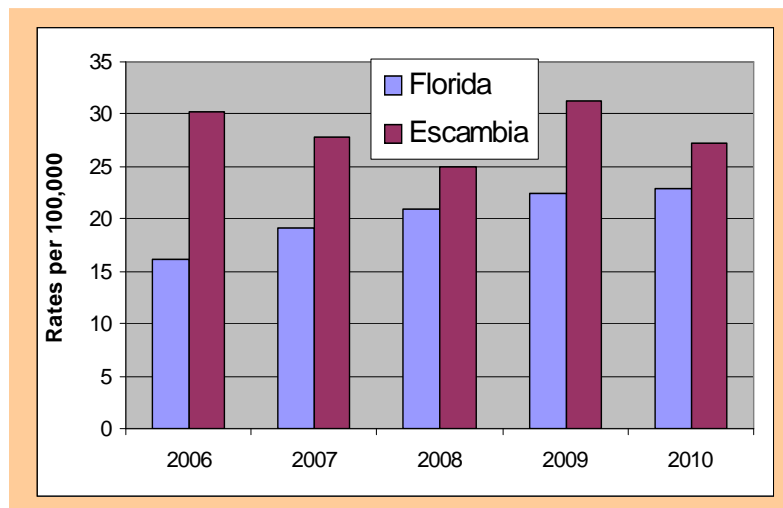
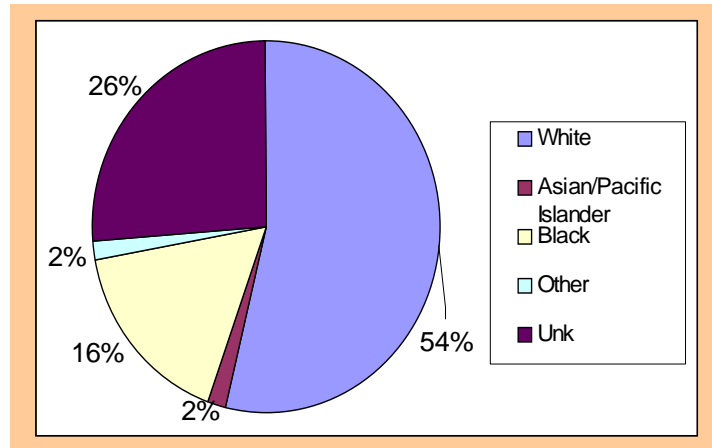


Figure 11 shows the distribution by race for reported Escambia County chronic HBV and HCV cases. Of the total number of cases of both infections reported for which race was known, the white population accounted for 54%, black race accounted for 16%, Asian/Pacific Islanders comprised 2% of the cases, American Indian/Alaskan Native <1%, and 2% were categorized as other. In 26% of reported chronic HBV and HCV cases, the individuals' race was unknown.

Figure 11: Total Reported Escambia County, FL Chronic HCV and HBV Infections by Race, 2006-2010



When comparing chronic HCV infection to chronic HBV infection with respect to race (Figure 12), the white race is predominant in both, accounting for 56% of chronic HCV cases and 34.8% of chronic HBV cases reported during 2007-2010. It should be noted that in a large portion of cases of both infections (25.2% and 31.8%, respectively), race is unknown.

Figure 12 shows a comparison of reported chronic HCV and HBV cases with respect to race. Cumulatively, the white race shows a significantly higher proportion of reported cases during 2006-2010.

Figure 12: Total Cumulative Number of Reported Cases of Chronic HBV and HCV, By Race, in Escambia County, FL 2006-2010

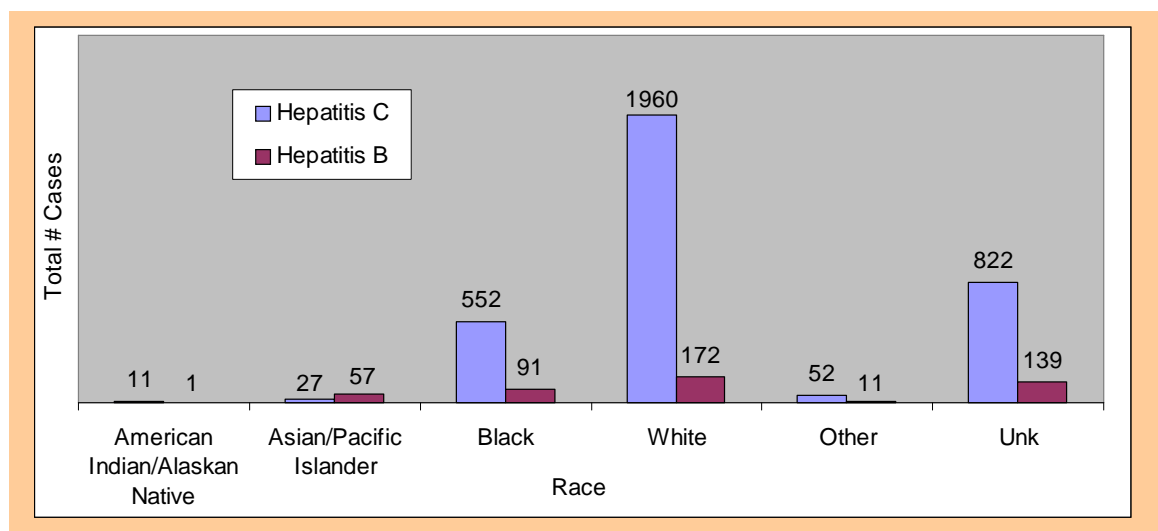


Figure 13 illustrates that the cumulative number of chronic HBV case reports in Escambia County, Florida males during the 2006-2010 time period peaks in the 40-49 year age group, while female reports are distributed equally across three age groups from 20-49 years of age.

Figure 14 displays a comparison for cumulative chronic HCV reports in males and females; both peak in the two age groups from 40-59. Males accounted for an estimated 60% and females accounted for 40% for both chronic HBV and HCV reports during the 2006-2010 time period.

Figure 13: Cumulative Number of Escambia County, FL Chronic HBV Reports by Age Group and Gender, 2006-2010

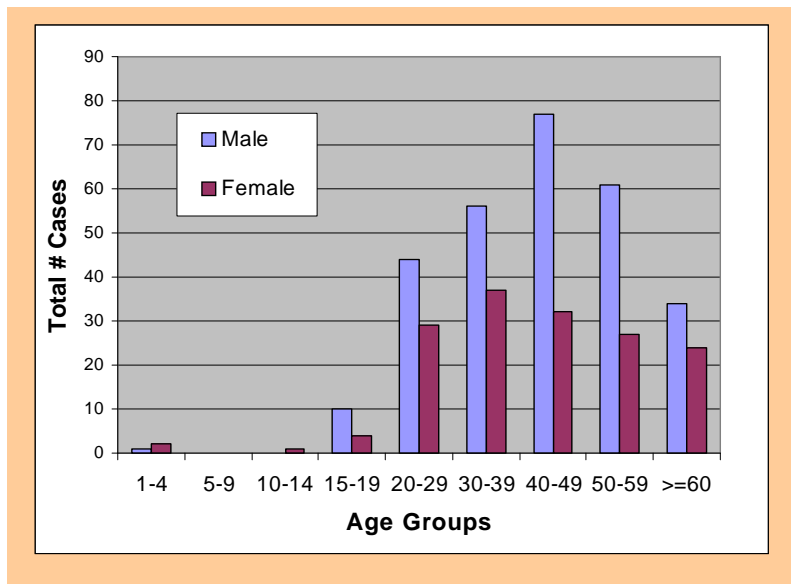
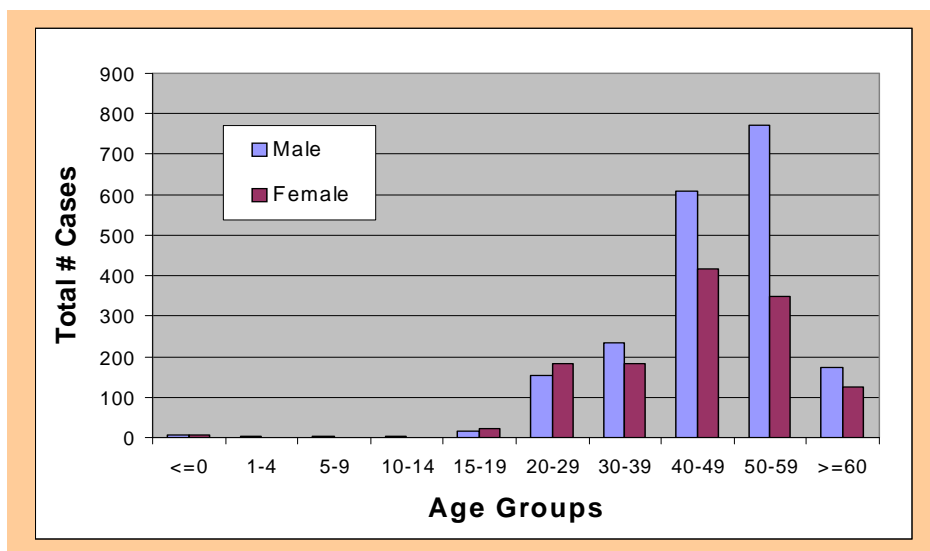


