

# Public Health Update

A Bi-monthly Newsletter on Current  
Public Health Topics



## Tri-County Health Department

Serving Adams, Arapahoe and Douglas Counties  
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# Public Health Update

March 2003

## What's News to Public Health? Tri-County Health Department 2002: A Year in Review

by Jenna Patnaik, MHS

Calendar year 2002 was an interesting year for all those involved in communicable disease control. Here are some of the events that have occurred in the jurisdiction that Tri-County Health Department (TCHD) serves:

### West Nile Virus Activity of 2002 and Preparation for 2003

Colorado had its first human case of West Nile virus (WNV) in September of 2002. There were a total of 13 cases of WNV in Colorado during the last season and 4 of these cases were residents of **Adams County**. Past experience in eastern states indicates that the second season of human WNV cases is much more dramatic than the first, therefore, it is imperative that TCHD intensifies surveillance and prevention efforts. We have recently established a WNV Task Force in order to prepare for the upcoming 2003 mosquito season. We will enhance our routine surveillance and vector control activities and develop a comprehensive picture of human, horse, mosquito, and chicken serology data in order to better target prevention messages. This team will take initiative in coordinating with state health officials and other local health departments, as well as in working with different municipalities to provide general guidance concerning mosquito control. In addition, TCHD has been involved in a statewide WNV prevention campaign for Public Health Week 2003 that will kickoff on April 7<sup>th</sup>, for more information there will be a website up soon at <http://www.fightthebightcolorado.com>.

### Active Cases of Tuberculosis

- In the state of Colorado, the case rate of active tuberculosis (TB) was 2.3 cases per 100,000 population in 2002. Although this rate is considered low, Colorado continues to struggle to lower the incidence of active TB.
- Statewide, in 2002 there were 8 active cases among children less than 15 years of age and three were in our jurisdiction. TB in children is a major concern because they are at greater risk for severe disease and because the development of TB in children less than five years of age means that transmission has occurred recently and probably within the state.
- Colorado has seen an increasing proportion of cases that are foreign-borne; in 2002 a total of 70% of active cases were foreign-borne compared to about a third of cases ten years ago.



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Richard L. Vogt, M.D., Executive Director

- In **Arapahoe County**, there was almost a doubling of active cases between 2001 and 2002, from 11 to 20 cases. There were 10 cases of active TB in **Adams County** and 2 cases in **Douglas County** in 2002.
- There is a great need to screen and PPD test those at risk for TB, especially foreign-borne patients.
- World TB Day is held on March 24<sup>th</sup> each year, it is an occasion for people around the world to raise awareness about the international health threat presented by TB.
- New treatment guidelines published by the American Thoracic Society and the Centers for Disease Control and Prevention and are freely available at <http://www.thoracic.org/adobe/statements/treattb.pdf>.

## **Outbreak of *E. coli* O157:H7 and Hemolytic Uremic Syndrome**

In June and July, the Colorado Department of Public Health and Environment (CDPHE) identified an outbreak of 22 cases of *E. coli* O157:H7 and hemolytic uremic syndrome (HUS) illnesses within the state. Nine of these cases were reported to TCHD (3 in **Arapahoe County** and 6 in **Douglas County**) and interviews revealed that eight cases ate ground beef purchased from Safeway prior to illness. Associations between illness and identified risk factors were determined by conducting a case-control study of the nine TCHD cases and 23 randomly selected controls. Analysis showed that those who purchased ground beef at Safeway stores were at a significant increased risk of illness.

An environmental investigation revealed that Safeway stores had reground beef from the ConAgra meatpacker plant in Greeley. Routine microbiologic testing conducted by the U.S. Department of Agriculture (USDA) detected *E. coli* O157 in the beef products of ConAgra, which resulted in a nationwide recall of 354,200 pounds of ground beef products produced on May 31, 2002. Subsequent to the detection of this outbreak, laboratory testing confirmed that the *E. coli* O157:H7 DNA fingerprint in a sample from the plant matched the DNA fingerprint in specimens taken from patients and from ground beef product obtained from the freezers of two cases. The nationwide recall of ground beef was expanded to a recall of 18.6 million pounds of fresh and frozen ground beef and beef trimmings.

