

IDAHO DISEASE Bulletin

Tuberculosis Outbreak continued

have matching genotypes, although few direct links between them have been found by interview. Aggressive efforts have been made to find any additional cases, including posting notices in areas where homeless persons congregate, offering free skin testing at homeless shelters and day

centers, and ongoing efforts to require skin testing of all persons staying overnight at local area shelters.

In at least one case, the diagnosis was initially missed on presentation. Please consider tuberculosis in any homeless patient presenting with pneumonia or other febrile illness with

weight loss. If your suspicion is high, please notify an epidemiologist at your public health district or Dr. Christine Hahn at the state TB control program immediately so we can assist with patient isolation, treatment, and investigation as quickly as possible to prevent additional cases.

Morgellons: Disease or Delusion?

PEOPLE WHO EXPERIENCE SENSATIONS of something crawling on or biting their skin, skin lesions, and sometimes fibers or granules coming out of their skin have usually been diagnosed with delusional parasitosis; but a new name and media interest in the condition has recently developed, leading to more inquiries from patients. Patients seek assistance from providers and public health agencies to gain information on the condition, to learn what is being done to address the problem, to request environmental sampling of their living spaces, and to receive health education.

“Morgellons” was coined by a patient advocate after reading about a

disease with similar symptoms mentioned in a 16th-century medical text. The syndrome has been described as a constellation of symptoms which include crawling, stinging, and biting sensations; non-healing skin lesions with associated fiber-like structures, seed-like granules or black speck-like material; fatigue; cognitive difficulties such as short term memory and attention deficit; and behavioral effects such as Attention Deficit Disorder and Obsessive-Compulsive Disorder¹.

No peer-reviewed findings of this syndrome have ever been published. Therefore, little information is available for health care providers and public health on an appropriate

course of action.

The Centers for Disease Control and Prevention has formed a task force to gather information on Morgellons reports. Inquiries may be directed to morgellonssyndrome@cdc.gov. The Idaho Department of Health and Welfare is not pursuing investigation of Morgellons reports, but will wait for additional information to be collected and reported upon by the CDC. Valuable information on delusional parasitosis (and human skin parasites) can be found at <http://delusion.ucdavis.edu/delusion-al.html>.

¹ Morgellons Research Foundation Web Site. <http://www.morgellons.org/casedef.html>. Accessed 10/2/2006.

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West Nile Virus in Idaho in 2006

In 2006, Idaho led the nation in reported cases of West Nile Virus (WNV) infection with 909 reported human cases as of 11/13/2006. The cases were classified by syndrome; 766 were non-neuroinvasive WNV fever and 143 were considered neuroinvasive. All WNV infections, neuroinvasive and non-neuroinvasive, are reportable in Idaho. Deaths of 17 individuals were counted as being at least in part due to WNV. This was the third year of local WNV transmission in Idaho. Given that many other states experienced an upsurge in cases the second or third year WNV became established in those states, an epidemic of WNV was not unexpected in Idaho. West Nile virus activity was reported from 37 of 44 Idaho counties, sparing most of the northern region of the state to date. Ada (n = 246), Canyon (n = 180), Elmore (n = 64), and Bingham (n = 75) Counties collectively reported 62% of the cases this year.

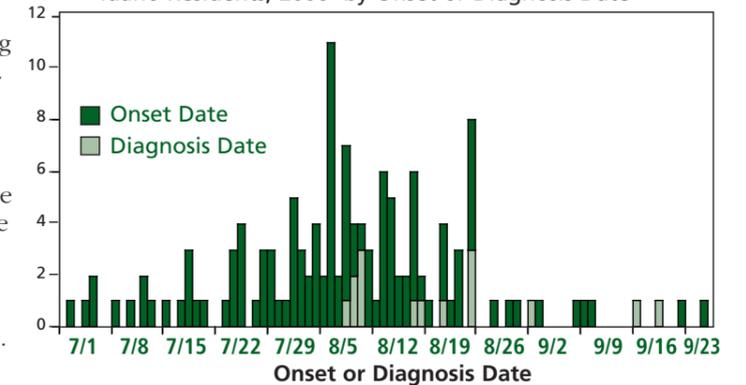
Neuroinvasive Cases

About 1 in 150 infections result in neuroinvasive disease, including meningitis, encephalitis, acute flaccid paralysis (AFP) due to poliomyelitis-like syndrome or an illness similar to Guillain-Barré syndrome, or cranial neuropathies. Onset of neuroinvasive disease is probably the most reliable indicator to use for tracking the timing and peak of human WNV infections in a community, given the severity of symptoms and the likelihood that those individuals will seek medical attention and subsequently be reported.

Based on reported neuroinvasive disease in Idaho, WNV activity appeared to peak during early August (Figure 1).

Although some investigations are still being finalized, reports of neuroinvasive disease received to date include meningitis (n=54), encephalitis (n= 30), meningoencephalitis (n= 25), and AFP (n=6). The remainder (28) remain unclassified.

