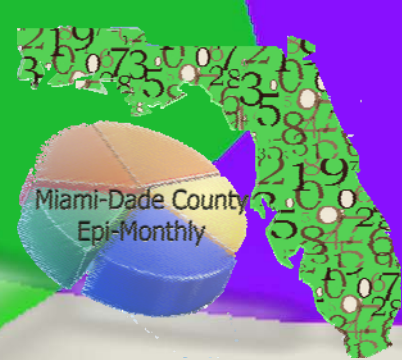


MIAMI-DADE COUNTY HEALTH DEPARTMENT

EPI MONTHLY REPORT



Using ESSENCE to Support an Outbreak Investigation, March 2010

Anthony Llau, MPH

Introduction

Syndromic surveillance systems are becoming an essential tool for public health epidemiologists. The primary objective of syndromic surveillance has been to detect potential outbreaks early in order to reduce disease-related morbidity and mortality. More recently, syndromic surveillance has expanded to “provide more useful tools to assist in an outbreak investigation” (Pavlin, 2003). Although several outbreaks identified by syndromic surveillance methods exist in the literature, little has been published regarding its support of a previously identified outbreak. This case report describes how the Electronic Surveillance System for the Early Notification of Community Based Epidemics’ (ESSENCE) hospital query tool was able to identify the scope of an outbreak at an assisted living facility.

Methods

An Automated alert in ESSENCE occurs whenever the number of emergency department (ED) visits for a specific syndrome is greater than ex-

pected based on historical data by demographic or/and geographic characteristics. The query in ESSENCE is a useful tool to detect reportable diseases and outbreaks through spatial/temporal clustering which can generate automated alerts for individual hospital or zip code. On March 11, 2010, a gastrointestinal (GI) alert was observed over ESSENCE among adults aged 65 years in Miami-Dade County Health Department’s (MDCHD) syndromic surveillance system. The query was used to analyze daily ED visits at a local hospital (henceforward, referred to as Hospital A) during February 1st through March 10th among elderly adults aged 65 and over with a GI syndrome regardless of patient’s residence.

Results

The results of ESSENCE’s hospital query revealed that 10 elderly adults visited Hospital A with a GI syndrome on March 10th, more than three times the number expected (See Figure 1). Four patients (40%)

Inside this issue:

Using ESSENCE to Support an Outbreak Investigation, March 2010

1

Using ESSENCE to Support an Outbreak Investigation, March 2010

2

Selected Notifiable Disease Reports, Historical data, March 2010

3

EDC-IS Influenza/Respiratory Illness Surveillance Report

4

Monthly Report, Selected Reportable Diseases/ Conditions in March 2010

5

*Fermin Leguen MD, MPH
Chief Physician, Miami-Dade County Health Department
Epidemiology, Disease Control & Immunization Services
8600 NW 17th Street
Suite 200
Miami, Florida 33126*