Figure 14: Percent of Chronic HCV Cases, by Age Group and Gender, Escambia County, Florida 2006-2010

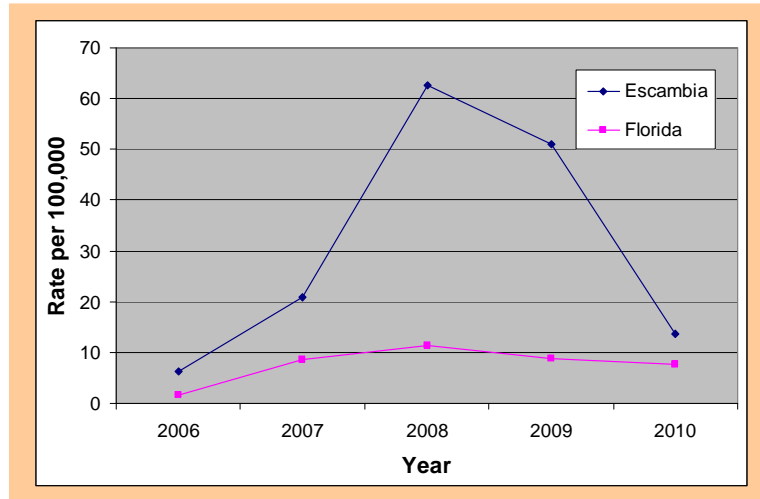


Data Source: (Figures 9-14) FDOH Merlin® Disease Hepatitis B, Chronic Risk Factor and Incidence Report for years 2006-2010 based on all cases entered by county health departments.

Vaccine-Preventable Diseases

Vaccine-preventable diseases (VPD) include acute HBV infection, measles, mumps, pertussis, rubella, tetanus and, as of November 20, 2006, varicella infection. The following VPD's have been reported in Escambia County, Florida during the past five years (2006-2010): acute HBV infection, suspect mumps, pertussis, and varicella infection. As seen in **Figure 15**, the number of reports of vaccine preventable diseases in Escambia County has greatly decreased since 2008. The elevated rates in 2008 and 2009 were due to an increased number of pertussis and varicella infection reports.

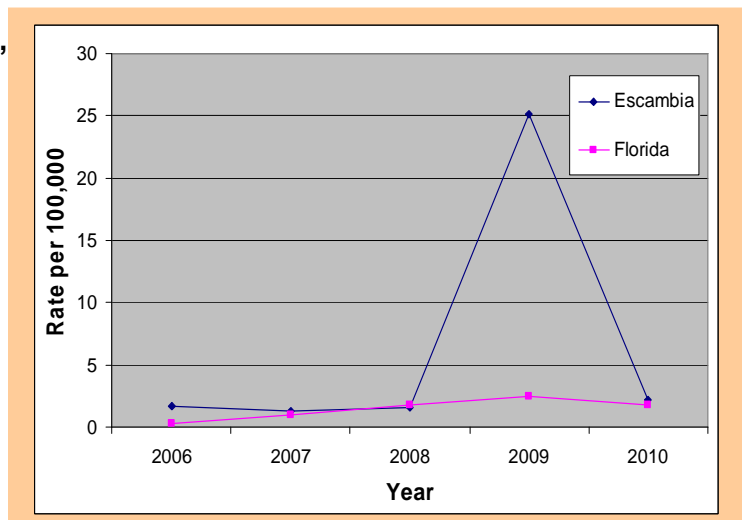
Figure 15: Rates of Escambia County, FL and State of Florida Reports of Vaccine Preventable Diseases per 100,000 Population, 2006-2010



Data Source: FDOH Merlin® Vaccine Preventable Disease Incidence Report for years 2006-2010 based on all cases reported by health departments.

The number of pertussis reports has been increasing in Escambia County and across the state since 2004. The cause for this increase may be due to better case finding or changes in the disease itself. Reports include confirmed cases and suspect cases (cases that may not be laboratory confirmed, but are epidemiologically linked to a confirmed case). As shown in **Figure 16**, Escambia County experienced much higher rates than Florida in 2009 due to a large school outbreak in the spring of 2009. With the advent of the new pertussis booster that can be given at an older age, and its longer expected efficacy, infection reports may decline in the future.

Figure 16: Rates of Escambia County, FL and State of Florida Pertussis Reports per 100,000 Population, 2006-2010



In 2010, 36 cases of varicella were reported in Escambia County compared to 190 cases in 2008. **Figure 17** shows the rates of varicella reports per 100,000 population in Escambia County for each year during 2006-2010. In 2010, the gap between the Escambia County and the state rate narrowed significantly. **Figure 18** indicates that over half of the reported cases of varicella were outbreak-associated in 2010.

Figure 17: Escambia County, FL and State of Florida Annual Rates of Varicella Reports per 100,000 Population, 2006-2010

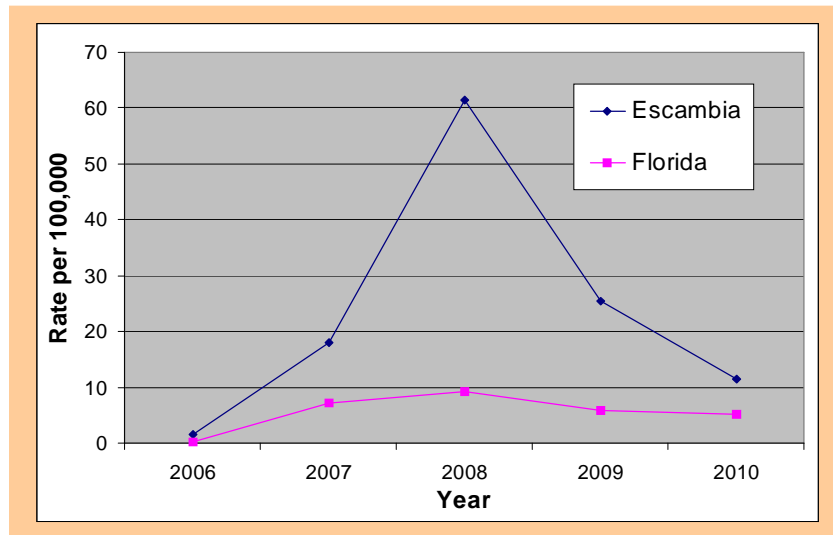
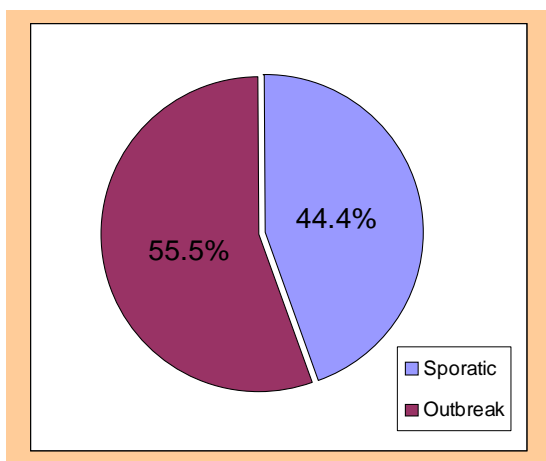


Figure 18: Total Number and Percentage of Outbreak-associated vs. Sporadic Varicella Reports in Escambia County, 2010

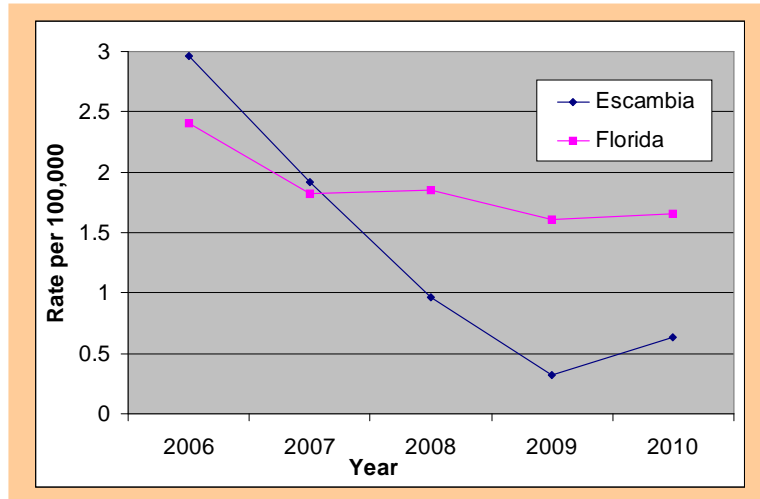


Varicella 2010	NUMBER OF CASES	PERCENTAGE
SPORADIC	16	44.44%
OUTBREAK	20	55.56%

Data Source: (Figures 17-18) FDOH Merlin® Varicella Incidence Report for years 2007-2010 based on cases reported by ECHD and/or all cases reported by all county health departments.

