

2004 Reportable Disease Summary Report

Cabinet for Health and Family Services
Department for Public Health

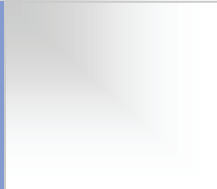
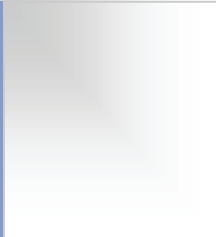
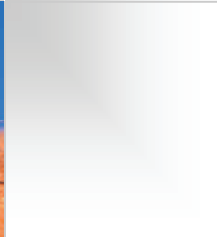
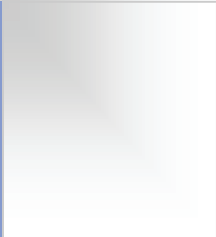
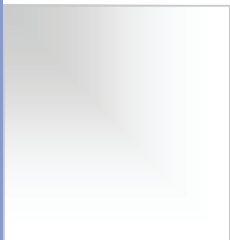
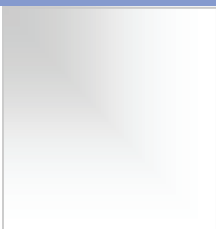
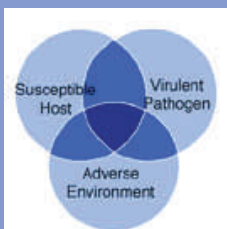


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Background

What is this report about?

The Division of Epidemiology and Health Planning (EHP) in the Kentucky Department for Public Health provides an annual summary of reportable diseases as required by 902 KAR 2:020. This report highlights the surveillance activities that have occurred for 2004 and provides valuable information to health and services providers and the citizens of this state. This summary only reports cases that meet the “confirmed case” definitions of the Commonwealth and the Centers for Disease Control and Prevention (CDC) in Atlanta, Georgia.

EHP collects this information from physicians, hospitals, laboratories and local health departments. The case information entered into the state’s National Electronic Telecommunications System for Surveillance (NETSS) is used for passive surveillance of diseases in the Commonwealth of Kentucky and a weekly report to CDC which presents the information in the Morbidity & Mortality Weekly Report (MMWR).

What is a reportable (Notifiable) disease?

A notifiable disease is one for which regular, frequent, and timely information regarding individual cases is considered necessary for the prevention and control of the disease. The list of notifiable diseases is revised periodically and a disease might be added to the list as a new pathogen emerges, or a disease might be deleted as its incidence declines. Although disease reporting is mandated by legislation or regulation at the state level, Kentucky reporting to CDC is voluntary.

What are the limitations of these data?

Data in the disease reporting system are limited by the availability of complete information. For example, 35 percent of the *Salmonella* cases had “unknown” reported for race. This incomplete information inhibits our ability to accurately report a disease’s impact such as disparities among race, sex, and ethnicity. This shortfall manifests itself in other areas such as lab confirmation, spatial analysis, and underreporting.

Additionally, tardiness with case reporting, inconsistencies with receiving reports, and stakeholders not reporting cases to the state obscure the true disease magnitude. Many conditions are likely underreported. To become a “confirmed case” for some diseases, initial lab reporting must be followed up with a confirmatory test. An initial test may be received, but not the follow-up, which makes it impossible to confirm the case.

Due to the high percentage of “unknowns” race is not reported for all diseases. It should be acknowledged that rates in this report are not age adjusted and are crude rates.

*For further information see the Background section under the following link:
<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5254a1.htm>*

2004 Highlights

The Kentucky Department for Public Health (DPH) strives to meet its mission “To promote and protect the health and safety of Kentuckians”, and work towards its vision “To positively impact the health of Kentuckians through leadership in evidenced based: Advocacy for Wellness, Public Health Policy, Health Promotion, Community Safety, and Disease Prevention and Control.”

The Division of Epidemiology and Health Planning has an initiative for replacing/upgrading its disease reporting system and surveillance approach to achieve the above mission and vision. This new system, KY-Electronic Public Health Reporting System, will allow more timely reporting and robust capacity for investigation. This will allow the state to improve on disease prevention and control.

Further, this report allows DPH to communicate to the Commonwealth its activities and the status of the people’s health relating to communicable diseases.

