

Kentucky Influenza Surveillance

**Cabinet for Health and Family Services
Kentucky Immunization Program**

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Kentucky Public Health

Prevent. Promote. Protect.

Geographic Spread of Influenza

Five Classifications

- No Activity
- Sporadic
- Local
- Regional
- Widespread



No Activity

- No laboratory-confirmed cases of influenza and
- No reported increase in the number of ILI cases and
- Overall clinical activity remains low



Sporadic:

Small numbers of laboratory-confirmed influenza cases or a single laboratory-confirmed influenza outbreak has been reported, but there is no increase in ILI cases



Local

- Outbreaks of influenza or increases in ILI cases and
- Recent laboratory-confirmed influenza in a single region of the state



Regional

- Outbreaks of influenza or increases in ILI and
- Recent laboratory confirmed influenza in at least two, but less than half the regions of the state, with laboratory evidence in identified regions

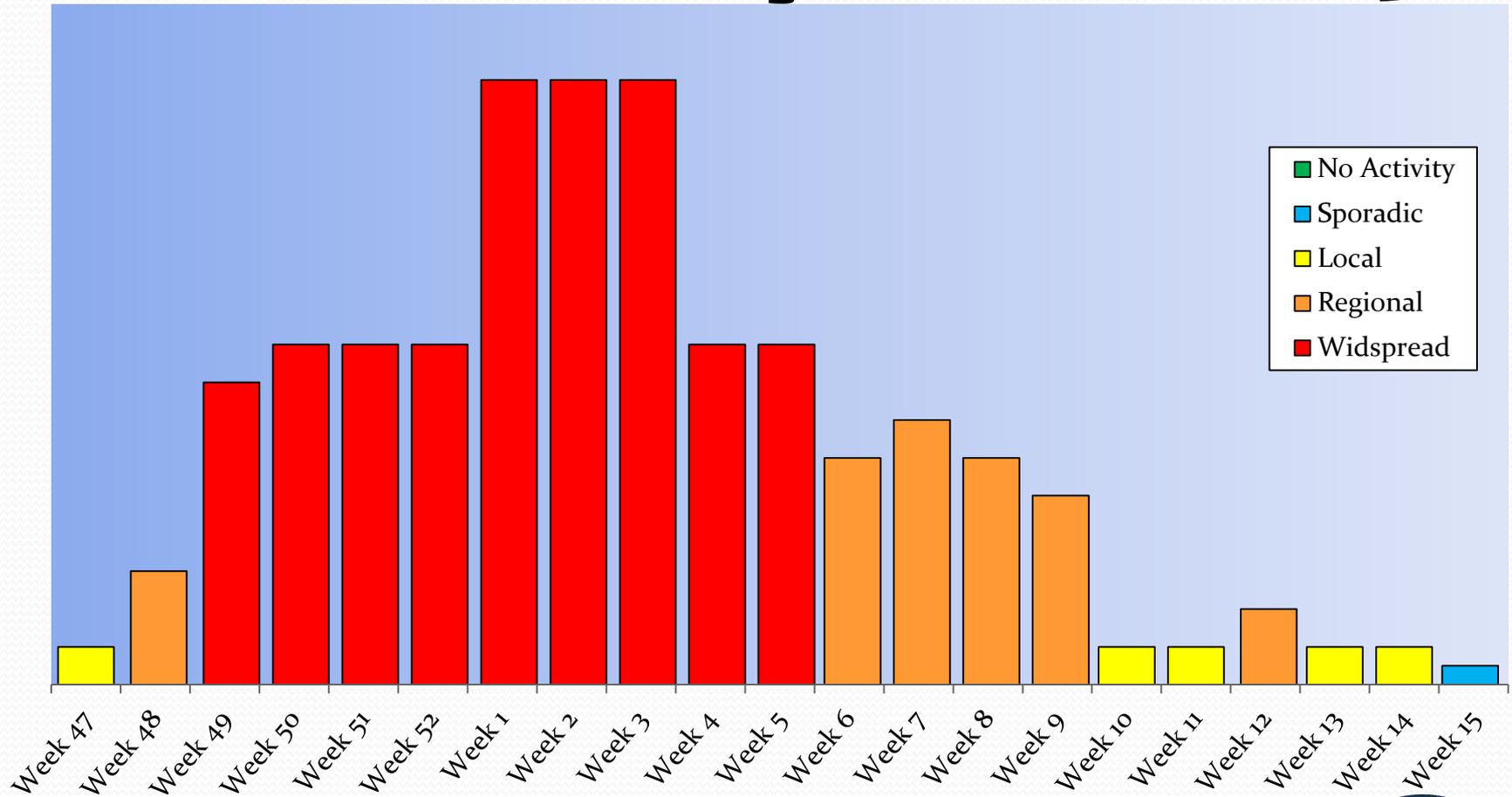


Widespread

Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in at least half the regions of the state with recent laboratory evidence of influenza in the state.



KY Activity 2012-2013



What Data do we use?

- KY Division of Laboratory Services
- Confirmed Influenza cases in NEDSS
- Pediatric deaths
- ILINet reports
- LHD reports of ILI
- School outbreaks, absenteeism and closures related to influenza
- Long-term care facilities outbreaks