Acute hepatitis B is less frequently reported due to a number of factors including the short time period for which an individual has signs and symptoms. Since 2007, there have been a total of twenty two cases of acute HBV infection reported in Escambia County, FL.

Figure 19: Annual Escambia County, FL Rates of Acute Hepatitis B Reports per 100,000 population, 2006-2010



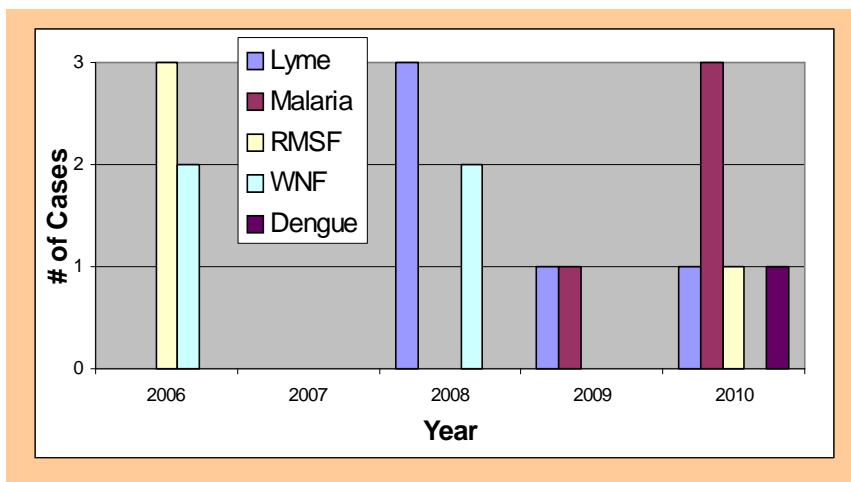
Data Source: FDOH Merlin® Acute Hepatitis B, Chronic Incidence Report for years 2006-2010 based on all cases reported by the county health departments.

Figure 19 compares the reported acute hepatitis B rates in Escambia County with Florida's rates during each year from 2006 through 2010. In 2007, the number of acute HBV infection reports per 100,000 population in Escambia County was similar to Florida's. Since 2006, Escambia County's rate has significantly decreased overall, while Florida's has not.

Vector-Borne Diseases

Vector-borne diseases analyzed for this report include Eastern Equine Encephalitis (EEE), St. Louis Encephalitis (SLE), West Nile Virus Encephalitis (WNVE), West Nile Virus Fever (WNF), Ehrlichiosis, Lyme disease, malaria and Rocky Mountain Spotted Fever (RMSF). Over the past five years in Escambia County, there were no reported human cases of EEE, SLE, WNVE, or Ehrlichiosis reported.

Figure 13: Vector-Borne Diseases Reported in Escambia County, FL, 2006-2010

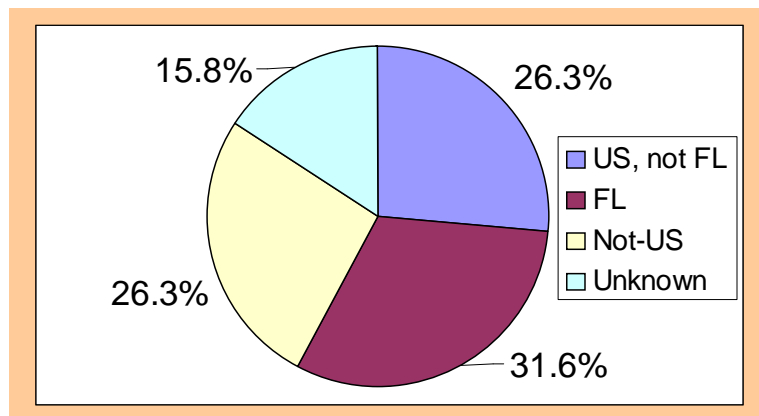


Data Source: FDOH Merlin® Disease Incidence Vector-Borne Disease Selected Independently Reports for Years 2006-2010 based on all cases (confirmed and probable) entered by county health departments

Often of interest in vector-borne disease, and a common focus in epidemiological investigations, is the location where the infection may have been acquired. As depicted in **Figure 13**, ECHD's Epi Program staff investigated two cases of WNF in 2006 and both seemed to have been acquired in Mississippi. Two cases of WNF were reported in 2008 and both seemed to have been acquired in Florida. Three cases of Lyme disease were reported in 2008. One case seemed to have been acquired in Florida, one in Virginia, and the source location of the third was unknown. Only one case of Lyme was reported 2009 and it appeared to have been acquired in West Virginia. In 2010, one case of Lyme was reported and the source location was unknown. One case of Malaria apparently acquired in Uganda was reported in 2009. Three cases of malaria were reported in 2010 which appeared to have been acquired in Africa, Uganda, and Haiti. Three cases of RMSF, all apparently acquired in Florida, were reported in 2006; one was reported in 2010, which appeared to have been acquired in Colorado. One case of Dengue Fever was reported in 2010 which was apparently acquired in Costa Rica.

Of the nineteen total vector-borne diseases reported over the last five years, it was determined that six were likely acquired in Florida. This included three cases of RMSF, two cases of WNF, and one case of Lyme. **Figure 14** shows the distribution of cases based on the location where the disease was thought to have been acquired.

Figure 14: Escambia County, FL Reports of Vector-Borne Diseases, Percentages by Apparent Source Location, 2006-2010



Data Source: FDOH Merlin® Disease Incidence Vector-Borne Disease Selected Independently Reports for Years 2006-2010 based on all cases (confirmed and probable) entered by county health departments.

Surveillance and Outbreak Investigations

Enhanced surveillance activities performed by the Epidemiology Program include outbreak investigations, influenza surveillance, emergency department syndromic surveillance, school attendance, and school clinic visits. **Table 4** illustrates the outbreaks investigated by the ECHD Epi Program staff. The Table describes the distribution of notifiable and non-notifiable disease reports based on outbreak setting and disease. The table includes only those situations in which the initial investigation/follow-up confirmed the presence of an outbreak requiring an epidemiological response. In 2010, 45 outbreaks involving 453 suspect, probable, or confirmed cases required epidemiological response. The number of investigated outbreaks in 2010 in various settings included outbreaks in 5 childcare centers, 15 schools, 4 nursing homes/ALFs, and 21 other outbreaks within various settings in the community, such as household, environmental, and business settings.