The following are highlights for 2004:

Acquired Immunodeficiency Syndrome (AIDS) has been less prevalent in Kentucky than many other states, but no less serious. In 2004 the trend shows a continued decline in AIDS cases, with a 9 percent decrease in new AIDS cases compared to 2003. This trend may be due to the improvement in the health of existing HIV cases and to efforts to prevent spread of the disease.

Sexually Transmitted Diseases (STDs), such as Chlamydia, gonorrhea and syphilis, have experienced a decrease in 2004. A downward trend has been seen in number of cases of gonorrhea since 1998, in Chlamydia since 2001, and in syphilis since 1995.

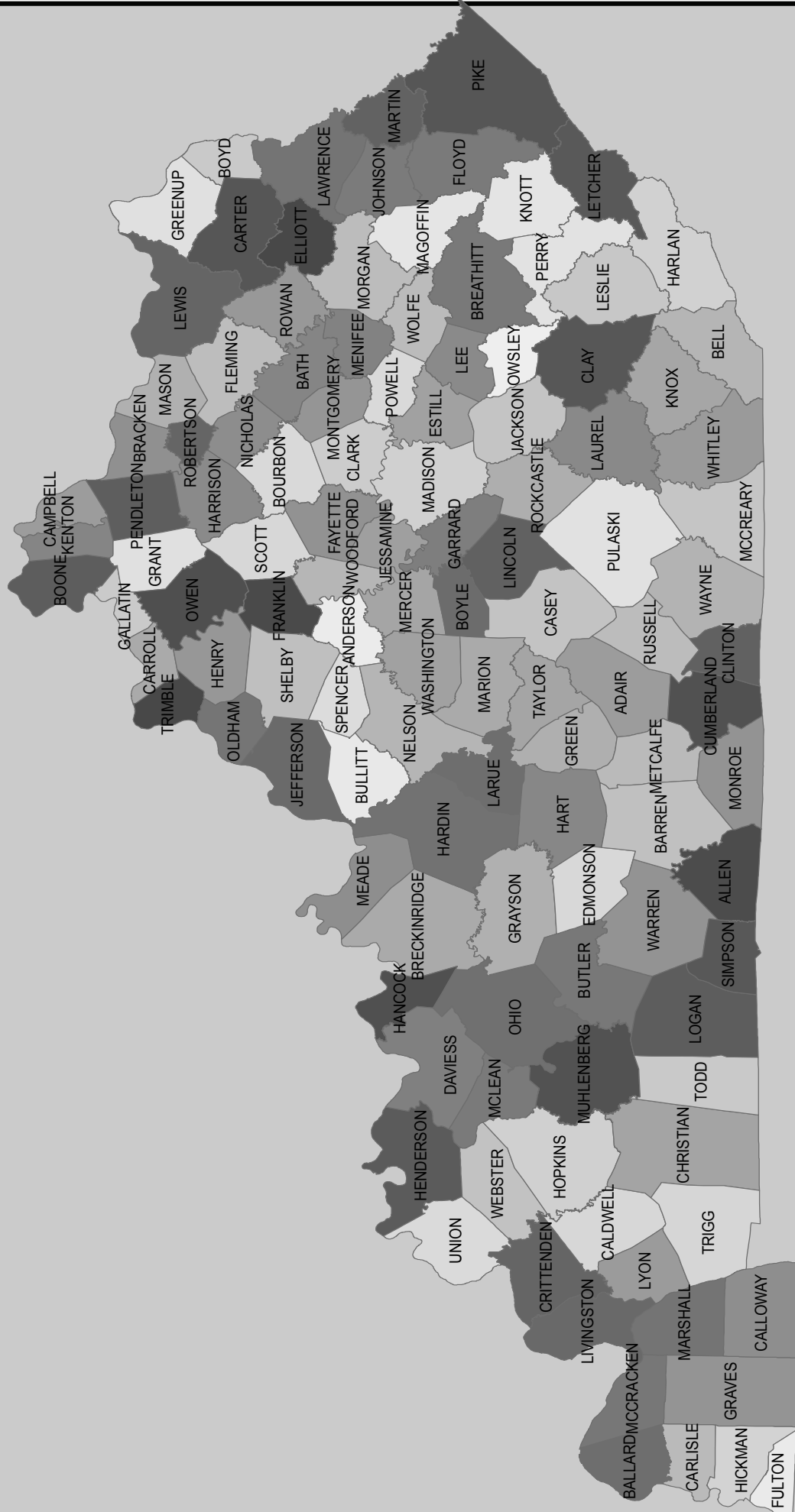
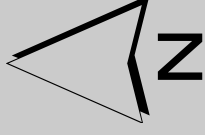
Numbers of cases of Cryptosporidium increased 74 percent in 2004, over a low baseline number of cases in 2003. This seeming increase may have been the result of greater recognition, testing and reporting of the disease. Other diseases exhibited a marked percentage increase, but this maybe due to expected normal variations in relatively low baseline case counts: Toxic Shock Syndrome and West Nile Virus disease.

