

Public Health Update

April 2007

Notifiable Diseases 2006: A Year in Review

This Public Health Update includes brief descriptions of many of the disease outbreaks and large communicable disease control efforts that occurred in Adams, Arapahoe and Douglas Counties, the jurisdiction of Tri-County Health Department (TCHD). In addition, summary numbers for notifiable diseases in 2006 are presented in a table. A list of notifiable disease in Colorado and a case report form are included at the end of this update.

Mumps

In April 2006, Colorado and other states were notified of a large multi-state outbreak of mumps that originated in Iowa in December of 2005. The majority of their cases were among 18-25 year olds, many of whom had been vaccinated. Due to this outbreak, a HAN advisory was sent by Colorado Department of Public Health and Environment (CDPHE) and TCHD and our medical community increased surveillance of the disease in our state. In late April, TCHD had Colorado's first confirmed mumps case with a link to the outbreak in the mid-west. By the beginning of May, over 100 suspect mumps cases had been investigated in the state with only 2 cases being confirmed as mumps. By the middle of October, CDPHE had new recommendations on testing and recommendations for exclusion from work and school. Overall, TCHD investigated approximately 82 suspect cases with 15 of those considered to be cases: 3 cases in **Adams County**, 6 cases in **Arapahoe County** and 6 cases in **Douglas County**.

Group A Strep in an Elementary School

In January 2006, TCHD received a call from a parent whose child had been diagnosed with streptococcal pharyngitis (Strep-throat) for the third time in a two-month period and who also reported a large number of cases at the child's school. The child attended an elementary school in **Arapahoe County**. School officials had also noticed an increase in cases and had been keeping track of the cases since October 2005. When TCHD called the school, there were 58 cases reported and two letters had been sent home to families by the school. TCHD assisted the school with increasing their surveillance and enforcing their ill student and staff exclusion policies. TCHD also assisted the school with sending another letter, both in English and Spanish about the illness and included local resources for low-cost medical care in the community. Passive and active surveillance for additional cases of illness were put into place. TCHD staff and school nurses came to the school for multiple days for many hours to screen the students for fever and if they were feeling "healthy". Students with symptoms were sent home and their parents were asked to take them to the doctor. TCHD staff also went to each classroom in the school to provide education to teaching staff about how to monitor their students for illness. A survey was developed and was administered to school staff or parents of ill children who reported a positive throat culture or rapid Strep test to the school. With the help of TCHD, the school nurses and winter break, the rate of infection dropped dramatically. In the end, a total of 47 students and staff met our case definition for streptococcal infection, with some of them having evidence of infection up to 4 times. The outbreak was considered over by the middle of March, after 3 weeks without any cases.

Salmonellosis at a Child Care Center

In March 2006, TCHD staff conducted routine interviews of two confirmed cases of salmonellosis that revealed that both children attended the same child care center in **Douglas County**. The parents of these cases



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also reported other ill children at the facility, so TCHD began an investigation to identify the source of illness and causative agent and to implement environmental controls to prevent further illness. TCHD staff interviewed parents and staff who were potential cases based on staff report and attendance records. TCHD staff identified 18 cases of illness among children in 5 separate classrooms and two cases in child care center staff. Eight specimens were collected by private providers and 7 tested positive for *Salmonella*. The environmental health investigation focused on food preparation because of the simultaneous onset of illness in children of all ages that did not share bathroom facilities. Review of the food preparation process found that some dishes were being prepared from raw ground turkey and these dishes were served during the week in question. Ground turkey was the only raw meat product used by the school and was considered by TCHD to be the source of *Salmonella*. Restrictions were placed on the child care center to limit the spread of illness and the center complied. All restrictions were lifted by April 7, 2006.