Table 4: Escambia County, FL Outbreak Investigations, by Setting, Disease/Symptom/Syndrome and Total Cases Involved, 2010

Reportable Diseases

Outbreak Setting	Disease (x Number of Outbreaks)	Number of Cases (suspect, probable, & confirmed)
Household	Giardiasis	3
	Pertussis	4
	Animal Bites (x2)	4
	Salmonella (x7)	15
	Strep Pneumo	2
	Varicella (x4)	9
Environmental	Cryptosporidium	2
	Lead	4
Public School	Varicella (x3)	11
Haiti Earthquake	Giardiasis	2
Statewide	Novel-Flu	2
Total	23	58

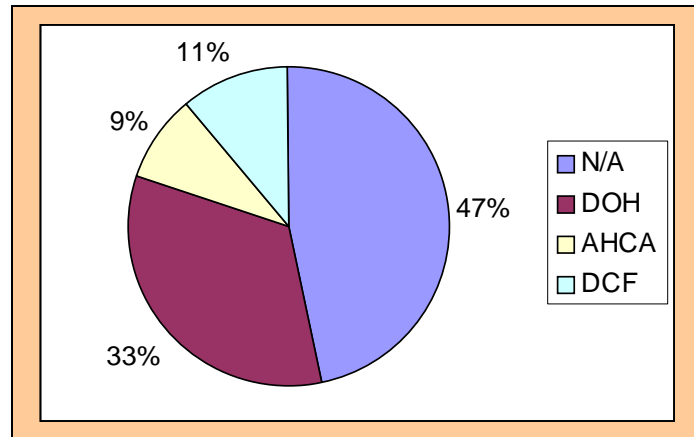
Non-Reportable

Outbreak Setting	Illness/Symptom/Syndrome (x Number of Outbreaks)	Number of Cases (suspect, probable, & confirmed)
Childcare	RSV	10
	GI Syndrome (x2)	13
	ILI Syndrome	12
	Respiratory/Fever	7
Public School	Rash	6
	GI Syndrome (x10)	130
	ILI Syndrome	7
Nursing/ALF	Scabies (x2)	117
	GI Syndrome (x2)	72
Community	GI Syndrome	10
Total	22	384

Data Source: ECHD ACCESS Database Reports for Year 2010

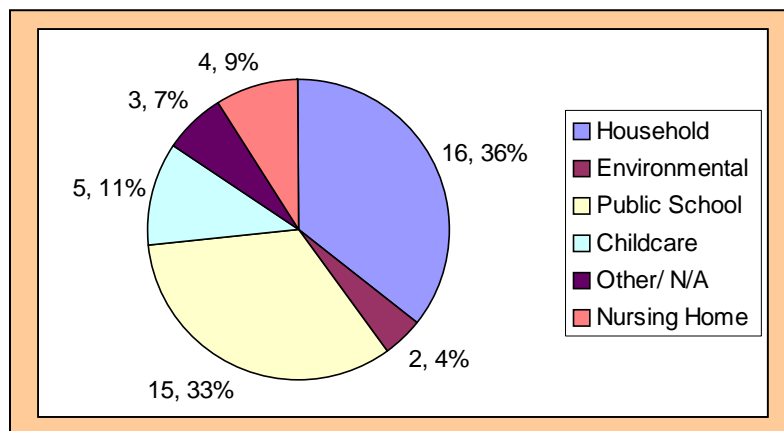
As seen in **Figure 15**, of the 45 outbreaks investigated during 2010, 33% were reported in facilities that had previously been regulated and inspected by the ECHD. The Agency for HealthCare Administration (AHCA) regulates 9% and Department of Children and Families (DCF) regulates 11%. As of July 2010, due to legislative changes, the ECHD no longer regulated or inspected childcares, nursing homes, or hospitals. **Figure 16** shows the breakdown of the outbreak location. A majority of outbreaks were reported in households (36%) and secondarily in public schools (33%).

Figure 15: Percent of Reported 2010 Escambia County, FL Outbreaks, by Regulatory Authority as of June 30, 2010



Data Source: ECHD ACCESS Database Reports and FDOH Merlin® Disease Incidence for Year 2010

Figure 16: Percent of Reported Escambia County, FL Outbreaks, by Facility Type, 2010



Data Source: ECHD ACCESS Database Reports and FDOH Merlin® Disease Incidence for Year 2010

Through daily monitoring of enhanced surveillance systems (e.g., ESSENCE, school attendance data and school health clinic visits), staff attendance at seminars, and by providing education and field visits to facilities, Epi Program staff has continued to improve the ECHD's capacity to detect outbreaks. This year's outbreaks were caused by personal contact between individuals or with fomites, poor personal hand washing practices, and suboptimal facility infection control practices. Propagation of outbreaks can be minimized through early identification and implementation of infection control measures. The ECHD's Epi Program

works closely with the facilities involved to recommend control measures and conduct surveillance.

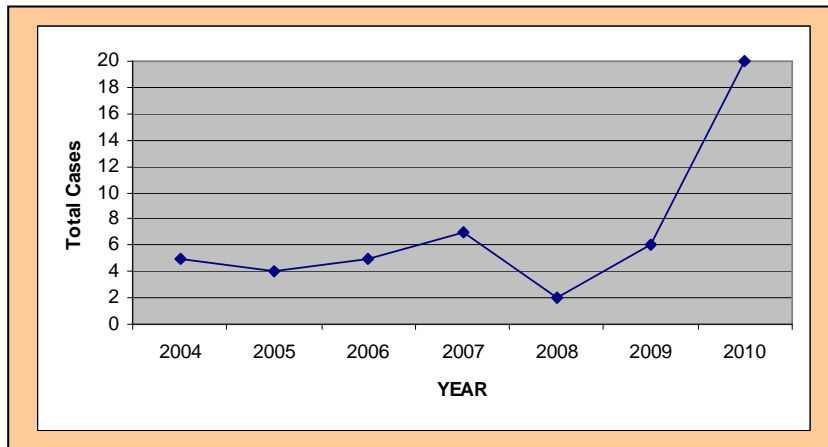
Influenza surveillance is accomplished through sentinel physician participation, voluntary reporting of rapid flu tests by all hospitals, daily review of hospital emergency department visit data via Essence, and daily school health nurse/clinic surveillance and reporting. A total of eight sentinel physician sites were enrolled in the Escambia County system for influenza season 2009-2010 and these physicians reported cases on a weekly basis. A respiratory illness report (see Attachment 1) was developed and is distributed on a weekly basis to appropriate community partners as well as ECHD division directors and physicians. It describes the sentinel physician activity, hospital respiratory syncytial virus testing results, and hospital influenza testing results, as well as background information on current topics in influenza. .

Cases with Elevated Blood Lead Levels

As shown in Figure 17, a total of twenty cases of elevated blood lead levels were reported in Escambia County, FL in 2010. This was significantly higher than in any of the last six years. A total of six adult cases were related to an occupational exposure cluster involving one Escambia County construction company. All cases were employed as painters. Of note, additionally there were three Santa Rosa County residents involved in the same cluster. All adult lead levels were under 50 µg/dL and did not meet requirements for ECHD contact or OSHA investigation.

There were a total of thirteen reported elevated blood lead level cases involving children. Five of the thirteen childhood cases were determined to be ECHD Family Health Clinic clients. All cases were under the age of 10. Seven children were priority cases (age <2 years). One hundred per cent were of minority race. There were two cases involving pica behaviors. The average lead level among the childhood lead poisoning cases was 13.3 µg/dL, with the highest level of 25 µg/dL.

Figure 17: Total number of Notifiable Lead Level Cases in Escambia County, FL by Year, 2004-2010

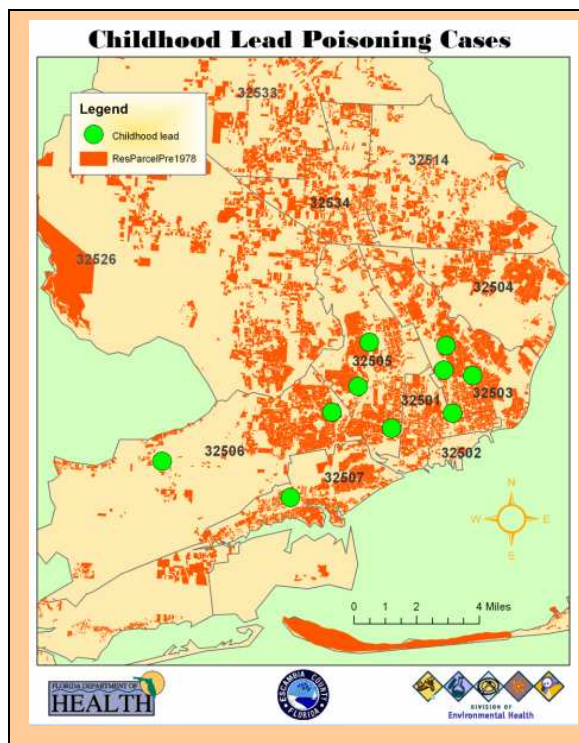


Data Source: FDOH Merlin® Disease Incidence for reported lead cases during 2004-2010 based on all cases (confirmed and probable) entered by ECHD.

