

**Outbreak of a Respiratory Illness in a Residential Care Facility,
Wilson County, April 2011**



Background

On April 5, 2011, the Kansas Department of Health and Environment, Bureau of Epidemiology and Public Health Informatics (KDHE-BEPHI) was notified of a potential respiratory outbreak among residents and staff at residential care facility in Wilson County. The initial report indicated that ten individuals had been hospitalized due to a respiratory illness with one death reported. On April 5th, in response to this report, an investigation was initiated by staff from KDHE-BEPHI and the Wilson County Health Department (WCHD) to determine the etiological agent and make recommendations to stop transmission of the illness in the facility.

Methods

Epidemiologic Investigation

A chart review was conducted to determine ill residents and staff members. Staff from WCHD assisted the facility with constructing a line list of ill residents and staff. The Department of Social and Rehabilitation Services (SRS) was contacted to obtain information about the facility. SRS stated that this facility had one large building that held 30 residents and 5 separate cabins with 7 residents and 4 staff members.

Laboratory Analysis

KDHE-BEPHI recommended collecting nasopharyngeal swabs on any newly ill staff or resident and on any hospitalized patient. One specimen was sent to the Kansas Health and Environmental Laboratory for testing and another specimen was tested by a private laboratory.

Results

Epidemiologic Investigation

A total of 8 individuals reported illness and of those 7 met the case definition (1 staff member and 6 residents). A case was defined as a staff or resident of the residential care facility that developed a cough and either a fever greater than 100°F, a sore throat, shortness of breath, pneumonia, or myalgia on or after March 24th. The onset date of illness ranged from March 24th to April 2nd (Figure 1). Of the 7 symptomatic individuals, 4 (57.1%) were female. The median age was 55, with a range of 44 to 72 years. All seven (100%) reported seeking care at a hospital. One death was reported among the seven ill individuals. Chart reviews of the ill individuals indicated that cough (100%) was the most commonly reported symptom followed by shortness of breath, fever, myalgia, and sore throat (Table 1). Three individuals were diagnosed with pneumonia.

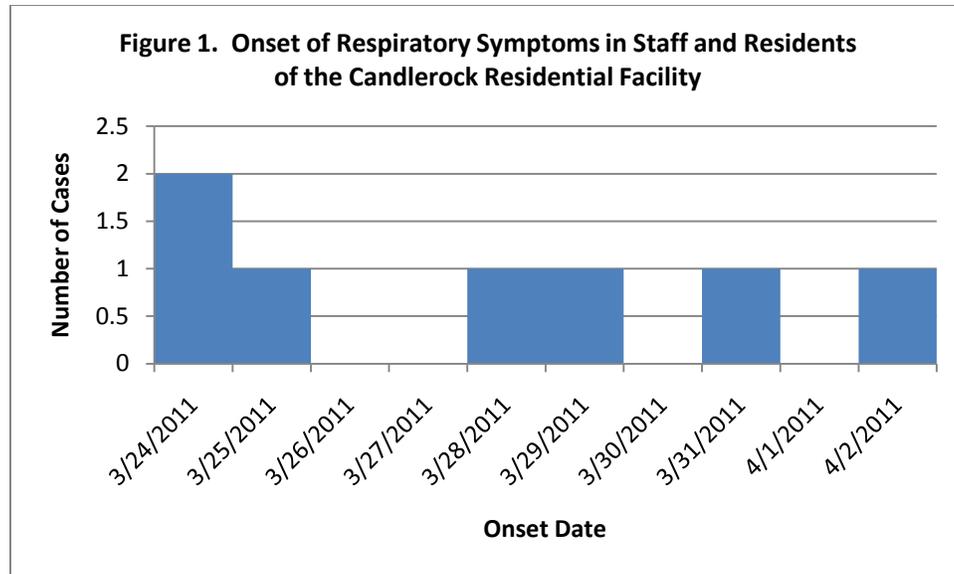


Table 1: Clinical Information for Cases (n=7)

<i>Symptoms</i>	<i># with symptoms(%)</i>
Cough	7 (100)
Shortness of Breath	6 (85.7)
Fever	4 (57.1)
Myalgia	4 (57.1)
Pneumonia	3 (42.9)
Sore Throat	3 (42.9)

Laboratory Analysis

The two nasopharyngeal swabs collected from the hospitalized patients were both positive for the 2009 H1N1 influenza virus.

Discussion

This was an outbreak of the 2009 H1N1 influenza virus in a residential care facility. The outbreak was not reported to the KDHE-BEPHI until April 5th, which delayed the investigation of this outbreak. Influenza (the flu) is a contagious respiratory illness caused by influenza viruses. It can cause mild to severe illness, and at times can lead to death. Older individuals, young children, and people with certain health conditions, are at high risk for serious flu complications¹.

Recommendations

Outbreaks should be reported as soon as possible to either the local health department or to KHDE-BEPHI so that an investigation can be initiated and recommendations to prevent and control the spread of the illness can be given. The Centers for Disease Control and Prevention (CDC) recommends vaccinating residents and staff of long-term

care facilities as well as following basic infection control practices to reduce outbreaks of influenza in these types of facilities².

References

1. Centers for Disease Control and Prevention. Seasonal Influenza
<http://www.cdc.gov/flu/about/disease/index.htm>
2. Centers for Disease Control and Prevention. Seasonal Influenza. Infection Control Measures for Preventing and Controlling Influenza Transmission in Long-Term Care Facilities.
<http://www.cdc.gov/flu/professionals/infectioncontrol/longtermcare.htm>

Report author: Jamie DeMent (Kansas Department of Health and Environment, Bureau of Epidemiology and Public Health Informatics)

Investigated by:

Wilson County Health Department

421 North 7th Street

Fredonia, KS 66736-1342

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

Kansas Department of Health & Environment

Bureau of Epidemiology and Public Health Informatics

1000 SW Jackson St., Suite 210

Topeka, KS 66612

Epidemiology Hotline: (877) 427-7317

epihotline@kdheks.gov

<http://www.kdheks.gov/epi>

Our Vision and Mission

As the state's environmental protection and public health agency, KDHE promotes responsible choices to protect the health and environment for all Kansans.

Through education, direct services, and the assessment of data and trends, coupled with policy development and enforcement, KDHE will improve health and quality of life. We prevent injuries, illness, and foster a safe and sustainable environment for the people of Kansas.