Foodborne Illness Outbreak associated with a Catered Lunch

In May, TCHD received a phone call from a school nurse stating that approximately 15 people who had eaten a catered lunch from a **Douglas County** restaurant had become ill with gastrointestinal symptoms. This lunch was a teacher appreciation event, so no students were exposed to the meal. Interviews were conducted with the lunch attendees to assess illness, symptoms and food history. Of these interviews, TCHD found that 22 people were ill with similar symptoms. Stool specimens were collected and tested positive for norovirus. Interviews were also conducted with the staff of the restaurant to assess illness, symptoms and work history. TCHD found that 2 employees had been ill with similar symptoms and worked while they were ill. The facility did not have a sick policy and workers were not required to stay home for any period of time after the end of symptoms. Epidemiologic analysis suggested 2 food items that, when consumed, increased the likelihood of illness. TCHD concluded that the fact that employees of the facility worked while ill contributed to this outbreak.

Outbreaks in Long-Term Care Facilities

Norovirus is a frequent cause of outbreaks of gastrointestinal illness in long-term care facilities (LTCFs), particularly in the winter and early spring. Because these outbreaks can quickly become quite large, affecting both residents and staff, rapid investigation and implementation of infection control measures are very important. There were 20 separate gastrointestinal outbreaks in LTCFs in the Tri-County area during 2006. Four of these outbreaks were in **Adams County** and sixteen were in **Arapahoe County**; there were no reported outbreaks in **Douglas County**. Fourteen of the outbreaks were confirmed norovirus and six were suspect norovirus.

Thirteen of the outbreaks were spread through person-to-person transmission and seven were spread through point-source exposure with subsequent person-to-person transmission. Control measures were implemented and included the following: no common or group activities for residents, restriction of ill residents to their rooms, restriction of new admissions until 72 hours after the cessation of symptoms, requiring ill staff to stay home until 48 hours after the cessation of symptoms, increased staff and resident hand washing and increased sanitizing throughout the facility.

In October 2006, an interesting finding occurred during the investigation of three separate **Arapahoe County** LTCFs. It was discovered that the three facilities experiencing norovirus outbreaks shared healthcare and/or food service employees who worked in one or two of the other LTCFs. TCHD concluded that having shared staff members among facilities could increase the likelihood of the spread of norovirus outbreaks amongst long-term care facilities.

MRSA in a Wrestling Team

In January 2006, TCHD received a call from a concerned parent regarding an outbreak of staphylococcal infections among wrestlers at a high school in **Douglas County**. Further investigation showed that 13 individuals had lesions from staphylococcus, with two laboratory confirmed to be *Staphylococcus aureus*. Although initial lab results indicated sensitivity to augmentin and penicillin, two individuals failed treatment on these antibiotics. Therefore, the strain was presumed to be methicillin-resistant *Staphylococcus aureus* (MRSA). TCHD worked with the Douglas County School District and the Colorado High School Athletics Association (CHSAA) to alert parents of wrestlers of the necessary precautions to prevent further spread of the disease. Guidelines established by the National Collegiate Athletic Association (NCAA) were followed, which stated that before a student could wrestle in practice or competition, he must have been without any new skin lesions for 48 hours and completed 72 hours of appropriate antibiotic therapy and have no moist or draining skin lesions. The outbreak occurred at the end of the wrestling season, and no new infections were reported after the end of the wrestling season.

Summary numbers for notifiable diseases in 2006 are presented in Table 1. A list of notifiable diseases in Colorado and a case report form are included at the end of this update. You can also visit <http://www.cdph.state.co.us/dc/Medlist.pdf> for a list of notifiable diseases in Colorado. Please know that upon receiving a report of any of these diseases, the public health department is likely to contact your patient to assess exposure and put appropriate control measures into place. If for some reason you would not like us to contact your patients, please let us know.

Also, a reminder that all outbreaks from any cause are notifiable conditions and should be reported to the local or state health department within 24 hours of identification. The health department can facilitate testing for pathogens, and can provide guidance/assistance for outbreak investigation and infection control measures. Thank you!