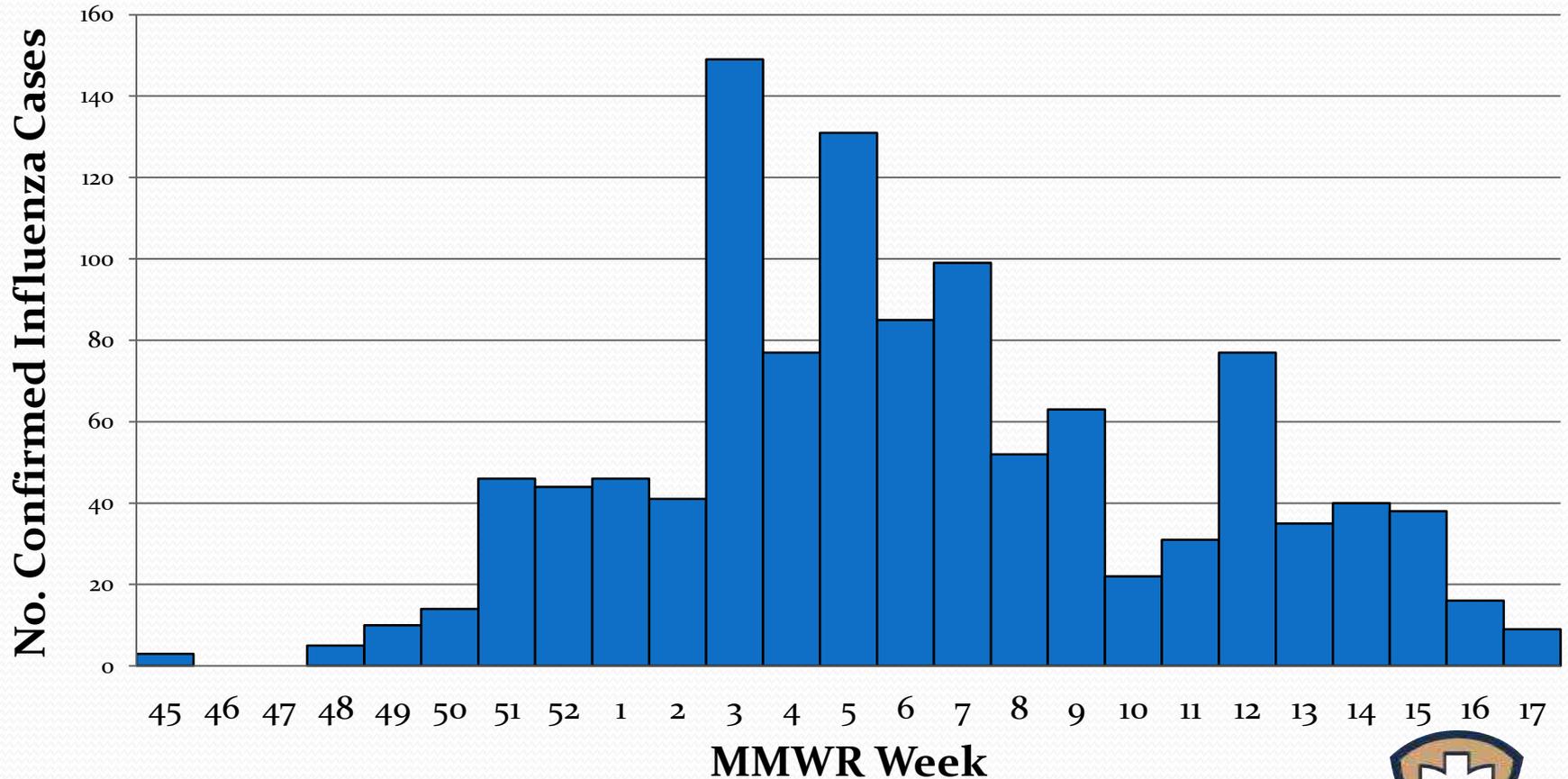


Labs in NEDSS

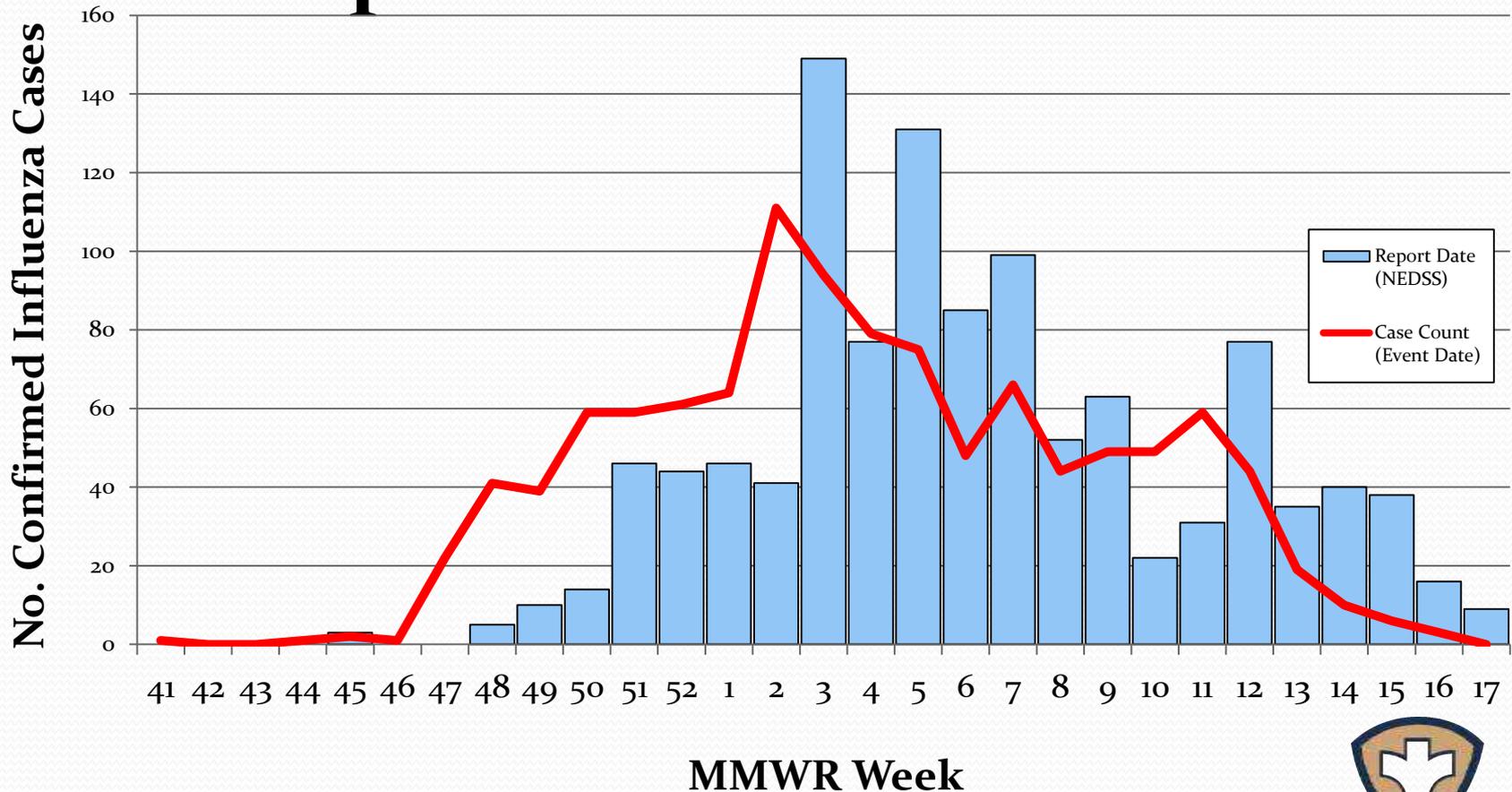
- Labs need to be reported in a timely manner
 - *As soon as the event happens*
- Only lab confirmed tests are reported in NEDSS
 - PCR and viral respiratory cultures