Nine of the thirteen childhood cases lived in rental homes, of which eight were built before 1978. As shown in Figure 18, zip code analysis using confirmed addresses of the child cases showed sporadic distribution throughout the county's zip codes (map does not include two cases located

in north Escambia County). Nine to 15 percent of homes in Escambia County were built before 1950 and 21.4 to 29.1% of children less than six years old live in poverty.

Figure 18: Cluster of Childhood Lead Poisoning Cases Based on Reported Residence Compared to Location of Homes Built <1978, Escambia County, FL, 2010



Data obtained from Escambia County Property Appraisers in 2010 and represents the location of homes built on parcels prior to 1978.

ECHD Epidemiology Program Activities

During the 2010 calendar year the outcome of internal audits and the state QI assessment on data entered into Merlin indicated that the ECHD's Epi program was successful in performing accurate, timely, and quality investigations. The surveillance workload increased this year, as the Epi program was able to recruit an additional local hospital to report their emergency room data via the ESSENCE syndromic surveillance system. In addition, the Epi program interacted with eight sentinel flu physicians, reviewed school health clinic and school attendance data on a daily basis, and reviewed influenza testing reports from four local hospital laboratories which included a military hospital lab.

Communicating surveillance data results through EpiCom, reports, emails, conference calls and other means is an important part of the Epi program. A total of 15 informational posts were submitted to EpiCom. Two hundred thirty nine ESSENCE reports (see Attachment 2) were distributed via email to infection control practitioners, public health preparedness partners, and administrative staff. Two bi-annual newsletters were distributed electronically to the Escambia County health care community. Forty six weekly executive summary reports (see Attachment

3) were emailed to administrative staff and public information officers. The Epi staff composed and published an article on the pertussis outbreak in the Department of Health (DOH) Bureau of Epidemiology's *Epi Update* publication. The ECHD Epi program electronically distributed 115 respiratory illness reports (see Attachment 1) to ECHD leaders and staff, hospital infection control practitioners, sentinel flu physicians, laboratories, and other members of the local medical community. An online version of the monthly communicable disease report, which provided the incidence of communicable disease in the community, was posted on the ECHD's website (see Attachment 4).

During 2010, the ECHD's Epi program provided seven educational presentations to various facilities, such as the Escambia County Jail, Keaton Restitution Center, Gulf Coast Diplomacy Council, and the local Division of Disability Determinations office. The program also contributed to a monthly educational email targeting the childcare and early learning facilities in Escambia County. The program provided annual school health staff training/development including an overview of epidemiology, a review of the school health manual, and a review of reporting requirements. The Epi program also hosted a DOH Epidemic Intelligence Officer, University of West Florida Master of Public Health interns, Florida State University College of Medicine students, and over twenty nursing students from the University of West Florida, Pensacola Christian College, and Pensacola State College. The Epi program staff participated in 75 trainings including educational conference calls, webinars, classroom sessions, and local hands-on-training in epidemiology and public health preparedness.

Networking with community based facilities, such as hospitals, childcare facilities, nursing homes, and with healthcare professionals such as laboratory directors and infection control practitioners, remains an important factor in disease prevention and reporting. The Epi Program coordinated a bi-monthly meeting with hospital infection control staff to discuss reportable disease trends in Escambia County, updates to the reportable disease list, and changes in reporting requirements. In addition, the program played an active role in a local non-profit organization, the Northwest Florida Infection Control Practitioners, by participating in annual seminars and bi-monthly educational meetings.

Special Accomplishments

- Received high scores for the state QI Snapshot for 2009-10.
- Actively participated in surveillance for health complaints possibly associated with the Deepwater Horizon oil spill. The Epi program utilized ESSENCE to specifically surveil for chief complaints or diagnoses in emergency departments which may have been related to oil exposure. Epi program staff answered 93 phone calls associated with the possible health risks and effects of oil exposure.
- Strong relationships with the school health program allowed for immediate investigation into potential school outbreak situations, which allowed for the prevention of countless illnesses.
- Enrolled West Florida Hospital in the ESSENCE syndromic surveillance system, increasing hospital participation to 2 out of 4 hospitals in the county.
- A distribution list was created for nursing homes and assisted living facilities for the quick distribution of health-specific information via email and blast fax.
- Assisted in control and prevention efforts related to a tuberculosis case in a local high school.
- Several members of the Epi program staff actively participated in committees and as members of specialized response teams, such as the ECHD Employee Quality Team, Training Day Committee, Regional Epidemiology Strike Team, and Regional Radiological Disaster Strike Team.

- An Epi program staff member acted as the Vice President and Educational Chair for the Northwest Florida Infection Control Practitioners non-profit organization, which serves the surrounding Panhandle counties and southeast Alabama.
- Epi program staff were active members of the state quality improvement and enteric illness work groups during 2010.
- Partnered with Santa Rosa County Health Department in the investigation and implementation of control measures associated with a confirmed case of imported measles. This resulted in no further transmission beyond the index case.

Questions or comments about the ECHD Epidemiology Program may be addressed to Casey Richards: Phone: 850.595.6683; Fax: 850.595.6268; E-mail: Casey_Richards@doh.state.fl.us or visit our "Disease Control & Prevention" page at <http://www.escambiahealth.com>



Rick Scott
Governor

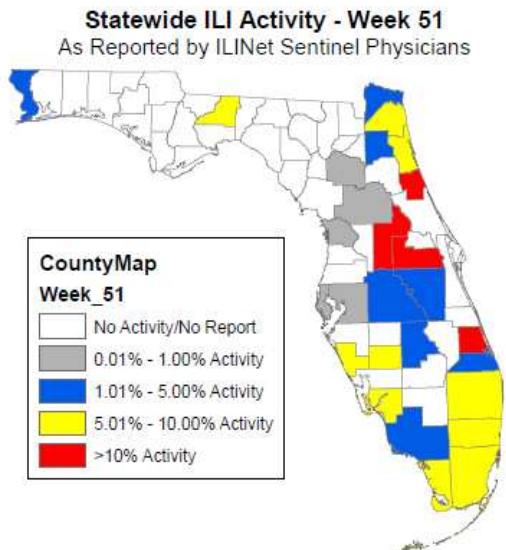
Weekly Respiratory Illness Report – Escambia County, 2010 - 2011
CDC Week 51: December 19 - December 25, 2010

Summary

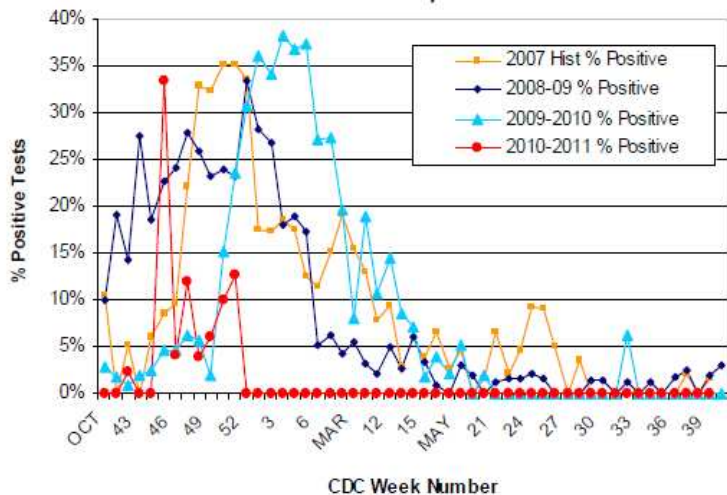
This report summarizes influenza activity in Escambia County as reported by participating laboratories and Sentinel Physicians during the week of December 19 - 25, 2010. This week, four (4) hospital laboratories reported their weekly numbers and percentages of positive rapid flu tests. Two (2) providers (out of 8) reported their weekly numbers in the Florida Outpatient Sentinel Physician Influenza-like Illness Surveillance Network (ILINet) for Escambia County for Week 51.

Influenza Like Illness Surveillance - Florida ILINet

During the week ending December 25, 2010, Escambia County Sentinel Physicians reported seeing one (1) cases of influenza-like illness (ILI) out of a total of 98 patients seen = 1.02%. The percentages of patient visits for ILI from statewide sentinel providers ranged from 0% to 66.67% (32/48), with a state average of 3.95% (number of ILI divided by total patients seen). See map below for distribution of ILI activity statewide as reported by Florida ILINet Sentinel Influenza Physicians for Week 51.



