

# Comparison of 2005-2007 Influenza-Like Illness Observed From Emergency Department Visits in Miami-Dade County

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## OBJECTIVE

The purpose of this study was to compare the 2005-2006 and 2006-2007 Influenza seasons using Influenza-like illness (ILI) data received from Emergency Departments in Miami-Dade County.

## BACKGROUND

The threat of pandemic and seasonal influenza has drawn attention to syndromic surveillance systems for the early detection of influenza-like illness [1]. Since 2005, the MDCHD has implemented a syndromic surveillance system (ESSENCE) to monitor ILI trends from data received from emergency departments (ED). This study describes ILI surveillance methods in Miami-Dade County.

## METHODS

In Miami-Dade County, there are fourteen hospitals that automatically transmit ED chief complaint data to the Office of Epidemiology and Disease Control. The ILI category was defined as a chief complaint of fever with either cough or sore throat, as well as a chief complaint of "flu". The weekly ILI report has been used to monitor ILI trends using an Exponentially Weighted Moving Average (EWMA). Data was analyzed in SAS 9.1.3 with the weekly percentage of ILI visits. The threshold Upper Control Limits for the EWMA (UCLE) are 2 and 3 standard deviations ( $\sigma$ ) above the mean. The weekly percentage of Respiratory syndrome was compared with ILI trends.

## RESULTS

Compared to the 2005-2006 influenza season, the 2006-2007 season showed the following characteristics: (1) the percent of ILI among total ED visits was lower than the 2005-2006 season's level; (2) the time periods were shorter than the previous year (11 weeks and 20 weeks respectively); (3) the first significant increase wave came earlier than the previous year (at weeks 42 and 49 respectively); and (4) there were no early peak cases among children aged 0-17 years in the 2006-2007 season. Respiratory and ILI ED visits had similar trends during these two years. A review of chief complaints showed that there were no hospital behavior changes in the coding of chief complaints for both respiratory and ILI syndromes. Sentinel physicians' data also showed that there was no significant peak time for the percent of ILI in the 2006-2007 influenza season compared to the previous years.

## CONCLUSIONS

There was a weak ILI activity among pediatric and adult populations in the 2006-2007 season compared to the 2005-2006 season. This is particularly true among children, who did not have an obvious peak time. ED-based syndromic surveillance could be a useful tool to monitor ILI trends in the community.

## LIMITATIONS

Due to the unavailability of Flu vaccination data by age group we were unable to explore an association between the low level of ILI among children and compliance with flu vaccination.

## REFERENCES

CDC. Framework for evaluating public health surveillance systems for early detection of outbreaks. MMWR 2004; 53(RR05).