Confirmed Influenza Cases in NEDSS (n=1133)



Influenza Case Count in NEDSS: Report Date vs Event Date



Pediatric deaths

- All influenza-related pediatric deaths are a nationally reportable event
 - Ages 0 through 18 years of age
 - 2 reported deaths in KY since Feb 2013

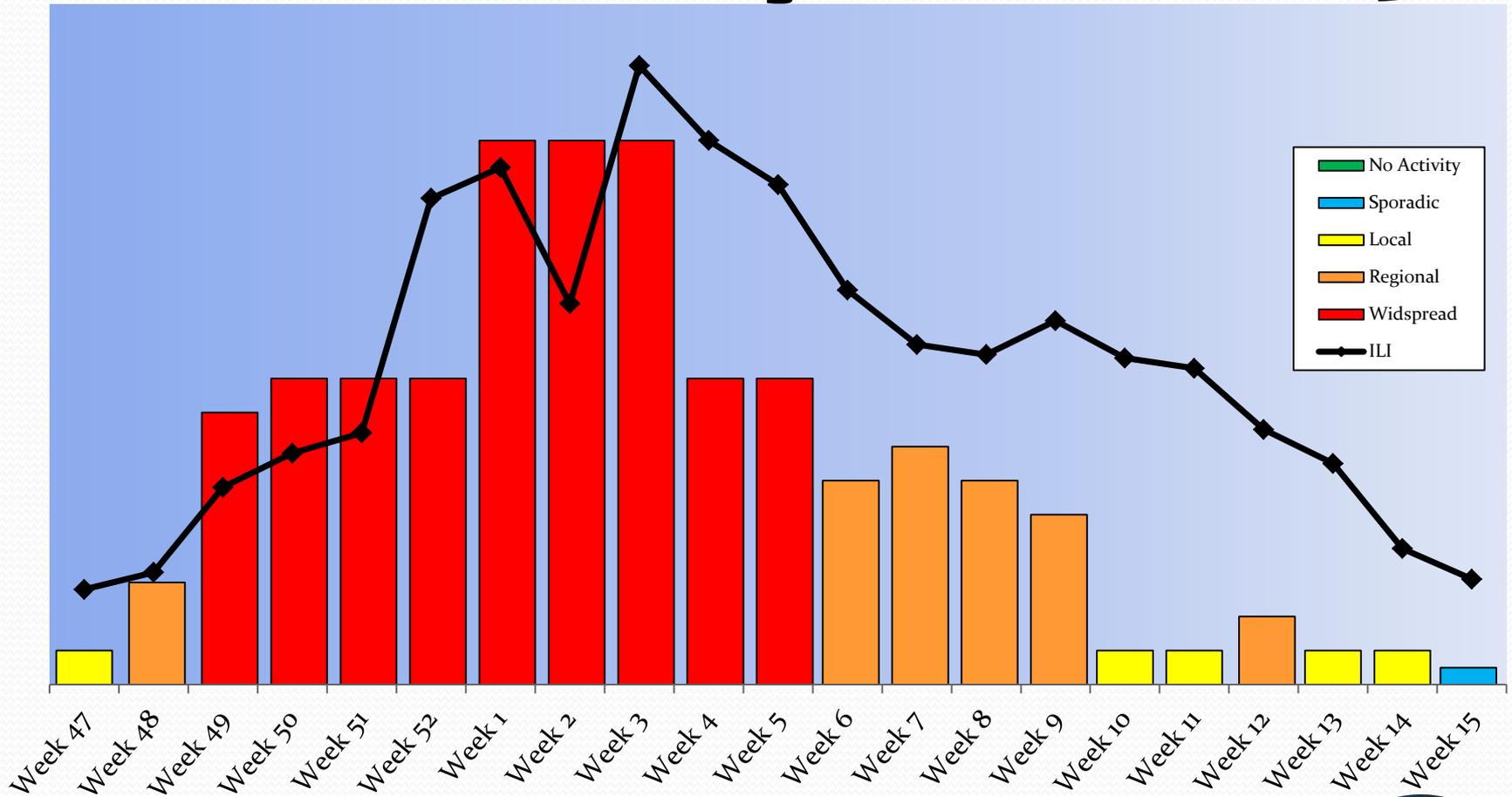


ILINet reports

- CDC website where providers report ILI data weekly
- Uses Sentinel Surveillance Sites
 - 35 site agreements in Kentucky
 - Only 18-20 of these report weekly
 - Sites are not always in areas that see influenza



KY Activity 2012-2013



Current Sentinel Sites

- **Acute Care of Elizabethtown-** Hardin County- Lincoln Trail
- **University of Kentucky University Health Services-** Fayette County-Lexington-Fayette
- **Lexington Clinic-** Fayette County- Lexington- Fayette
- **Asbury College Student Health Service-**Jessamine County-Bluegrass Capital
- **Eastern Kentucky University-**Madison County-Bluegrass South
- **Lexington Clinic-Richmond-** Madison County- Bluegrass South



Sites Continued

- **Lexington Clinic- Jessamine County- Bluegrass Capital**
- **St. Claire Family Medicine-Menifee County- Gateway/Buffalo Trace**
- **Morehead State University-Rowan County- Gateway/Buffalo Trace**