Percent Positive RSV Tests in Escambia County - Week 51
2010-2011 % Positive RSV Tests Compared to Previous Years



Respiratory Syncytial Virus (RSV)

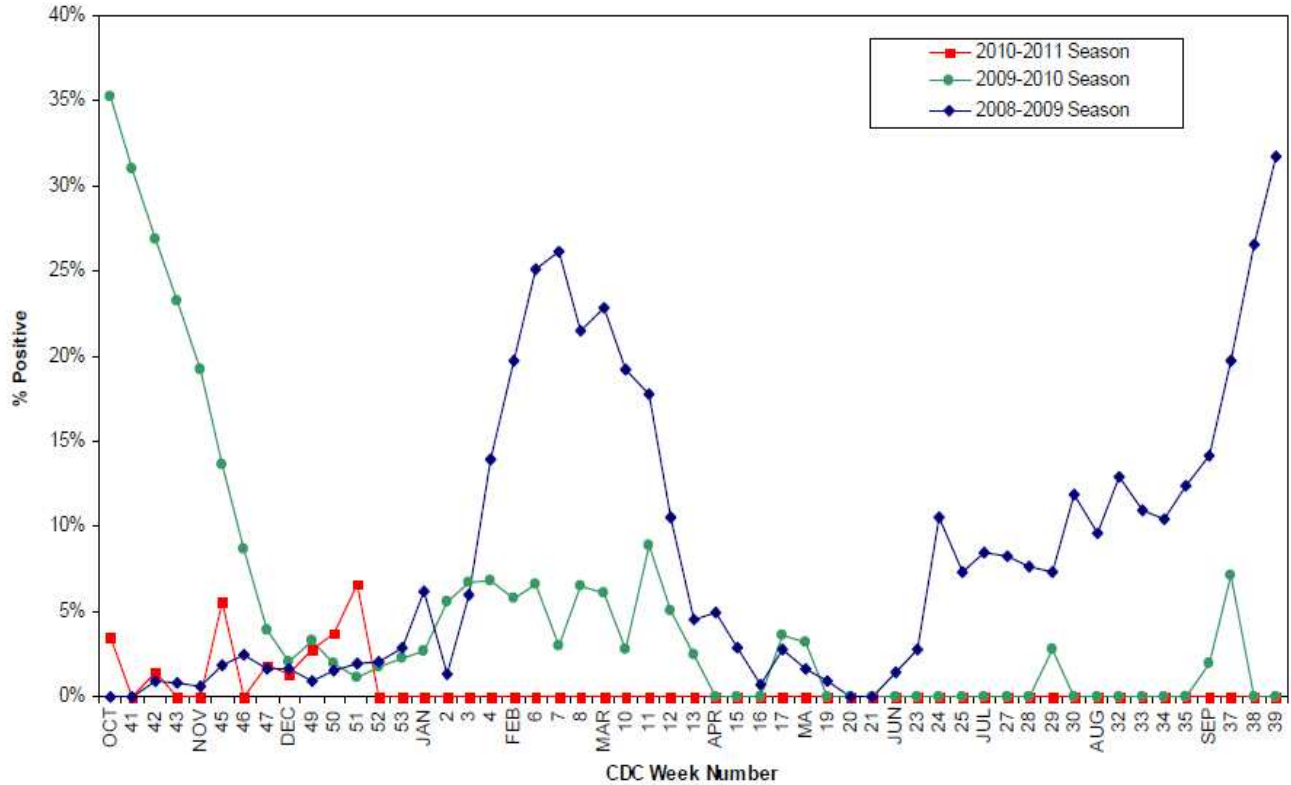
RSV infections usually occur during the late fall, winter, or early spring months (CDC). The graph above features the percentage of positive RSV cases (red) in Escambia County for 2010-11 reported by four (4) hospital laboratories compared to previous years' data. During Week 51, ten (10) positive RSV tests were reported out of 79 tests performed (12.66% positive).

Laboratory Surveillance

Hospitals in Escambia County routinely use either rapid antigen tests or PCR testing to diagnose and differentiate influenza A and B in clinical specimens. Sacred Heart hospital uses PCR testing; the other laboratories use rapid antigen testing. Out of 106 tests performed during Week 51, seven (7) were positive (6.60% positive). Five (5) were Influenza A; two (2) were Influenza B.

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Escambia County Health Department
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 John J. Lanza, MD, PhD, MPH, FAAP, CHD Director-Health
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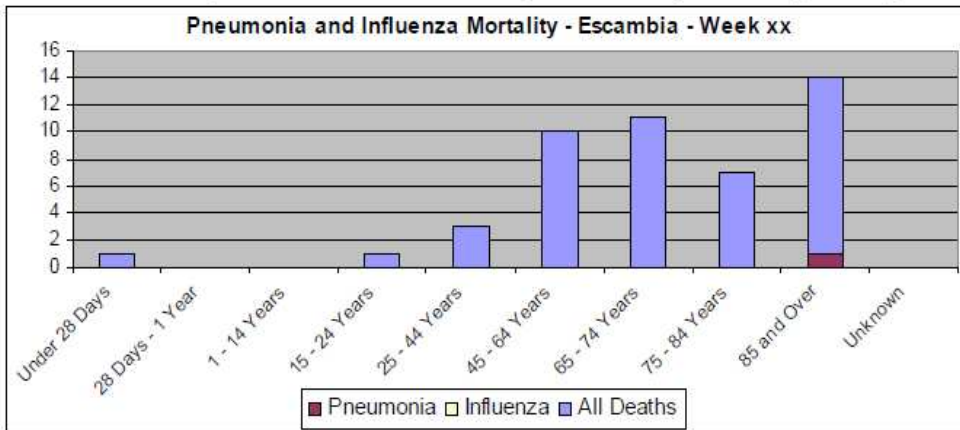
Comparison % Positive Flu Test Results



Escambia County Pneumonia and Influenza Mortality for Week 51, ending December 25, 2010

During the week ending December 25, zero (0) deaths in Escambia County residents were attributed to influenza. One (1) death was attributed to pneumonia.

***Note: All pediatric influenza mortality cases < 18 years of age are reportable to the state**



Florida Flu Review - Week 51

From: http://www.doh.state.fl.us/Disease_ctrl/epi/htopics/flu/2011/index.html

National:

CDC reported low levels of influenza around the country during week 50. The CDC calculated minimal ILI for the state of Florida using Florida's ILINet sentinel surveillance data.

State:

- Influenza-like illness (ILI) activity is moderate and increasing in many of our monitoring systems. This week no counties reported widespread activity, and ten counties reported moderate activity. Thirty-three counties reported increasing influenza activity. Week 51 has the highest number of counties reporting moderate and increasing influenza activity so far this season.
- ESSENCE syndromic data and ILINet ILI data are elevated compared to previous years at this time, especially in the southern and central regions of Florida.
- Current influenza strains circulating in Florida are primarily influenza A H3, with some 2009 H1N1 and influenza B. Other viruses known to be currently circulating, potentially causing influenza-like illness, include adenovirus, rhinovirus, parainfluenza and RSV. RSV activity is currently elevated, as is expected during the RSV season. RSV can cause severe respiratory illness in infants.

- There were no influenza or ILI outbreaks reported in week 51. There have been 3 previous outbreaks in the 2010-11 influenza season, in a long-term care facility, a skilled nursing facility, and a school, respectively.

Weekly state influenza activity: Regional

Florida is currently reporting Regional influenza activity statewide, due to moderate influenza activity levels reported out of south and central Florida, continued high percent positive for influenza specimens, and elevated and increasing ILI levels in ESSENCE and ILINet.

