

**Outbreak of Influenza A/H3 Associated with a Long-Term Care Facility —  
Sedgwick County, March 2011**



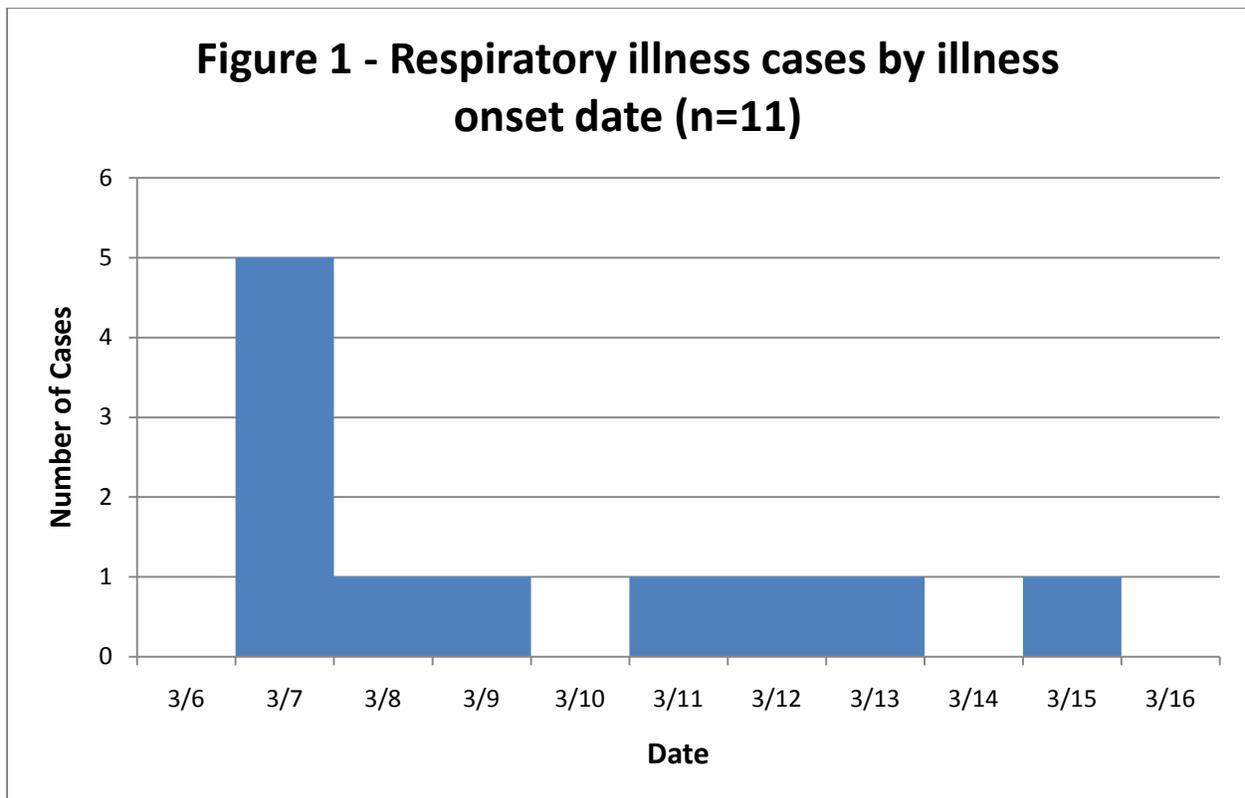
## **Background**

On March 10, 2011, the Sedgwick County Health Department (SCHD) was notified of a possible outbreak of respiratory illness among residents of a 40-bed Long-Term Care Facility (LTCF) in Sedgwick County. The facility indicated that approximately 8 illnesses had occurred over the past four days. The primary symptoms included fever and cough. Laboratory tests had not yet been successful in identifying the causative agent. In response to this report, an outbreak investigation was initiated on March 10 by the Kansas Department of Health and Environment (KDHE) and SCHD. The purpose of the investigation was to quantify and characterize the illnesses, determine the cause of illness, and to prevent additional cases.

## **Key Findings**

SCHD contacted the Director of Nursing to obtain a line list of all residents that had symptoms of respiratory illness (e.g. fever, cough, sore throat, shortness of breath, pneumonia, or myalgia) since the outbreak began. Other information collected included illness onset date, room number, and influenza vaccination status.

A case was defined as an individual who resided at the LTCF and became ill with a fever ( $\geq 100^{\circ}\text{F}$ ) or cough between March 7 and March 15, 2011 — 11 residents met the case definition (See Figure 1).



The most frequently reported symptoms were cough (n=8) and fever (n=8). Two cases were hospitalized; no deaths were reported. One case tested positive for influenza A by Direct Fluorescent Antibody (DFA) screening. Five additional cases were tested for influenza by Polymerase Chain Reaction (PCR) at the Kansas Health and Environmental Laboratories (KHEL). All but one were positive for influenza A/H3.

Seven of the eleven ill residents had a documented influenza vaccination from fall 2010. The two hospitalized cases had not received an influenza vaccination.

### **Conclusion**

This outbreak of respiratory illness was attributed to influenza A/H3. Eleven LTCF residents met the case definition for illness, and five were laboratory-confirmed cases of influenza. Seven residents, including three laboratory-confirmed influenza cases, became ill despite receiving a flu shot in September 2010 or November 2010. The 2010-2011 formulation of the influenza vaccine included an A/H3 component.

While a yearly influenza vaccine is recommended for everyone, the Centers for Disease Control and Prevention (CDC) stresses the importance of flu shots among LTCF residents, as they are at higher risk of developing complications due to influenza.<sup>1</sup> While the vaccine is more effective in preventing illness among younger populations compared to those older than age 65, studies have found the flu shot may be 50%-60% effective in preventing hospitalization among LTCF residents, and 80% effective in preventing flu-related death.<sup>2</sup>

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<sup>1</sup> Centers for Disease Control and Prevention. Prevention and Control of Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices (ACIP), 2010. MMWR 2010;59:1-62

<sup>2</sup> Ibid.

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