- **Health Plus PSC- Rowan County-Gateway/Buffalo Trace**
- **Union College Campus Health Service -Knox County-Cumberland Valley**



Sites Continued

- **All Star Pediatrics** – Jefferson-Louisville-Metro
- **Children’s Health**-Jefferson County- Louisville-Metro
- **East Louisville Pediatrics**-Jefferson County-Louisville-Metro
- **Louisville Area Pediatrics**-Jefferson County-Louisville-Metro
- **University of Louisville Health Service**-Jefferson County-Louisville-Metro
- **The little Clinic**-Jefferson County- Louisville Metro



Sites Continued

- **Norton Healthcare Lyndon ICC- Jefferson- Lou./Metro**
- **St Elizabeth Hospital ER-Kenton County NKY**
- **Caverna Memorial Hospital- Hart county-Barren River**
- **T J Samson ER- Barren- Barren River**
- **Western Kentucky University-Warren County-Barren River**
- **Pediatric Associates of Pikeville-Pike County- FIVCO**
- **Westlake Primary Care-Adair County- Lake Cumberland**



Reporting ILI

- 8-10 LHD or District Health Departments report influenza activity weekly
 - Each uses at least one hospital, provider and school in region to report ILI
 - Some require all positive rapid tests to be sent to LHD
- NKY produces a newsletter



