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## 2004 Communicable Diseases Summary – Trends and Observations

Year-end data for 2004 reportable diseases in the 15 county East Tennessee Region are notable for the following:

- Drug Resistant *Strep. pneumococcus* (DRSP) continues to steadily increase – from 9 cases in 2002, to 15 in 2003, to 26 in 2004;
- Gonorrhea cases have steadily climbed – from 225 in 2002, to 275 in 2003, to 349 in 2004; Chlamydia case reports have leveled off between 2003 and 2004;
- Hepatitis B cases for 2004 (61) were approximately the same in number for 2003, but 3 times the number reported in 2002;
- Shigella (17 cases in 2004) decreased back to similar numbers seen in 2002; the 117 cases reported in 2003 were mostly from an elementary-school associated outbreak in Hamblen County;
- TB cases decreased from 24 in 2003 to 20 in 2004;
- 5 animal rabies cases were reported in 2004, similar to 2003; although raccoon variant rabies has made its way into Southeast Tennessee, no cases have been detected among animals in the 16 county Knox-ETR area;
- 13 cases of LaCrosse encephalitis (10 confirmed, 3 probable)
- Testing for WNV in birds dropped dramatically in 2004 – only 17 birds were tested and 2 (12%) were confirmed positive, compared to 46 positive out of 86 (53%) in 2003; there were no human WNV cases in 2004.

Special reports included:

- Giardiasis in a Sevier County daycare - a total of 11 cases were reported
- Varicella in a daycare in Sevier County (17 cases) and in an elementary school in Hamblen County (12 cases)

# EPI Update

## In Knox County:

- Drug Resistant *Strep. pneumococcus* (DRSP) has actually decreased dramatically from 49 cases in 2000 to only 7 cases in 2002. Cases increased slightly in 2003 then declined again in 2004.
- Gonorrhea cases gradually decreased from 2001 to 2003, but have taken a slight upward turn this year; Chlamydia cases have increased each year from 2001 to 2003 and then leveled off this year. Syphilis cases decreased somewhat in 2003, but rebounded in 2004.
- Shigella cases also decreased in Knox County after an increase in 2003 associated with daycare cases.
- TB cases remain low in numbers, with only 5 cases reported thus far in 2004. This continues a downward trend over the last several years.
- Knox County had no cases of animal rabies reported in 2004; significantly no cases of raccoon rabies have been seen, as stated above.
- Two confirmed cases, and one probable case, of LaCrosse Encephalitis were reported for Knox County in 2004, and no human cases of WNV.
- Hepatitis A cases spiraled back down to single digit figures after the sharp peak seen in Knox County and East Tennessee associated with a restaurant based outbreak.

## Staff in Knox County dealt with:

- A small temporal outbreak of syphilis during the spring.
- Two significant outbreaks of Norovirus, one based in a restaurant (41 cases), and one based in a nursing home (24 cases).

## **Influenza Vaccine and Disease Update**

As of 1-18-05, a total of 25,992 doses of influenza vaccine had been distributed through the 15 county ETR's County Health Departments. Persons were screened for high risk – usually over the telephone – and most were given appointments to receive influenza vaccine in the health departments.

Knox County provided doses of inactivated influenza vaccine to persons meeting high-risk criteria through a variety of mechanisms. In November approximately 3000 doses were distributed through a mass vaccination clinic at the Expo Center. During December approximately 5,000 doses were given through an appointment system similar to ETRO's system. Several high-risk outreach efforts were completed in conjunction with Knox County Senior Centers and other agencies serving high-risk candidates. Knox County Health Department also utilized FluMist for the vaccination of healthy children and adults.

As of 1-19-05, statewide, a total of 14 cases of culture-confirmed influenza cases had been reported (beginning with week 40 in 2004), and serotyped as follows:

- Influenza A - H1N1 or H1N2: 1 case
- Influenza A - H3N2: 11 cases
- Influenza B: 2 cases

For national-level data, the Centers for Disease Control and Prevention (CDC) reports that:

Of the 1,369 influenza viruses identified since October 3, a total 1,128 (82.4%) were influenza A viruses, and 241 (17.6%) were influenza B viruses. Of the 1,128 influenza A viruses, 406 (36.0%) have been subtyped; 404 (99.5%) were influenza A (H3N2) viruses, and two (0.5%) were influenza A (H1)<sup>n</sup> viruses.