**Miami-Dade County
HEALTH DEPARTMENT**
www.mdchealth.org

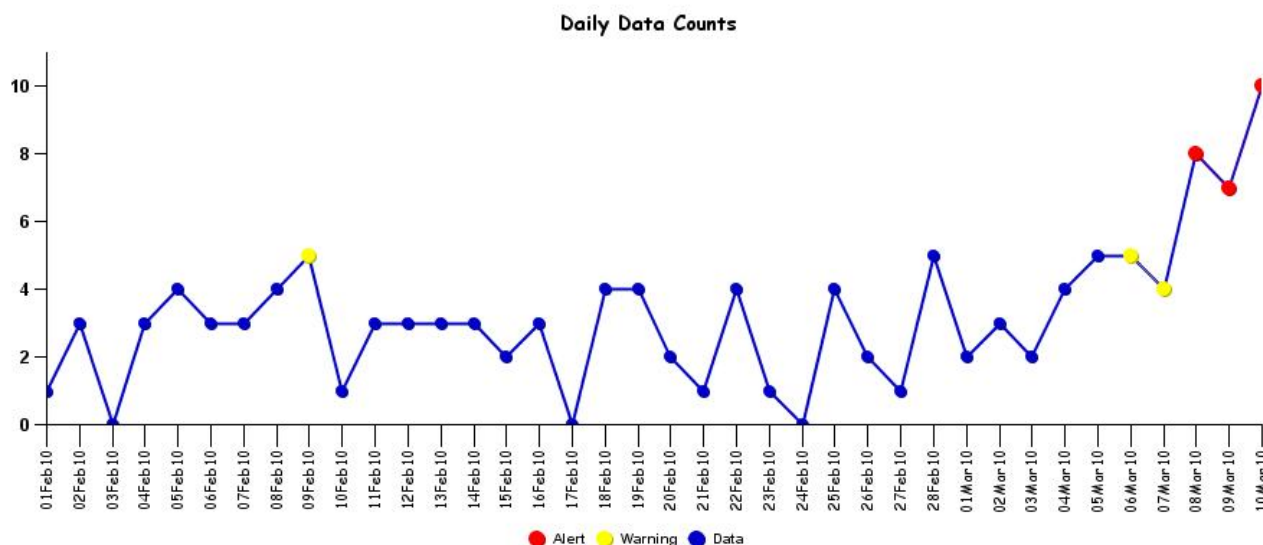


did not report a zip code of residence. Eight patients (80%) reported nausea, vomiting, and/or diarrhea. Moreover, a sharp increase in ED visits for this age group/syndrome had occurred on March 8th as the number of patients seen doubled from the previous day. The investigator immediately communicated the results to EPI's surveillance coordinator who divulged that a GI outbreak was being currently investigated at an assisted living facility (ALF) involving 19/304 residents as of March 5th. Since the ALF and hospital were in close proximity, the hospital's infection control practitioner (ICP) was contacted to determine whether the ED visits and GI outbreak were related. The ICP confirmed an additional sixteen residents from the same ALF had visited Hospital A between March 7th and 10th. Subsequent interviews with the ALF's administrator revealed the outbreak had affected 70 residents and 20 staff as of March 12th.

Conclusion

In this case report, ESSENCE demonstrated its usefulness in determining the extent of an outbreak through its query tool. Although proper communication between disease investigators and the community is essential for reducing disease morbidity and mortality, syndromic surveillance tools such as ESSENCE could be useful in not only detecting outbreaks but in providing support when needed. Future research could examine the reliability of ESSENCE in providing support for previously identified investigations.

Figure 1: Hospital A Emergency Department Visits for Gastrointestinal Illness Syndrome, Adults Aged 65+ Years February 1 – March 10, 2010





April 2010...

Alcohol Awareness Month

Foot Health Awareness Month

National Autism Awareness Month

National Donate Life Month

National Public Health Week

Are your feet healthy?