Figure 1: Reported WNV Neuroinvasive Disease, Idaho Residents, 2006- by Onset or Diagnosis Date*



*Diagnosis date used if onset date unavailable. (10/13/2006)

Prognosis

In 2003, Sejvar *et al.*¹ published an article examining neurologic manifestations of WNV infection that might distinguish WNV from other viral encephalitides and also examined long-term neurologic effects of WNV infection. They found that at approximately 8 months after onset of illness, all those with West Nile meningitis had a generally favorable outcome, and those with West Nile encephalitis displayed a low incidence of persistent severe sequelae. However, persistent fatigue, headache and myalgia were common among both groups. Patients with encephalitis or acute flaccid paralysis frequently experienced tremor and parkinsonism was common, with persistence of parkinsonism in

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E. coli O157:H7 Outbreak Related to Spinach: Impact in Idaho

ON SEPTEMBER 14, 2006, THE FDA ADVISED CONSUMERS not to eat fresh bagged spinach after CDC officials reported clusters of *E. coli* O157:H7 cases associated with fresh spinach consumption from several states, including Idaho (Figure 1). As of this printing, over 200 cases have been linked to this outbreak, including eight confirmed cases from Idaho. The death of a 2-year old child from Chubbuck increased national attention on the outbreak and Idaho's state and local health departments. Idaho cases were identified through molecular testing performed at the Idaho Bureau of Laboratories (IBL) and the State of Utah Public Health Laboratory. In several reported cases of *E. coli* O157:H7 infection, clinical laboratories did not forward bacterial isolates to the IBL for molecular analysis; therefore, it could not be determined if the patient had the outbreak strain of *E. coli* O157:H7. Laboratories should be encouraged to send all *E. coli* O157:H7 isolates or shiga-toxin positive stools to IBL for molecular analysis.

The cause of the spinach contamination is still under investigation. Samples of cattle feces on one of the four implicated ranches tested positive for the outbreak strain of *E. coli*

O157:H7. The four implicated fields are not currently being used to grow any fresh produce. According to the FDA, "There has been a long history of *E. coli* O157:H7 outbreaks involving leafy greens from the central California region. Spinach processed by other manufacturers has not been implicated in this outbreak, but based on discussions with industry, and given the past *E. coli* O157:H7 outbreaks, FDA and the State of California still expect the industry to develop a comprehensive plan which is designed to minimize the risk of another outbreak due to *E. coli* O157:H7 in spinach grown in central California. While this plan is under development, FDA and the State of California reiterate previous concerns and advise firms to review their current operations in light of the agency's guidance for minimizing microbial food safety hazards."

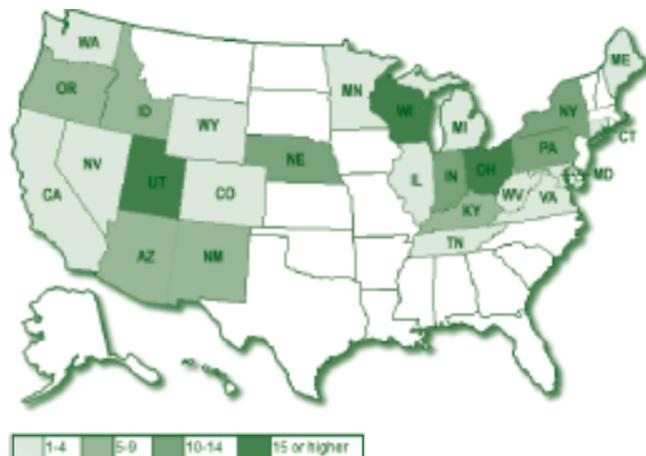


Figure 1. *E. coli* O157:H7 Outbreak Case Counts by State (As of October 6, 2006). Source: Centers for Disease Control and Prevention. http://www.cdc.gov/foodborne/ecolispinach/casecount_us_map.htm

Consumers are being advised that many pre-cut, bagged produce items like spinach and lettuce are pre-washed. If so, it will be stated on the packaging. This pre-washed, bagged produce can be used without further washing, according to the FDA. See <http://www.fda.gov/oc/opacom/hot-topics/spinach.html> for more information on spinach recalls and the spinach investigation, and <http://www.cdc.gov/foodborne/ecolispinach/100606.htm> for more information on the investigation of human cases.

West Nile Virus in Idaho continued

half of patients at follow-up. Patients with acute flaccid paralysis had a very poor prognosis for return to limb function. Of the three patients examined with AFP in this article, all showed chronic denervation and motor axon loss in affected limbs at the 8-month follow-up. No improvement in limb weakness occurred over that time.

Carson et al² published a review in 2006 of long-term clinical and neuropsychological outcomes of WNV infection. The authors assessed a small population of laboratory-confirmed WNV cases (neuroinvasive [n=11] and WN fever [n= 38]) a mean of 13 months after diagnosis. The most frequent long-term affects included fatigue, memory problems, extremity weakness, joint pain, word-finding difficulties, headaches, tremor, and other abnormalities in motor skills. Patients with milder illness, including West Nile fever, were just as likely as patients with more severe illness to experience adverse outcomes.