## **Cluster of Hepatitis A Cases**

An outbreak of hepatitis A occurred in an extended family in the Westminster area, **Adams County** during April and May. Nine cases of hepatitis A were identified in six related families. Five cases were laboratory confirmed and the other cases met the clinical case definition for hepatitis A and were epi-linked to confirmed cases. The index case had an illness onset in January 2002 just after arrival to the United States from Europe, where the virus was most likely acquired. The routes of exposure were either a common source exposure or person-to-person spread. There were several extended family gatherings where possible transmission may have occurred. Of the 73 individuals potentially exposed, 45 individuals received immune globulin (those > 2 years of age also received the vaccine), 6 individuals received the vaccine only, and 13 individuals did not receive either the immune globulin or the vaccine (reasons included prior history of illness, falling outside 14-day exposure window, and did not want to receive immune globulin or vaccine).

## **Immune Globulin Shot Clinic to Prevent Hepatitis A**

In December, a laboratory confirmed hepatitis A case in a food handler at Taco Bell in Commerce City, **Adams County** was reported to TCHD. Because the ill employee had questionable hand washing practices and handled ready-to-eat foods with bare hands during the infectious period, and because there were deficiencies with hand washing facilities within the restaurant, it was determined that it was necessary to notify the public about the possible exposure to hepatitis A. Customers who ate at this restaurant location on particular days were advised to get an immune globulin shot (IG) by the end of the week to prevent illness. The clinic was set up so that persons were screened for the appropriate window of exposure, prior history of hepatitis A disease or vaccine, as well as any potential symptoms prior to being sent for an IG shot. Persons identified as eligible for the shot were weighed and then seen by an available nurse for the injection. A total of 693 persons received IG at TCHD clinics. In addition, TCHD set up a phone service to answer questions from the public regarding this issue. No secondary cases linked to the food handler were identified.

## **Pertussis at Strasburg Elementary, Middle, and High Schools**

TCHD investigated 13 confirmed and 7 probable cases of pertussis that affected six separate families who lived in Strasburg during December 2002. Fifteen children and five adults were affected and 8 were residents of **Adams County** and 12 of **Arapahoe County**. Ten of the fifteen symptomatic children had completed at least 4 doses of pertussis-containing vaccine. Twelve of the fifteen children attend Strasburg Elementary, Middle, or High Schools, which share the same building, and one adult case was a teacher at the school. Transmission of the disease mostly likely occurred at school and then in the home to other family members. An informational letter was sent home with all Strasburg school children to advise parents about pertussis.

## **Cases of Early Syphilis Outbreak**

There was a dramatic rise in the number of cases of early syphilis in Colorado observed this past year, primarily in the Denver metropolitan area. The number of cases in the state increased from 35 in 2001 to 94 in 2002. The cases have predominantly been among men who have sex with men (MSM) and secondarily among Hispanic non-MSM identified men. More than about half the cases are co-infected with human immunodeficiency virus (HIV). There were 10 cases of early syphilis that were residents of our three counties last year (1 in **Adams County**, 7 in **Arapahoe County**, and 2 in **Douglas County**) which was at least twice as high as the total number of early syphilis cases in each of the five previous years.

## **Illness Associated with Thimmig School Teacher Potluck Meals**

There was a foodborne illness outbreak among teachers of a Thimmig, **Adams County** elementary school after eating several potluck meals in October. TCHD investigated 49 persons who ate at least one of these potluck meals and of these, 21 (43%) met the case definition of having vomiting and/or diarrhea. Although the sick teachers did not face serious illness, many teachers were unable to attend work as a result of illness. The median length of illness was 24 hours and the median onset of symptoms was 36 hours after eating. Statistical data indicated that one specific food item served at two of the three meals was the cause of illness, however, environmental investigation of preparation techniques of this dish did not determine the source of contamination. The symptoms, incubation period and length of illness suggest that a Norovirus (previously called Norwalk-like virus) was the probable contaminating agent. Norovirus is an extremely common cause of foodborne illness, although it is not always diagnosed because laboratory testing is not widely available. A letter containing information on how to properly handle foods related to potlucks was sent out to schools within our jurisdiction.