TABLE 1: Summary of Florida Influenza-Like Illness (ILI) Activity for Week 51				
Measure	Difference from previous week	Current week 51	Previous week 50	Page of Report
Overall statewide activity code reported to CDC	No Change	Regional	Regional	1
Number of ILI outbreaks reported in Epi Com	No Change	0	0	1
Percent of visits to ILINet providers for ILI	▲ 1.8	4.4%	2.6%	2
Percent of emergency department visits (from ESSENCE) due to ILI	▲ 1.0	4.3%	3.3%	4
Percent of hospital admissions (from ESSENCE) due to ILI	▲ 0.5	1.1%	0.6%	4
Percent of laboratory specimens that were positive for influenza	▲ 5.7	45.2%	39.5%	6
Number of counties reporting moderate influenza activity	▲ 2	12	10	7
Number of counties reporting widespread influenza activity	No Change	0	0	7
Number of counties reporting increasing influenza activity	▲ 8	41	33	8
Number of counties reporting decreasing influenza activity	▼ 1	0	1	8

State Weekly Influenza Summary

http://www.doh.state.fl.us/disease_ctrl/epi/htopics/flu/reports.htm

CDC Influenza Summary

www.cdc.gov/flu/weekly/fluactivity.htm

Escambia County Weekly Respiratory Reports

http://www.escambiahealth.com/epi/seasonal_flu/seasonal_flu.htm

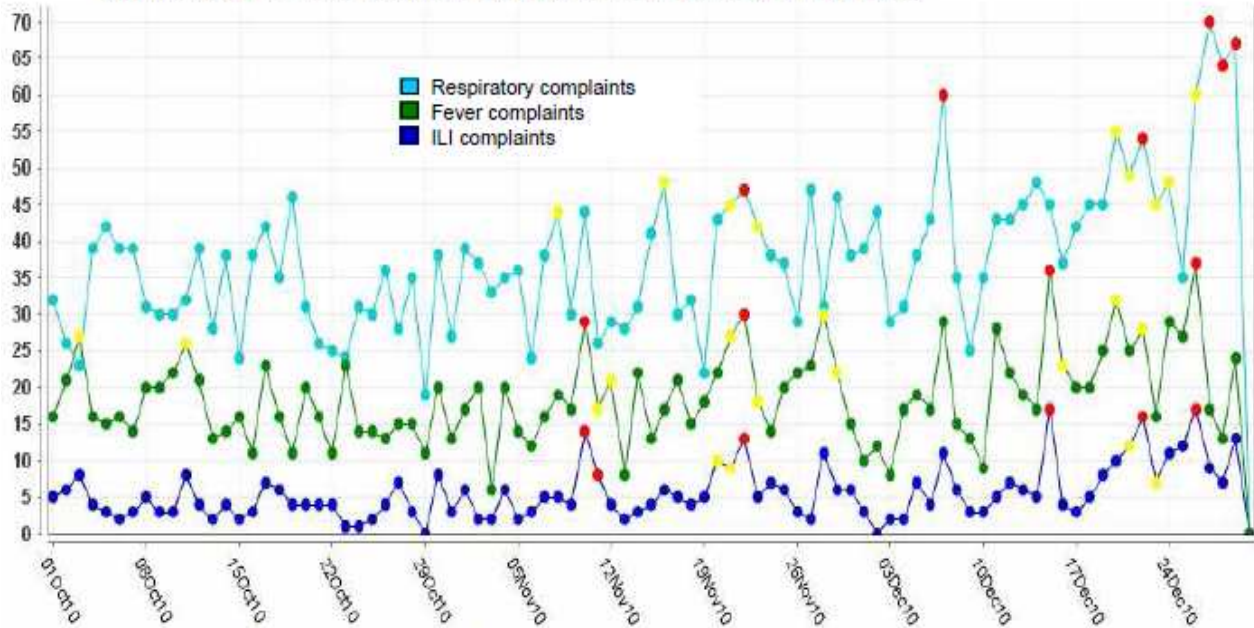
ESSENCE Report

Date of Data: December 29, 2010

This report summarizes data from Emergency Room visits from one (1) local, Pensacola hospital.

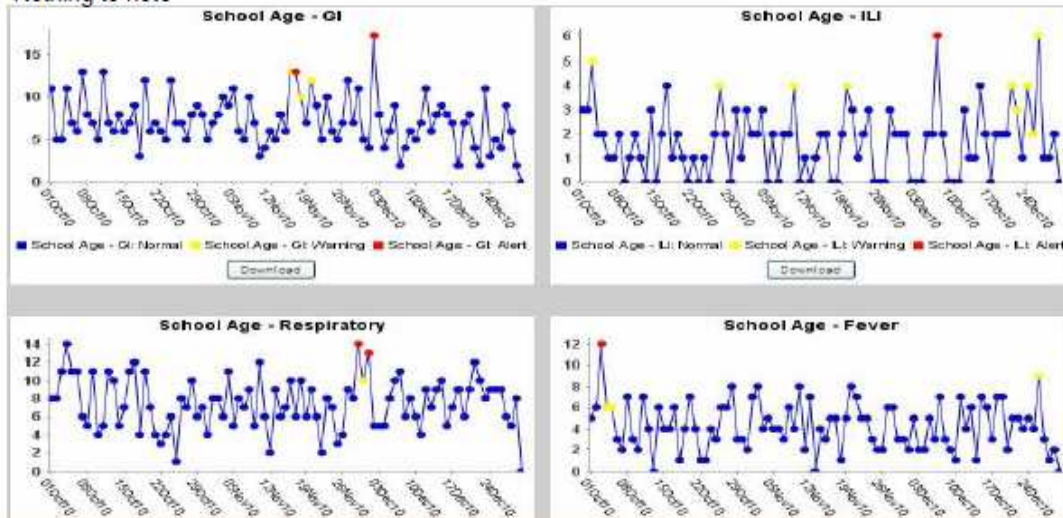
Overview of Syndrome Categories: Botulism-like illness, Exposure, Fever, GI, Hemorrhagic illness, Influenza-like illness, Injury, Neuro, Other, Rash, Respiratory, and Shock-coma

- Respiratory complaints remain elevated and triggered an alert on the 29th - 67 counts (23 were 0-4 age grp). Majority diagnoses were Bronchitis, Streptococcal Sore Throat and Otitis Media.



School Age Overview (ages 5-19): Fever, GI, ILI, and Respiratory

- Nothing to note



ESSENCE Report - continued

Reportable Disease Query: Queries chief complaint field and diagnosis field for key words from the Florida Reportable Disease List

- Nothing to note

Other

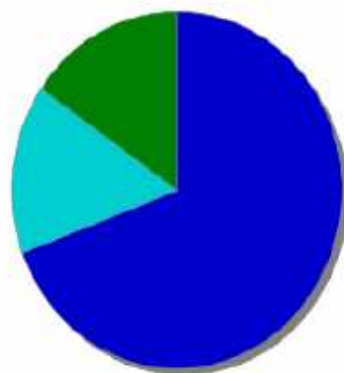
- % of total visits with a diagnosis of Otitis Media for the 29th = 15/251 = 5.98%

ILI (Influenza-Like Illness) Information

- % of total visits with ILI symptoms for the 29th = 13/251 = 5.18%
- # of patients *diagnosed* with influenza in the ER on the 29th = 2. Both patients were discharged home from the ER. *Note:* this may not be the final diagnosis, but only reflects the emergency room discharge diagnosis indicated in ESSENCE.

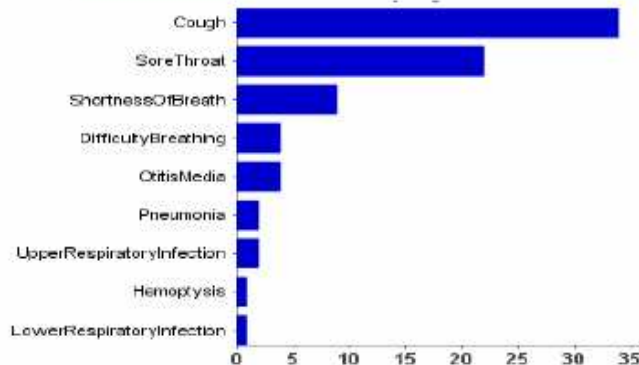
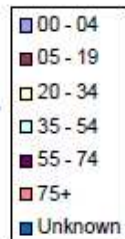
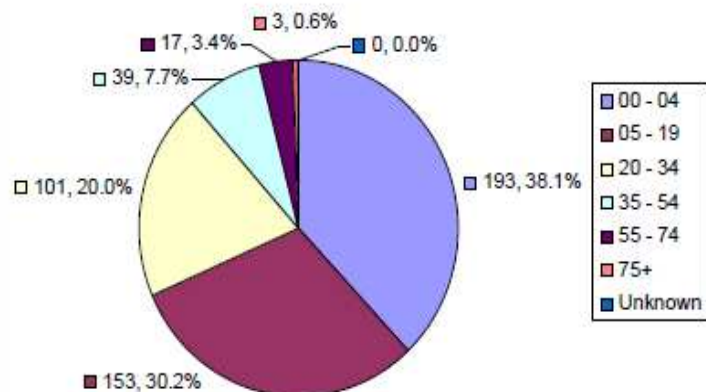
ILI Age Group Distribution - Sacred Heart Hospital

12/29/10 - Wednesday - ILI Age Distribution



■ 00-04 ■ 05-19 ■ 20-34

Cumulative ILI Age Distribution - last 90 days



Respiratory complaints of patients that presented to the ER on the 29th.