CDC has characterized antigenically 107 influenza viruses collected by U.S. laboratories since October 3. All 85 of the influenza A (H3N2) isolates were A/Fujian/411/2002-like (H3N2), the influenza A (H3N2) strain recommended for the 2004—05 influenza vaccine (MMWR, January 14, 2005 / 54(01);14-16)

## **TRANSMISSION OF MALARIA IN RESORT AREAS – DOMINICAN REPUBLIC, 2004**

Since November of 2004, CDC has received reports of three malaria cases in U.S. travelers returning from areas in La Altagracia and Duarte provinces previously considered nonmalarious. An additional 14 cases of malaria in La Altagracia Province, in the far eastern region of the country, have been reported in European and Canadian travelers. These areas include resort areas to which many Americans and Europeans travel.

CDC's report has hypothesized several reasons for this outbreak of non-resistant malaria in areas of the Dominican Republic previously thought to be nonmalarious. In September, 2004, Hurricane Jeanne struck the Dominican Republic. The east coast, including Punta Cana and the Bavaro Zone, received heavy rains and flooding, which might have resulted in increased breeding of mosquitoes. In addition, construction in Punta Cana and the Bavaro Zone has brought in many migrant workers from areas where malaria is endemic.

**In November, 2004, CDC expanded its recommendations for chloroquine prophylaxis for travelers to the Dominican Republic to cover all of la Altagracia and Duarte provinces, in addition to rural areas countrywide.** If you have a patient traveling to a resort in the Dominican Republic who would like more information on the recommendations, they can call the Knox County Health Department Travel Clinic at 215 5070, or go to the [cdc.gov](http://cdc.gov) website.

## From Tennessee Department of Health: New TB Reporting Requirement

As of July, 2004 there are new requirements for reporting tuberculosis (TB) to the Tennessee Department of Health:

**Effective July 1, 2004, all persons with known or suspected TB, including pulmonary and extrapulmonary disease, must be reported to the Tennessee Department of Health within 12 hours by phone (T. C. A. 68-10-101; Chapter 1200-14-1.02 of the Rules and Regulations of Communicable Diseases). This verbal report should include the name, age, sex, race, and address of the patient. Written notification providing the same information must also be submitted within one week, preferably using forms provided by the Department. Persons to report include who you can treat or consider treating for active TB.**

Early notification of TB suspects and cases enables the Department of Health to ensure appropriate treatment of TB suspects and cases to provide all patients with essential services, including counseling and education regarding TB disease and treatment, “client-centered” case management, free treatment under directly observed therapy, monitoring for toxicity and compliance throughout therapy. Early notification also enables the Department of Health to initiate a contact investigation promptly to identify additional persons with active TB or latent TB infection, thus preventing further spread of disease.

Providers should report TB cases and suspects directly to the Regional Health Office TB Clinic designated for the county where the patient resides. Please note that Health Department TB Clinic providers can provide consultation if you are considering the possibility of TB and whether or not to initiate isolation and treatment.

In East Tennessee, call 865-546-9221; in Knox County call 865-215-5370. Ask for a TB nurse who can assist you.



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## **Treatment of Latent Tuberculosis Infection (LTBI)**

Treatment of latent TB infection (LTBI) is essential to controlling and eliminating TB in the United States. Treatment of LTBI substantially reduces the risk that TB infection will progress to disease. Certain groups are at very high risk of developing TB disease once infected, and every effort should be made to begin appropriate treatment and to ensure those persons complete the entire course of treatment for LTBI.

### ***Candidates for the Treatment of LTBI***

Persons in the following high-risk groups should be given treatment for LTBI if their reaction to the Mantoux tuberculin skin test is  $\geq 5$ mm:

- \* HIV-infected persons
- \* Recent contacts of a TB case
- \* Persons with fibrotic changes on a chest radiograph consistent with old TB
- \* Patients with organ transplants, and other immunosuppressed patients (receiving the equivalent of  $\geq 15$  mg/day of prednisone for  $\geq 1$  month)