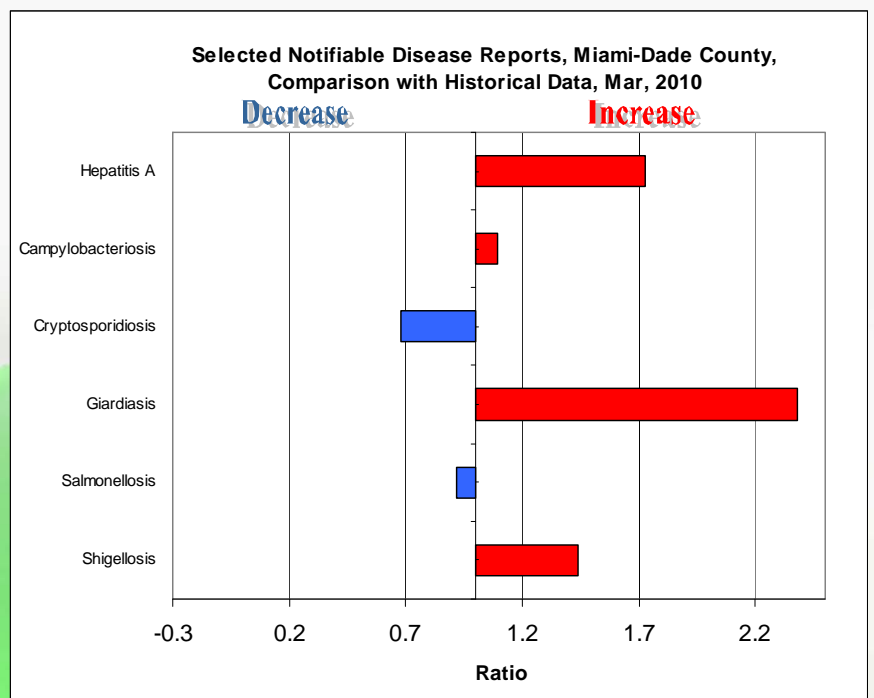
Tips on Good Foot Health by American Podiatric Medical Association (APMA)

1. Don't ignore foot pain—it's not normal.
2. Inspect your feet regularly. Look for thick or discolored nails (a sign of developing fungus), and check for cracks or cuts in the skin.
3. Wash your feet regularly, especially between the toes.
4. Trim toenails straight across, but not too short. Be careful not to cut nails in corners or on the sides; it can lead to ingrown toenails.
5. Make sure that your shoes fit properly. Purchase new shoes later in the day when feet tend to be at their largest and replace worn out shoes asap.
6. Select and wear the right shoe for the activity that you are engaged in (i.e., running shoes for running).
7. Alternate shoes—don't wear the same pair of shoes every day.
8. Avoid walking barefooted—your feet will be more prone to injury and infection. At the beach or when wearing sandals, always use sunblock on your feet just as on the rest of your body.

<http://www.apma.org/>

**TO REPORT ANY DISEASE AND FOR INFORMATION CALL:
Epidemiology, Disease Control & Immunization Services**

Childhood Lead Poisoning Prevention Program305-470-6877
 Hepatitis305-470-5536
 Immunizations or outbreaks305-470-5660
 HIV/AIDS Program305-470-6999
 STD Program305-325-3242
 Tuberculosis Program305-324-2470
 Immunization Service305-470-5660
 To make an appointment.....786-845-0550



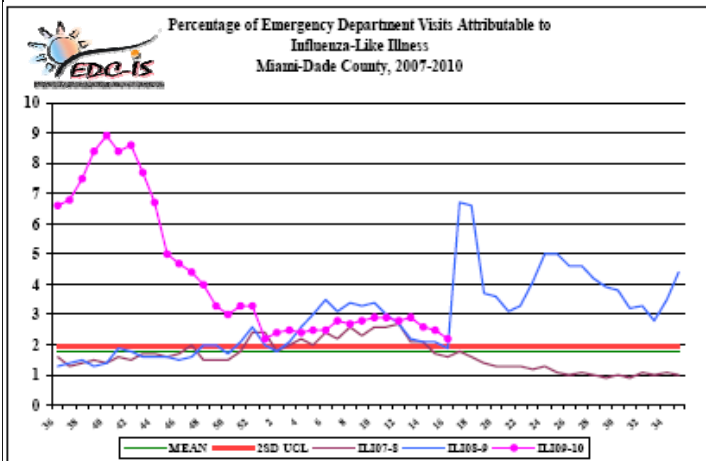
Miami-Dade County Health Department
EDC-IS Influenza/Respiratory Illness
Surveillance Report



Week 16: 04/18/2010– 04/24/2010

Miami Dade County Health Department EDC-IS collects and analyzes weekly information on influenza activity in Miami-Dade County. On a daily basis, selected Miami-Dade County hospitals electronically transmit hospital emergency department data to the Miami-Dade County Health Department.

