

Epi Monthly Report

Differences in ILI Chief Complaints among Patients Visiting the Emergency Department in Miami-Dade County from April-July 2008 to April-July 2009

Pamela Mann, MPH

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BACKGROUND

Since 2005, the Miami-Dade County Health Department (MDCHD) has used the Electronic Surveillance System for the Early Notification of Community-Based Epidemics (ESSENCE) to monitor chief complaints in the 17 largest of the 23 emergency department (ED) hospitals in Miami-Dade County. These 17 hospitals account for 90% of all ED visits in the county. ED data is frequently evaluated to anticipate disease outbreaks and to better understand disease trends/patterns in the area.

Overall, influenza patterns vary from year-to-year and are difficult to predict. However, as per the Centers for Disease Control and Prevention (CDC), flu outbreaks typically occur as early as October and usually peak in January, sometimes later. 2009 has proven to be different. With the emergence of novel influenza A (H1N1) in April 2009, the number of flu cases during the spring season has been dramatically higher than in past years.

As H1N1 continues to spread worldwide, infection has been reported to cause a wide range of influenza-like illness (ILI) symptoms, including fever, cough, sore throat, body aches, headache, chills and fatigue. Furthermore, most influenza viruses now being detected are lab-

confirmed Novel H1N1 viruses.

In response to higher levels of ILI than is normal for this time of year, this study aims to identify trends or differences in chief complaint data from patients reporting ILI symptoms who visited the ED in April-July of 2008 compared with April-July of 2009.

METHODS

Data for this study was extracted from ESSENCE. The ILI chief complaints were categorized into the following headings: 1) fever and cough, 2) fever and sore throat, 3) fever, sore throat and cough, and 4) flu. SAS 9.13 was employed for data analysis.

RESULTS

The number of patients with symptoms of ILI in the ED from April-July of 2008 was 3106, and in April-July of 2009 was 9560 - a three times increase. A chief complaint of fever and cough revealed to be the predominant ILI symptom in both years (2008 = 51%, 2009 = 42%).

Age Effects:

Compared to 2008, the proportion of ILI in children aged 5-17 increased from 34.2% to 41.7% (Figure-1). A chief complaint of fever and cough was highest among children aged 0-4

Differences in ILI Chief Complaints among Patients Visiting the Emergency Department in Miami-Dade County

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Selected Notifiable Disease Reports, Historical data, June 2009

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EDC-IS Influenza/Respiratory Illness Surveillance Report

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Monthly Report, Selected Reportable Diseases/ Conditions in June 2009

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*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.misdadehealth.org



Figure-1. Age Distribution of ED Patients with ILI in Miami-Dade County, April-July 2008 and April-July 2009

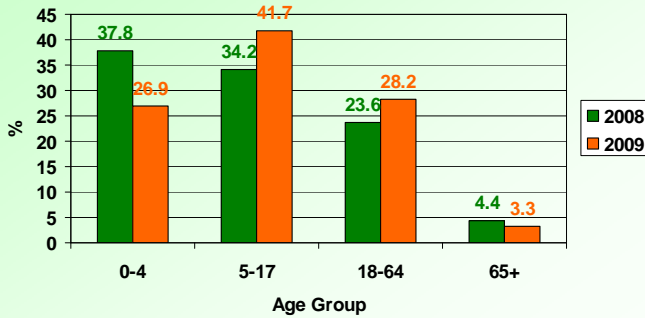


Figure-2. ED Patients with ILI Symptoms in Miami-Dade County, April-July 2008 and April-July 2009