## **Holiday Inn Banquet Meal for King Soopers' Employees**

TCHD was notified that attendees of a December King Soopers' employee dinner banquet became ill with severe diarrhea after eating a catered meal at Holiday Inn in Northglenn, **Adams County**. There was no specific food item identified as the source of contamination since most of the 33 attendees all ate the same standard meal. A random sample of 24 non-attending employees was interviewed to determine if the illness was event-related. Since none of the non-attending employees became ill and the epidemiologic curve was characteristic of a point source exposure, it was determined that eating at the dinner party was associated with illness. Of the 33 persons who ate at the dinner party, 15 (45.5%) reported illness and met the case definition of having symptoms of diarrhea, vomiting and/or abdominal pain. The median incubation period was 8 hours and the median duration of symptoms was 12 hours. Neither the epidemiologic or environmental investigations revealed a source of contamination and/or mode of transmission.

**Table. Reported Cases of Disease in Adams, Arapahoe and Douglas Counties, 2002.**

<b>Diagnosis</b>	<b>Adams</b>	<b>Arapahoe</b>	<b>Douglas</b>	<b>Total</b>
<i>Amebiasis</i>	4	4	0	8
<i>Campylobacter</i>	37	62	27	126
<i>Colorado Tick Fever</i>	1	0	0	1
<i>Cryptosporidiosis</i>	2	4	1	7
<i>Dengue Fever</i>	0	3	0	3
<i>E. coli O157:H7</i>	2	11	14	27
<i>E. coli STEC</i>	0	0	2	2
<i>Encephalitis Other</i>	0	2	2	4
<i>Giardiasis</i>	29	62	38	129
<i>Group A Strep Invasive</i>	27	17	7	51
<i>Group B Strep Invasive</i>	25	24	7	56
<i>Haemophilus influenzae</i>	3	8	2	13
<i>Hemolytic Uremic Syndrome</i>	0	3	2	5
<i>Hepatitis A</i>	12	8	2	22
<i>Hepatitis B, Acute</i>	4	9	3	16
<i>Hepatitis B, Chronic</i>	83	110	29	222
<i>Hepatitis B, Perinatal</i>	0	2	0	2
<i>Hepatitis C, Chronic</i>	214	299	26	539
<i>Influenza</i>	231	172	33	436
<i>Kawasaki Syndrome</i>	4	0	0	4
<i>Legionnaires Disease</i>	0	2	1	3
<i>Listeriosis</i>	1	2	0	3
<i>Malaria</i>	1	3	0	4
<i>Meningitis Aseptic</i>	23	30	18	71
<i>Meningitis, other bacteria</i>	2	2	1	5
<i>Meningococcal Disease</i>	5	1	1	7
<i>Mumps</i>	1	0	0	1
<i>Pertussis Syndrome</i>	44	77	10	131
<i>Rabies Animal</i>	2	8	1	11
<i>Rocky Mountain Spotted Fever</i>	0	1	0	1
<i>Salmonellosis</i>	53	64	26	143
<i>Shigellosis</i>	22	14	6	42
<i>Strep, Pneumo Invasive</i>	54	50	13	117
<i>Toxic Shock-Staph</i>	1	2	1	4
<i>Toxic Shock-Strep</i>	0	0	1	1
<i>Typhoid Fever</i>	1	2	0	3
<i>Vibrio spp. (non-cholera)</i>	0	1	0	1
<i>Vibrio vulnificus</i>	0	1	0	1
<i>West Nile Virus Infection</i>	4	0	0	4
<i>Yersiniosis</i>	1	1	0	2
<b>Total</b>	893	1061	274	2228

Comments or questions, please call Tri-County Health Department at (303) 220-9200.