This data is then categorized into 10 distinct syndromes. The influenza-like illness (ILI) syndrome consists of fever with either cough or sore throat. It can also include a chief complaint of “flu”. Each week, staff will determine the percentage of all emergency department visits that fall into the ILI category.



During this period, there were 18,807 ED visits; among them 417 (2.2%) were ILI. At the same week of last year, 1.9% of ED visits were ILI.

For more information, please contact
Erin O’Connell at 305-470-5660.

PARTICIPATE IN INFLUENZA
SENTINEL
PROVIDER SURVEILLANCE

The Miami-Dade County Health Department NEEDS Influenza Sentinel Providers!!

Sentinel providers are key to the success of the Florida Department of Health’s Influenza Surveillance System. Data reported by sentinel providers gives a picture of the influenza virus and ILI activity in the U.S. and Florida which can be used to guide prevention and control activities, vaccine strain selection, and patient care.

- Providers of any specialty, in any type of practice, are eligible to be sentinel providers.
- Most providers report that it takes **less than 30 minutes a week** to compile and report data on the total number of patients seen and the number of patients seen with influenza-like illness.
- Sentinel providers can submit specimens from a subset of patients to the state laboratory for virus isolation **free of charge**.

For more information, please contact
Erin O’Connell at 305-470-5660.

About the Epi Monthly Report

The Epi Monthly Report is a publication of the Miami-Dade County Health Department, Epidemiology, Disease Control & Immunization Services. The publication serves a primary audience of physicians, nurses, and public health professionals. Articles published in the Epi Monthly Report may focus on quantitative research and analysis, program updates, field investigations, or provider education. For more information or to submit an article, contact Lizbeth Londoño at 305-470-6918.



Miami-Dade County Monthly Report Select reportable Disease/Conditions March 2010

Diseases/Conditions	2010	2010	2009	2008
	Current Month	Year to Date	Year to Date	Year to Date
HIV/AIDS				
AIDS*	82	188	165	362
HIV	118	247	212	449
TB				
Tuberculosis**	16	31	N/A	N/A
Epidemiology, Disease Control & Immunization Services				
Epidemiology				
Campylobacteriosis	13	35	25	36
Ciguatera Poisoning	0	0	3	5
Cryptosporidiosis	1	1	5	6
Cyclosporiasis	0	0	0	3
Dengue Fever	1	2	2	1
E. coli, O157:H7	0	0	0	2
E. coli, Non-O157	0	0	0	0
Encephalitis (except WNV)	0	0	0	1
Encephalitis, West Nile Virus	0	0	0	0
Giardiasis, Acute	53	144	150	46
Influenza Novel Strain	8	14	0	0
Influenza, Pediatric Death	0	0	0	0
Legionellosis	0	1	3	3
Leptospirosis	0	0	0	0
Listeriosis	0	3	0	3
Lyme disease	0	0	0	0
Malaria	1	6	5	1
Meningitis (except aseptic)	0	0	0	0
Meningococcal Disease	3	5	8	1
Salmonellosis	31	67	76	63
Shigellosis	22	36	34	8
Streptococcus pneumoniae, Drug Resistant	33	58	38	27
Toxoplasmosis	0	0	0	0
Typhoid Fever	0	0	0	0
Vibriosis	0	0	0	1
West Nile Fever	0	0	0	0
Immunization Preventable Diseases				
Measles	0	0	0	0
Mumps	0	0	0	1
Pertussis	5	8	10	0
Rubella	0	0	0	0
Tetanus	0	0	0	0
Varicella	10	25	20	2
Hepatitis				
Hepatitis A	6	14	14	10
Hepatitis B (Acute)	6	8	2	2
Lead				
Lead Poisoning	46	54	31	36

*Data on AIDS are provisional at the county level and is subject to edit checks by state and federal agencies.

** Data on tuberculosis are provisional at the county level.