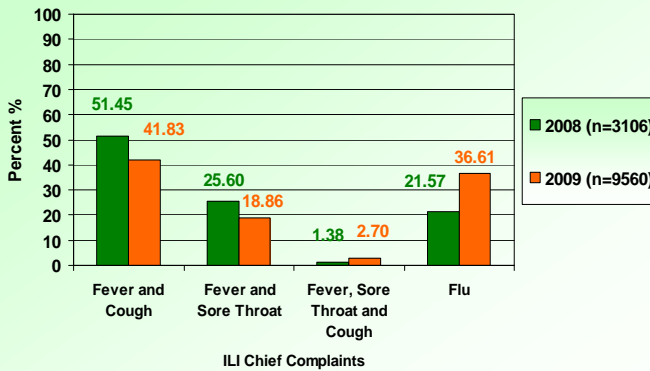
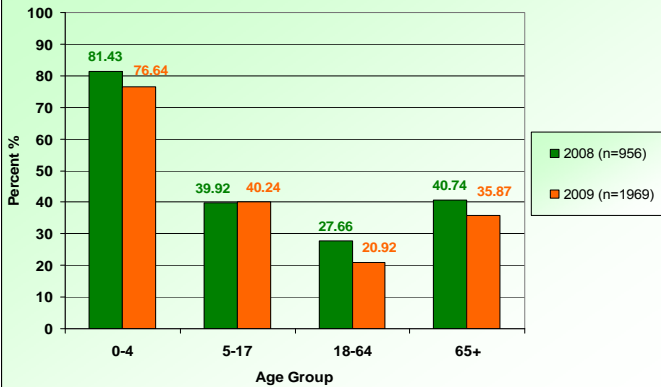


Figure-3. ED Patients with Chief Complaints of Fever and Cough by Age Group in Miami-Dade County, April-July 2008 and April-July 2009



(2008=81%, 2009 = 77%). In both years, chief complaints of fever, sore throat, and cough (2008= 3%, 2009 =5%) and fever and sore throat (2008=51%, 2009 =35%) were higher among persons aged 5 to 17 years (Figure-2, Figure-3).

Gender Effects:

Females represented the majority of ILI ED visits in both years (2008=53%, 2009=55%).

Race/Ethnicity Effects:

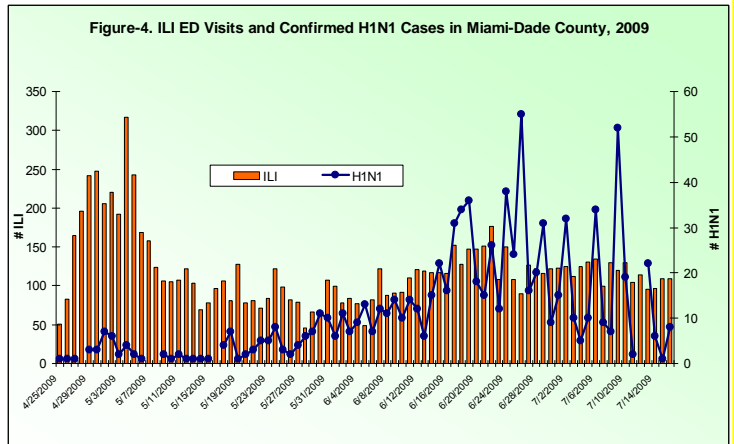
In 2008 and 2009, ED visits for ILI was most preva-

lent among Hispanics (2008 = 66%, 2009 = 65%). This is demographically representative of Miami-Dade County's large Hispanic population (61.3%).

ED Patients reporting ILI symptoms compared with Confirmed Cases of H1N1:

The threat of a flu outbreak brought a sharp increase in ED visits for ILI. In April of 2009, the number of ED patients with ILI was much higher than the actual number of lab-confirmed H1N1 cases. Over time, this trend changed. As a result of clearer, more specific CDC testing and reporting guidelines, better testing capabilities of private and public laboratories, better-characterized H1N1 information, and more robust surveillance activities, the number of ILI ED visits decreased while the number of lab-confirmed H1N1 cases increased (Figure-4).

Figure-4. ILI ED Visits and Confirmed H1N1 Cases in Miami-Dade County, 2009



CONCLUSIONS

The number of ED visits for ILI in April-July of 2009 is approximately three times higher than during the same time in 2008, particularly among school-aged children. Despite this increase, the data indicates little variations in ILI among chief complaints, gender and race/ethnicity from April-July 2008 to April-July 2009. Identifying clinical differences in ILI chief complaint data from past flu seasons to this year can help better characterize this new influenza strain, and to understand the public health impact for guiding decision-makers' response to the ongoing outbreak.