**Escambia County Health Department
Epidemiology Program
Weekly Activity Update**



September 17, 2010—September 23, 2010

SUMMARY

Campylobacteriosis—1
Giardiasis—1
Lead Poisoning, Suspect —1
Rabies, Possible Exposure—1
Rocky Mountain Spotted Fever—1
Salmonellosis—2
Varicella—3

NEW CASES

Campylobacteriosis: 1 adult case.

Giardiasis: 1 child case. Adopted from Africa.

Leading Poisoning, Suspect: 1 child case.

Rabies, Possible Exposure: 1 adolescent case.

Rocky Mountain Spotted Fever: 1 adult case.

Salmonellosis: 2 child cases. Unrelated.

Varicella: 3 child cases. 2 siblings in the same household.

CLUSTER SNAPSHOT: WEEK OF SEPTEMBER 17—SEPTEMBER 23, 2010:

- ILI Clusters: None
- Other Clusters: Varicella cluster (same household noted above) in elementary school. Increased surveillance.
- No additional cases in possible scabies outbreak in a local nursing home.

ESSENCE AND OTHER UPDATES:

- No ER visits or phone calls to poison control related to the oil reported in ESSENCE
- Respiratory complaints still elevated - appears to be normal, seasonal increase compared to previous years' data
- Saw a very slight increase in ILI complaints - no diagnoses of influenza in the ER

Questions regarding the content of this report may be directed to Patricia Williams, Epidemiology Supervisor, 850-595-6640 or Patricia_Williams2@doh.state.fl.us.

Attachment 4: Communicable Disease Report

REPORTABLE DISEASES FOR ESCAMBIA COUNTY HEALTH DEPARTMENT -- 2010

DISEASES	2004-2009						YEAR TO DATE				CALENDAR YEAR 2010											
	2004	2005	2006	2007	2008	2009	6 YEAR HISTORY		3 YEAR HISTORY		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
							*EXPECTED TO DATE	ACTUAL	**EXPECTED TO DATE	ACTUAL												
AIDS †	62	73	60	59	71	50	63	47	60	47	2	8	7	4	1	6	6	2	3	3	1	4
AMEBIC ENCEPHALITIS *	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANIMAL BITE, PEP RECOMMENDED	1	0	67	94	43	64	45	62	67	62	2	4	5	8	7	7	4	5	3	6	6	5
ANIMAL RABIES	1	0	0	2	2	7	2	2	4	2	0	0	0	0	0	0	0	0	0	0	1	1
ARSENIC *	-	-	-	-	-	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
CAMPYLOBACTER	22	19	10	17	24	26	20	30	22	30	0	4	2	2	2	2	4	4	3	4	1	
CARBON MONOXIDE POISONING	-	-	-	-	-	6	6	3	6	3	0	0	0	0	1	0	0	1	1	0	0	
CHLAMYDIA †	1077	1256	1353	1650	1826	1727	1482	1677	1734	1677	128	160	160	135	116	152	132	140	145	135	105	169
CIGUATERA	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CREUTZFELDT-JAKOB DISEASE	0	1	1	0	2	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
CRYPTOSPORIDIUM	2	1	7	2	3	1	3	3	2	3	0	0	0	0	1	0	0	2	0	0	0	0
CYCLOSPORIASIS	0	2	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DENGUE FEVER	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0
EHRlichiosis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENCEPHALITIS Other	1	1	0	2	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
E. COLI (O157:H7)	5	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E. COLI (NON-O157:H7)	0	0	0	0	0	1	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0
GIARDIA	13	8	12	13	9	19	12	16	14	16	1	3	3	0	2	0	3	0	1	2	1	0
GONORRHEA †	532	642	944	851	720	774	744	530	782	530	53	46	58	49	47	37	43	47	49	28	38	35
H. INFLUENZAE	0	4	4	5	8	5	4	4	6	4	1	0	1	0	0	1	0	0	0	0	1	0
HEMOLYTIC UREMIC SYN.	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEPATITIS A	3	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEPATITIS B acute	1	9	9	7	4	1	5	2	4	2	1	0	0	0	0	0	0	0	0	1	0	0
HEPATITIS B chronic	111	90	91	88	78	90	91	86	85	86	6	3	12	8	5	5	2	11	8	10	8	8
HEPATITIS B-perinatal	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEP B-preg woman	14	19	12	16	18	9	15	5	14	5	0	0	2	1	0	0	2	0	0	0	0	0
HEPATITIS C acute	0	0	4	2	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
HEPATITIS C chronic	557	655	723	721	680	582	653	534	661	534	27	21	82	41	63	39	38	51	25	51	32	64
HEPATITIS NANB acute	0	1	32	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEPATITIS D	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HIV †	64	48	64	79	67	52	62	78	66	78	4	3	7	6	6	6	9	8	5	8	7	9
INFLUENZA A, NOVEL STRAIN	0	0	0	0	0	56	9	2	19	2	0	1	1	0	0	0	0	0	0	0	0	0
LEAD LEVEL ≥10	5	4	5	7	2	6	5	20	5	20	1	1	2	0	1	1	3	2	2	1	6	0
LEGIONELLOSIS	1	0	1	0	0	1	1	2	0	2	0	0	0	1	1	0	0	0	0	0	0	0
LISTERIOSIS	2	0	1	0	0	0	1	3	0	3	0	0	0	0	0	0	0	3	0	0	0	0
LYME DISEASE	0	1	1	0	3	3	1	1	2	1	0	0	0	0	0	1	0	0	0	0	0	0
MALARIA	2	0	0	0	0	1	1	3	0	3	0	0	1	0	0	0	0	2	0	0	0	0
MENINGOCOCCAL (Neisseria)	1	4	0	5	1	0	2	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0
MENINGITIS (Bact, Crypto, Mycot)	16	15	18	19	16	14	16	6	16	6	1	2	0	1	1	0	0	0	0	0	0	1
MERCURY POISONING	0	0	4	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MUMPS	0	0	1	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
PERTUSSIS	4	5	13	4	3	85	19	6	31	6	0	0	0	0	0	0	1	2	2	0	1	
ROCKY MTN SPOT FEVER	0	0	1	2	0	0	1	1	1	1	0	0	0	0	0	0	0	0	1	0	0	0
SALMONELLA	81	139	107	189	83	119	120	97	130	97	4	0	5	5	4	5	12	17	16	9	15	5
SHIGELLA	71	7	7	163	143	32	71	3	113	3	0	0	0	0	0	0	0	0	1	1	0	1
STAPH AUREUS MORTALITY *	-	-	-	-	-	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
STAPH AUREUS ISOLATE *	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STREP, GROUP A, INV	3	5	16	8	8	7	8	6	8	6	0	1	0	1	1	0	1	0	0	2	0	0
STREP PNEU, INV.	21	35	41	34	63	49	41	57	49	57	6	8	10	4	5	2	0	2	2	4	7	7
SYPHILIS †	9	17	5	26	37	23	20	60	29	60	3	2	1	5	4	6	6	15	5	2	5	6
TOXOPLASMOSIS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TUBERCULOSIS †	9	10	24	14	10	5	12	13	10	13	1	3	1	2	1	1	0	1	2	0	0	1
TYPHOID FEVER	0	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	1	0	0	0	0
VARICELLA ●	-	-	5	56	192	78	83	36	109	36	2	3	3	11	5	1	0	4	4	2	1	1
VIBRIO (vulnificus)	2	2	2	0	2	4	2	2	2	2	0	0	0	0	0	0	1	0	0	1	0	0
VIBRIO (other)	2	4	1	2	0	2	2	1	1	1	0	0	0	0	0	0	1	0	0	0	0	0
WEST NILE	0	0	2	0	2	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	2695	3078	3652	4139	4123	3829	3586	3360	4030	3360	244	273	363	284	274	273	264	316	279	261	225	304

Grey shading indicates value less than -2 StdDev Red shading indicates value greater than +2 StdDev ● Newly reportable in 2007 ★ Newly reportable 2009

* Expected Number Based on last 6 years average, prorated **Expected Number Based on last 3 Year Average, prorated to date

† Information is provisional and reflects data reported by the FDOH Bureau of STD Control and Prevention and HIV/AIDS Surveillance
All other data is from the FDOH Bureau of Epidemiology Merlin database (date entered range)