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June 2009

Travis Elementary School H1N1 Outbreak Investigation

Circumstance: On Wednesday May 13, 2009, the Bureau of Epidemiology (BOE) in the Houston Department of Health and Human Services (HDHHS) received a report from the Houston Independent School District (HISD) Medical Administration that Travis Elementary School was experiencing an outbreak of unknown illness, primarily among third grade students.

For additional information about this survey or novel influenza A (H1N1), "swine flu," please contact the HDHHS Bureau of Epidemiology at (713) 794-9181 or visit our website at <http://www.houstontx.gov/health/swineflu.html>.

Investigation:

- Phone Interviews on 5/13/2009 - The BOE received contact information from the school on 73 students who were absent or sent home on 5/13.
- School Absenteeism on 5/14/2009 - A total of 216 students (30%) were absent and more than one-third were third grade students (38%).
- Visit to the School on 5/14/2009 - An Environmental Health Specialist, an Epidemiologist and Sanitarians visited the school. No violation was noted in food preparation areas. Testing and environmental assessment at the school appeared normal.
- School Closure - On May 15, 2009, Travis Elementary School was closed with plans to re-open on May 26, 2009.
- Confirmed H1N1 - By 5/15 at 15:20 there were 12 confirmed H1N1 cases (10 from 3rd grade; 1 from 4th grade; and 1 from 2nd grade).
- Household Survey - An online survey was conducted to help determine the extent of the outbreak of Influenza Like Illness (ILI) at Travis Elementary School.

Epidemic Curve : The majority of students became ill on Wednesday, May 13. Among the Travis students, the disease trend for the ILI is similar to the trend for the confirmed H1N1 cases which suggests that those with ILI may have tested positive for H1N1.

Interpretation: Data from this outbreak suggest that the novel influenza A (H1N1) virus has the potential for rapid spread among young school-aged children. The increased risk for person-to-person transmission of novel influenza A (H1N1) in a school environment is most likely due to a combination of population susceptibility; close proximity of students within the classroom and the hygiene practices of young children. In conjunction with these factors the ventilation in the 3rd grade classrooms may have played a role in the high attack rates and reported ILI.

Attack Rates*: There were 40 confirmed H1N1 cases at Travis Elementary School. Students with confirmed cases of H1N1 account for 13.4% of the 3rd grade and 8.8% of the fourth grade. Attack rates for those reporting ILI and Acute Respiratory Illness (ARI) followed the same distribution as the confirmed with the highest proportion residing in the 3rd grade. *Proportion of population affected in a given time period