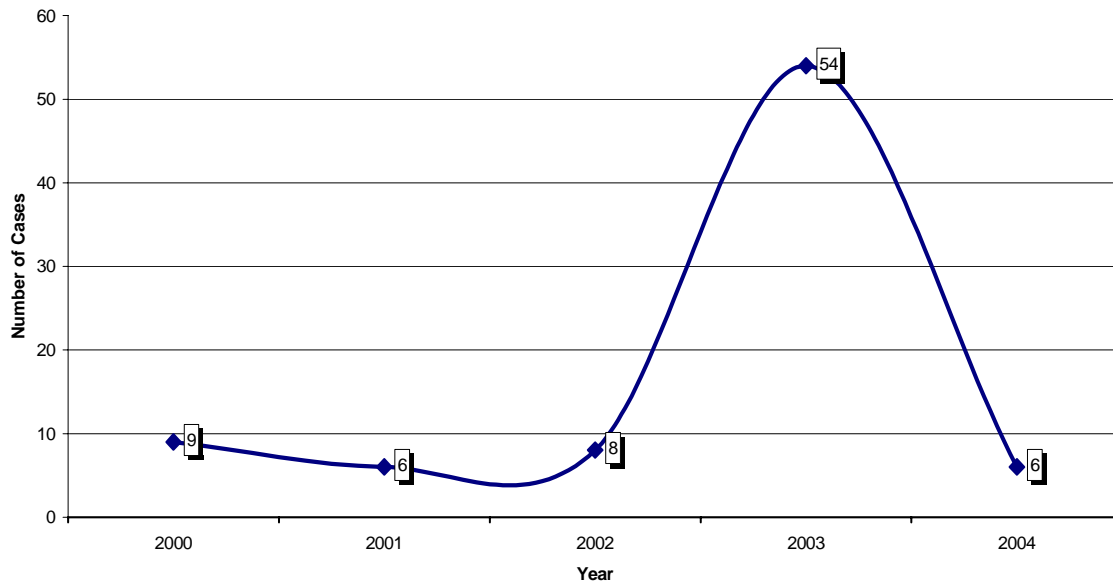
In addition, persons in the following high-risk groups should be considered for treatment of LTBI if their reaction to the Mantoux tuberculin skin test is  $\geq 10$  mm:

- \* Recent arrivals (<5 years) from high-prevalence countries
- \* Injection drug users
- \* Residents and employees of high-risk congregate settings (e.g., correctional facilities, nursing homes, homeless shelters, hospitals, and other health facilities)
- \* Mycobacteriology laboratory personnel
- \* Persons with clinical conditions that make them high-risk
- \* Children <4 years of age, or children and adolescents exposed to adults in high-risk categories

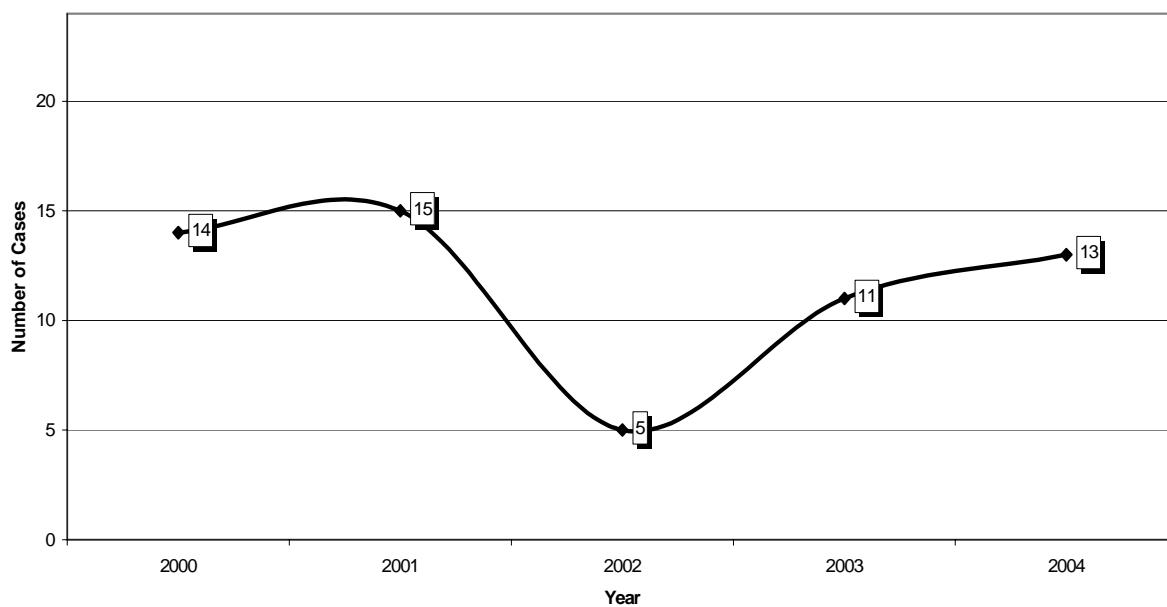
Persons with no known risk factors for TB may be considered for treatment of LTBI if their reaction to the tuberculin test is  $\geq 15$  mm. However, targeted skin testing programs should only be conducted among high-risk groups. All testing activities should be accompanied by a plan for follow-up care persons with TB infection or disease.