Summary

Based on 1 neuroinvasive illness per 150 infections, it is estimated that there were approximately 21,450 WNV

infections in Idaho this season; the majority were asymptomatic. Although a significant number, this also is a reminder that the vast majority of Idahoans are probably still nonimmune and another epidemic year could occur next year. It is expected that WNV will continue to expand into northern regions of Idaho in years to come.

We continue to encourage healthcare providers to promote the "Fight the Bite" campaign, and educate patients on the value of avoiding mosquito bites in 2007. See www.Westnile.idaho.gov for more information on this campaign.

1 Sejvar, James J, Haddad, M.B., Tierney, B. C., et al. Neurologic Manifestations and Outcome of West Nile Virus Infection JAMA, July 23/30 2003 -Vol 290, No. 4, pp 511- 515
 2 Carson, Paul J, Konewko, P, Wold, K. S., et al. Long-Term Clinical and Neuropsychological Outcomes of West Nile Virus Infection. *Clinical Infectious Diseases* 2006;43:723-730

Tuberculosis (TB) Outbreak in Treasure Valley

AN INCREASE IN TB CASES IN IDAHO IN 2005 was noted, in part due to a rise in reported cases among foreign-born individuals statewide, but also due to an outbreak of TB in the Treasure Valley. It's not clear that this outbreak is over yet.

In January 2005, a case of TB was

reported in a 50-year old homeless male in Boise. He was treated successfully with directly observed therapy, a process in which public health staff observe the patient taking their medication each day to assure compliance. In October 2005, a second case of TB, also in a homeless male, was reported.

The initial interview revealed no clear connections between the two other than their living homelessness, but molecular genotyping of the tuberculosis isolate revealed a match between the two organisms. Since then, three more cases have been reported, all in Boise-area homeless men. All five

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Influenza Season 2006-2007

INFLUENZA VACCINE MANUFACTURERS have produced approximately 110-115 million doses of influenza vaccine for the 2006-07 influenza season, an amount that is approximately 16% more doses than were available for the 2005-06 season. Despite this increase in production, early distribution delays leading to cancelled vaccination clinics were a common occurrence this October. Notwithstanding delays in some shipments, it is expected that there will be an ample supply of flu vaccine available so everyone who wants to get a flu shot this year can receive one.

Persons considered at high risk for complications associated with an influenza infection or persons who commonly have contact with those who are at high risk should receive the influenza vaccine.

People at high risk for complications from the flu include:

- Children aged 6-59 months of age,
- Pregnant women,
- People 50 years of age and older,
- People of any age with certain chronic medical conditions such as congestive heart failure, asthma, or diabetes, and
- People who live in nursing homes and other long term care facilities.

People who live with or care for those at high risk for complications from flu and who should receive a flu vaccination include:

- Health care workers,
- Household contacts of persons at high risk for complications from the flu (see above), and
- Household contacts and out of home caregivers of children less than 6 months of age (these children are too young to be vaccinated).

Vaccine Options

Vaccines to be used in the 2006-07 season in the U.S. target the following three influenza viruses:

- an A/New Caledonia/20/99 (H1N1)-like virus;
- an A/Wisconsin/67/2005 (H3N2)-like virus (A/Wisconsin/67/2005 and A/Hiroshima/52/2005 strains); and,
- a B/Malaysia/2506/2004-like virus (B/Malaysia/2506/2004 and B/Ohio/1/2005 strains)

Different influenza vaccine preparations have different indications as licensed by the FDA. Table 1 lists the currently available influenza vaccine options in the U.S. for the 2006-2007 influenza season.

TABLE 1*. Influenza Vaccine Manufacturers for the 2006-07 Influenza Season

MANUFACTURER	VACCINE	FORMULATION	THIMEROSAL PRESERVATIVE	AGE INDICATION
sanofi pasteur, Inc.	Fluzone®, Inactivated TIV	Multi-dose vial	Yes	≥ 6 months
		Single-dose pre-filled 0.5 mL syringe or vial	None	≥ 36 months
		Single-dose pre-filled 0.25 mL syringe	None	6-35 months
MedImmune Vaccines, Inc	FluMist™ LAIV	Single-dose sprayer	None	Healthy persons 5-49 years
Novartis Vaccine (formerly Chiron Corporation)	Fluvirin™ Inactivated TIV	Multi-dose vial	Yes	≥ 4 years
		Single-dose 0.5 mL syringe	<1µg Hg/0.5mL dose), preservative free	≥ 4 years
GlaxoSmithKline, Inc.	Fluarix™ Inactivated TIV	Single-dose pre-filled syringe 0.5 mL	<1 µg Hg/0.5mL dose, preservative free	≥ 18 years
	FluLaval™ Inactivated TIV (FDA-approved 10/5/2006)	Multi-dose vial	Yes	> 18 years

* From the Centers for Disease Control and Prevention <http://www.cdc.gov/flu/about/qa/vaxprioritygroups.htm>

To learn more about the vaccines or seasonal, avian or pandemic influenza, search the Centers for Disease Control and Prevention flu home page at <http://www.cdc.gov/flu/>, visit our website at <http://healthandwelfare.idaho.gov>, or search <http://www.pandemicflu.gov/>