2012-2013 School Absentee Data

- Daily updated dataset from Infinite Campus
 - School districts from 95 counties report consistently
- General absentee data—not specific to illness or reason for absence
- 14 counties reported school closures due to illness
 - No standardization for school closures
 - Each independent school board/system determines when schools close
- Calculation for daily average absent rate=

$$\frac{\text{Total \# of absences}}{\text{Total number of enrolled students}} \times 1000 / \# \text{ of days school was in session for week}$$



KY School Absentee Weekly Rate*: Dec 17 - Dec 21, 2012

Absent Rate (per 1,000 Students)



Cabinet for Health and Family Services
Kentucky Immunization Program
December 26, 2012

*Note: Data provided are for those schools reporting during week of Dec 17-Dec 21, 2012. The numbers reported may represent an underestimate of the true absolute number of school absences in the state. Data are considered provisional and subject to change. The Cabinet for Health and Family Services is not responsible for any duplication or misrepresentation of surveillance data released in this report.

KY School Absentee Weekly Rate*: Jan 14 - Jan 18, 2013

Absent Rate (per 1,000 students)



Cabinet for Health and Family Services
Kentucky Immunization Program
January 22, 2013

*Note: Data provided are for those schools reporting during week of Jan 14-Jan 18, 2013. The numbers reported may represent an underestimate of the true absolute number of school absences in the state. Data are considered provisional and subject to change. The Cabinet for Health and Family Services is not responsible for any duplication or misrepresentation of surveillance data released in this report.

Long Term Care Facility Outbreaks 2012-2013

- 58 Reported Outbreaks
 - December 2012-March 2013
- Average Attack Rate
 - 13.2% Residents (Range: 1%-57%)
 - 3.7% Employees (Range: 0%-14%)
- Average Vaccination Rates
 - 87.5% Residents (Range: 58%-100%)
 - 44.2% Employees (Range: 13%-97%)
- 46 Hospitalized
- 9 deaths



LTCF Outbreaks - Conducting Surveillance

- Once an outbreak in a facility is identified
- Conduct daily active surveillance until 1 week after last confirmed case
- People who have the flu often feel some or all of these symptoms:
 - Fever or feeling feverish/chills
 - Cough
 - Sore throat
 - Runny or stuffy nose
 - Muscle or body aches
 - Headaches
 - Fatigue (tiredness)
 - Vomiting and diarrhea (more common in children)



LTCF Outbreaks - Conducting Surveillance

- ILI Surveillance Definition:
 - Fever (temperature of 100°F [37.8°C] or greater) and a cough and/or a sore throat without a KNOWN cause other than influenza
 - Definition for ILINet Seasonal Flu Surveillance-Not an Outbreak Definition
- Note that elderly persons and other LTCF residents (including medically fragile, neurological or neurocognitive conditions) may have atypical signs and symptoms, and may not have fever



Working Case Definition

- Any resident, employee, or visitor of LTCF “X” with ILI (defined as: fever (temperature of 100°F [37.8°C] or greater) and a cough and/or a sore throat without a known cause other than influenza) or at least one or more signs or symptoms of respiratory illness, including but not limited to: fever, cough, sore throat, runny nose, muscle aches, or malaise with a date of symptom onset on or after Month, Day, Year.



Case Classification

Classification	Number Residents	Number Staff	Number Visitors
Confirmed Case: Patient has positive viral culture, PCR, or rapid test			
Probable Case: Patient is epi-linked to a confirmed case and has 2 or more symptoms of respiratory illness (fever, cough, sore throat, runny nose, muscle aches, or malaise)			
Suspect Case: Patient has 1 or more symptoms of respiratory illness (fever, cough, sore throat, runny nose, muscle aches, or malaise)			



Exercise

- Working Case Definition:
 - Any resident, employee, or visitor of Rosewood Healthcare Manor, Bowling Green, KY with ILI (defined as: fever (temperature of 100°F [37.8°C] or greater) and a cough and/or a sore throat without a known cause other than influenza) or at least one or more signs or symptoms of respiratory illness, including but not limited to: fever, cough, sore throat, runny nose, muscle aches, or malaise with a date of symptom onset on or after December 23, 2012.



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