If you have questions please contact your state or local health department:

Colorado Department of Public Health and Environment:
(303) 692-2700 / (303) 370-9395 (after hours)
Fax: (303) 782-0338

Tri-County Health Department:
(303) 220-9200 / (303) 461-2342 (after hours)
Fax: (303) 846-6295

Epidemiology staff at Tri-County Health Department includes:
Jenna Patnaik, MHS, Epidemiology Program Coordinator
Anita Watkins, MPH, Disease Intervention Coordinator
Tista Ghosh, MD, MPH, Medical Advisor
Tegan Boehmer, PhD, MPH, CDC Epidemic Intelligence Service Officer
Taylor Jones, Disease Intervention Specialist
Leslie Smith, MPH, Disease Intervention Specialist
Tiffany White, PhD, Disease Intervention Specialist

Table 1. Reported Cases of Notifiable Disease in Adams, Arapahoe and Douglas Counties, 2006.

Diagnosis	Adams	Arapahoe	Douglas	Total
AIDS	8	36	7	51
Brucellosis	1	0	0	1
Campylobacter	75	72	39	186
Chlamydia	1,284	1,622	202	3,108
Cryptosporidiosis	2	7	11	20
Encephalitis Other	2	0	2	4
Giardiasis	23	71	37	131
Gonorrhea	229	494	30	753
Group A Strep Invasive	18	27	15	60
Group B Strep Invasive	16	31	7	54
Haemophilus influenzae	2	11	1	14
Hemolytic Uremic Syndrome	1	0	2	3
Hepatitis A	3	6	1	10
Hepatitis B, Acute	7	5	1	13
Hepatitis B, Chronic	46	84	20	150
Hepatitis C, Acute	2	3	0	5
Hepatitis C, Chronic	254	309	73	636
HIV	15	40	7	62
Influenza, hospitalized	56	80	23	159
Influenza, pediatric death	0	0	1	1
Kawasaki Syndrome	7	6	3	16
Legionnaires Disease	1	2	1	4
Leprosy	0	1	0	1
Listeriosis	0	1	1	2
Malaria	2	5	2	9
Meningitis Aseptic	19	24	15	58
Meningococcal Disease	0	3	2	5
Mumps	3	6	6	15
Pertussis Syndrome	69	68	29	166
Psittacosis	1	0	0	1
Rocky Mountain Spotted Fever	0	1	0	1
Salmonellosis	48	64	49	161
Shigellosis	34	25	4	63
STEC	3	8	7	18
Strep, Pneumo Invasive	53	47	11	111
Syphilis	18	19	3	40
Toxic Shock	3	1	0	4
Tuberculosis	17	22	1	40
Typhoid Fever	1	1	0	2
Varicella	166	162	115	443
Vibrio SPP (non-cholera)	0	1	1	2
West Nile Virus Infection	11	2	0	13
Yersiniosis	0	2	1	3
Total	2,500	3,369	730	6,599

**TRI-COUNTY HEALTH DEPARTMENT
REPORTABLE DISEASE NOTIFICATION FORM
FOR PHYSICIANS AND OTHER HEALTH CARE PROVIDERS**

Case Information

Case's Name: _____ **Parent's Name:** _____

Age: _____ **Date of Birth:** _____ **Sex:** () Male () Female **Race:** _____

Home Phone(s): _____ **Work Phone(s):** _____

Address: _____ **City:** _____ **Zip:** _____

County of Residence: () Adams () Arapahoe () Douglas

If another county, please specify: _____ **School/Employer:** _____

Medical Information

Disease: _____ **Onset Date:** _____ **Specimen:** _____

Specimen Collect Date: _____ **Lab Tests Performed:** _____

Lab Confirmed: () Yes () No **Name of Lab Used:** _____

Other Relevant Medical/Rx/Immunization Info: _____

Doctor's Information

Doctor's Name: _____ **Doctor's Phone:** _____

Doctor's Address: _____ **City:** _____ **Zip:** _____

Report Submitted By: _____ **Phone:** _____

Organization: _____ **Date Reported:** _____

For your convenience, you may report diseases by phone Monday through Friday, 8:00 A.M. to 5:00 P.M. at (303) 220-9200 or you may complete this form and fax it 24 hours a day to (303) 220-9208.

For after hour and weekend emergencies:

Contact the Tri-County Health Department at (303) 461-2342

or the Colorado Department of Public Health and Environment at (303) 370-9395

For Internal Use:

Date Report Received: _____ **Received By:** _____