Pertussis had a 84% percent increase, largely because of an outbreak in Fayette County. This outbreak was associated with daycare centers in the area. On the other hand, Shigellosis saw a decrease of 44 percent, due to fewer outbreaks in 2004.

For further information:

For further information contact the Division of Epidemiology and Health Planning at 502-564-3418 or visit our web address:

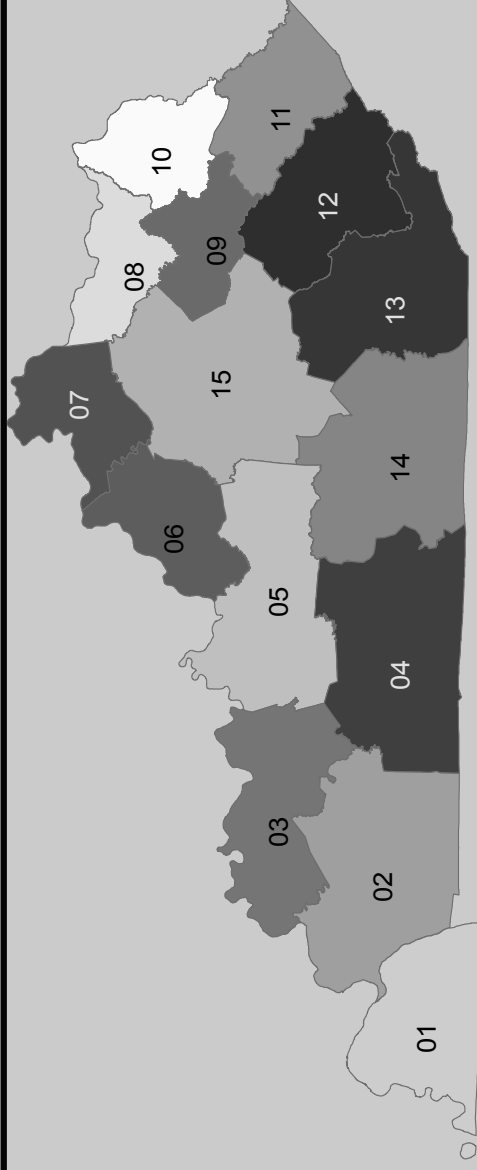
Kentucky by County



Kentucky by Area Development District (ADD)

Legend

- 1 Purchase
- 2 Pennyrite
- 3 Green River
- 4 Barren River
- 5 Lincoln Trail
- 6 KIPDA
- 7 Northern KY
- 8 Buffalo Trace
- 9 Gateway
- 10 FIVCO
- 11 Big Sandy
- 12 Ky River
- 13 Cumberland Valley
- 14 Lake Cumberland
- 15 Bluegrass



Counties within an ADD

- Purchase - Ballard, Calloway, Carlisle, Fulton, Graves, Hickman, McCracken, Marshall
- Pennyrite - Caldwell, Christian, Crittenden, Hopkins, Livingston, Lyon, Muhlenberg, Todd, Trigg
- Green River - Daviess, Hancock, Henderson, McLean, Ohio, Union, Webster
- Barren River - Allen, Barren, Butler, Edmonson, Hart, Logan, Metcalfe, Monroe, Simpson, Warren
- Lincoln Trail - Breckinridge, Grayson, Hardin, Larue, Marion, Meade, Nelson, Washington
- KIPDA - Bullitt, Henry, Jefferson, Oldham, Shelby, Spencer, Trimble
- Northern KY - Boone, Campbell, Carroll, Gallatin, Grant, Kenton, Owen, Pendleton
- Buffalo Trace - Bracken, Fleming Lewis, Mason, Robertson
- Gateway - Bath, Menifee, Montgomery, Morgan, Rowan
- FIVCO - Boyd, Carter, Elliott, Greenup, Lawrence
- Big Sandy - Floyd, Johnson, Magoffin, Martin, Pike
- KY River - Breathitt, Knott, Lee, Leslie, Letcher, Owsley, Perry, Wolfe
- Cumberland Valley - Bell, Clay, Harlan, Jackson, Knox, Laurel, Rockcastle, Whitley
- Lake Cumberland - Adair, Casey, Clinton, Cumberland, Green, McCreary, Pulaski, Russell, Taylor, Wayne
- Bluegrass - Anderson, Bourbon, Boyle, Clark, Estill, Fayette, Franklin, Garrard, Harrison, Jessamine, Lincoln, Madison, Mercer, Nicholas, Powell, Scott, Woodford