For persons suspected of having LTBI, treatment of LTBI should not begin until active TB disease has been excluded. Persons suspected of having TB disease should receive the recommended multidrug regimen for treatment of disease until the diagnosis is confirmed or ruled out.

Number of Acute Hepatitis A Cases, Knox County, 2000-2004



Number of Acute Hepatitis B Cases, Knox County, 2000-2004



## SELECTED DISEASES REPORTED by COUNTY, EAST TN JANUARY-DECEMBER, 2004 YEAR-TO-DATE

Disease	Campylobacter	Salmonella	Shigella	Hep A	Hep B	DRSP	Pen Sen	Strep VRE	Chlamydia	Syphilis	Gonorrhea	AIDS/HIV	TB
<b><i>Knox County</i></b>													
YTD '04	42	63	15	6	13	15	50	31	1448	38	679	26/56	6
YTD '03	58	46	64	54	11	16	40	46	1416	25	675	40/58	7
<b><i>East Tennessee Region</i></b>													
Anderson	8	5	0	0	11	1	12	0	162	0	123	0/0	0
Blount	24	16	0	0	2	5	8	3	212	0	60	1/5	7
Campbell	1	4	0	0	5	2	5	1	41	4	6	1/3	0
Claiborne	2	6	0	2	1	0	3	0	30	1	6	1/1	0
Cocke	2	5	1	0	4	4	10	1	107	2	14	1/2	0
Grainger	5	5	0	0	0	2	2	1	15	0	4	0/0	1
Hamblen	2	8	2	2	8	0	2	1	124	2	28	1/1	1
Jefferson	9	8	6	0	4	3	1	0	82	1	11	1/0	2
Loudon	1	5	0	2	2	2	9	1	55	1	18	4/6	4
Monroe	2	4	0	0	0	2	2	1	76	0	24	3/5	0
Morgan	1	1	0	0	7	1	2	0	24	0	5	3/4	0
Roane	0	4	0	0	14	0	3	0	65	3	17	2/5	1
Scott	1	1	0	0	1	0	1	0	24	1	3	0/0	0
Sevier	6	16	0	1	2	2	11	0	133	1	26	4/5	4
Union	3	2	8	0	0	2	2	0	28	0	6	0/0	0
YTD '04	67	90	17	7	61	26	73	9	1178	16	351	48/93	20
YTD '03	77	81	117	44	56	15	39	90	1207	21	275	61/85	24

# EPI Update

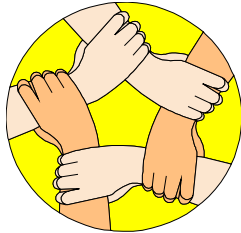
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## ANIMALS TESTED FOR RABIES IN EAST TN JANUARY-DECEMBER, 2004



County	Bats	Skunks	Dogs	Cats	Raccoons	Foxes
Anderson	4	0	5	5	3	1
Blount	9	4	9	10	15	2
Campbell	2	0	15	1	1	3
Claiborne	0	1	3	2	1	0
Cocke	0	2	3	2	0	0
Grainger	2	0	4	7	0	0
Hamblen	0	1	3	2	1	0
Jefferson	1	0	1	2	1	0
Knox	22	9	103	72	132	19
Loudon	1	1	4	3	4	2
Monroe	0	0	2	1	2	0
Morgan	1	0	4	0	2	0
Roane	3	0	15	4	3	0
Scott	0	0	1	0	0	0
Sevier	10	2	16	15	11	0
Union	0	0	2	0	0	0
<b>Total</b>	<b>55</b>	<b>20</b>	<b>190</b>	<b>126</b>	<b>176</b>	<b>27</b>

### Positive Rabies Reports

Date	County	Animal	Variant
1/14/2004	Cocke	Skunk	NC Skunk
7/23/2004	Blount	Bat	Bat
8/3/2004	Sevier	Skunk	NC Skunk
8/12/2004	Sevier	Bat	Bat
9/2/2004	Cocke	Skunk	NC Skunk