SUMMARY

Disease	2002 Case Count/<i>Crude</i> Rate Per 100,000⁽¹⁾	2003 Case Count/<i>Crude</i> Rate Per 100,000	2004 Case Count/<i>Crude</i> Rate Per 100,000
AIDS	198/ 4.90	174/ 4.30	158/ 5.00
Botulism, Infant	0	0	1/ 0.02
Brucellosis	1/ 0.02	0	2/ 0.05
Campylobacteriosis	198/ 4.90	253/ 6.20	273/ 6.60
Chlamydia	8755/ 216.4	7959/ 198.9	6470/ 157.1
Cryptosporidiosis	10/ 0.20	27/ 0.65	47/ 1.1
Encephalitis, California	2/ 0.05	3/ 0.07	1/ 0.02
Encephalitis, West Nile	53/ 1.3	11/ 0.27	1/ 0.02
Escherichia coli Non-O157:H7	0	2/ 0.05	1/ 0.02
Escherichia coli O157:H7	40/ 1.0	29/ 0.70	31/ 0.75
Escherichia coli SHI NG	8/ 0.2	6/ 0.2	10/ 0.24
Ehrlichiosis ⁽²⁾	2/ 0.05	5/ 0.1	2/ 0.05
Gonorrhea ⁽³⁾	3772/ 92.26	3565/ 86.60	2758/ 66.59
<i>Haemophilus influenzae</i>	10/ 0.20	12/ 0.30	16/ 0.39
Hansen	2/ 0.05	0	0
Hepatitis A	47/ 1.2	36/ 0.87	31/ 0.75
Hepatitis B	67/ 1.6	95/ 2.3	85/ 2.1
Hepatitis B , perinatal	1/ 0.02	0	0
Hepatitis C ⁽⁴⁾	5/ 0.1	26/ 0.6	27/ 0.65
Histoplasmosis	40/ 1.0	39/ 1.0	47/ 1.13
Legionellosis ⁽⁵⁾	22/ 0.5	46/ 1.1	44/ 1.1
Listeriosis	4/ 0.1	9/ 0.2	4/ 1.0
Lyme Disease	25/ 0.6	17/ 0.4	15/ 0.4
Malaria	8/ 0.2	11/ 0.27	5/ 0.1
<i>Neisseria meningitidis</i>	18/ 0.4	23/ 0.56	18/ 0.4
Pertussis ⁽⁶⁾	103/ 2.5	53/ 1.3	98/ 2.4
Q Fever	9/ 0.2	9/ 0.2	6/ 0.2
Rabies(Animal) ⁽⁷⁾	28/ 21	39/ 32	23/ 19
RMSF ⁽⁸⁾	5/ 0.1	3/ 0.7	3/ 0.7
Salmonellosis	415/ 10.2	404/ 9.81	361/ 8.72
Shigellosis ⁽⁹⁾	210/ 5.2	136/ 3.3	75/ 1.8
Streptococcal Disease, Invasive Group A	24/ 0.59	52/ 3.3	62/ 1.5
<i>Streptococcus pneumoniae</i> , Drug-Resistant Invasive Disease	19/ 0.46	31/ 0.75	32/ 0.77
Syphilis	212/ 5.19	160/ 3.89	151/ 3.65

Tetanus	0	0	2/0.05
Toxic Shock Syndrome	5/0.1	6/0.2	11/0.27
Toxoplasmosis	0	0	1/0.02
Tuberculosis	146/3.57	138/3.35	127/3.11
Tularemia	2/0.05	2/0.05	5/0.1
Typhoid Fever	4/0.1	1/0.02	3/0.07
<i>Vibrio vulnificus</i>	0	0	1/0.02
<i>Vibrio parahaemolyticus</i>	0	1/0.02	2/0.05
West Nile Fever, Human	22/0.54 ⁽¹⁰⁾	3/0.07	6/0.2

¹ Source: Kentucky State Data Center (<http://ksdc.louisville.edu/kpr/popest/nst-est2005-01.xls>)

² Combined HME and unspecific.

³ The downward trend is indicative of community disease status.

⁴ Interpretation of the present case definition (staff changes), and change in case definition.

⁵ The case/rate variation in 2002 may be due to changes in the lab testing requirements and requirements for reporting.

⁶ Case count decrease attributable to outbreaks in 2002 and 2004.

⁷ Method of Calculation: Annual number of confirmed cases of rabies in animals/Total number of animals tested in that year

⁸ Rocky Mountain Spotted Fever

⁹ Variation in case counts maybe due to natural fluctuations in disease and reporting

¹⁰ Complex interactions between the virus, birds and other animals, mosquitoes, and the environment have influenced the pattern of West Nile virus emergence and distribution and the outcomes of West Nile Fever in humans.

NO CASES REPORTED (2002 through 2004)

Anthrax

Chancroid

Cholera

Diphtheria

Granuloma inguinale

Hantavirus Pulmonary Syndrome

Lymphogranuloma venereum

Measles

Plague

Poliomyelitis

Psittacosis

Rabies, human

Rubella

Yellow Fever

AIDS

The Centers for Disease Control and Prevention define Human Immunodeficiency Virus (HIV) as the virus that causes Acquired Immunodeficiency Syndrome (AIDS). This virus may be passed from one person to another when infected blood, semen, or vaginal secretions come in contact with an uninfected person's broken skin or mucous membranes. In addition, infected pregnant women can pass HIV to their babies during pregnancy or delivery, as well as through breast-feeding. People with HIV have what is called HIV infection. Some of these people will develop AIDS as a result of their HIV infection.

Number of cases

158

Change from 2003

Decreased 9.2 percent

Kentucky rate

5.0 per 100,000

U.S. rate

15.2 per 100,000

Age of case-patients

Mean - 39 years

Median - 39 years

Range - 19 to 50 years

Rate by sex

Female - 1.5 per 100,000

Male - 9.9 per 100,000

Rate by race

White - 4.2 per 100,000

Black - 26.3 per 100,000

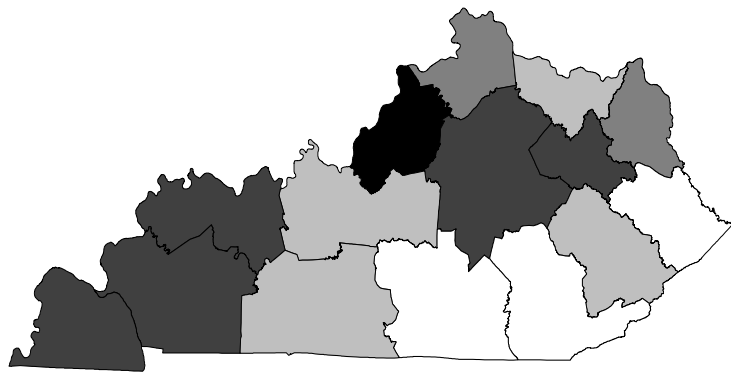
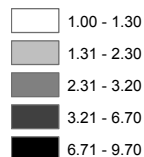
Rate by ethnicity

Hispanic - 14.6 per 100,000

*Rates based on Census 2003
Population Estimates

AIDS Incidence per 100,000 by ADD, 2004

Legend



Source: Kentucky Department for Public Health (KDPH) and Centers for Disease Control and Prevention (CDC).
HIV/AIDS Surveillance. Frankfort, Kentucky: Cabinet for Health and Family Services,
Kentucky Department for Public Health, 2004.

Campylobacteriosis

Campylobacteriosis is an acute zoonotic bacterial enteric illness of varying severity caused by *Campylobacter jejuni* and less commonly *Campylobacter coli*. Diarrhea, abdominal pain, malaise, fever, nausea, and vomiting characterize the illness. The duration may be up to 10 days, but typically lasts from 2-5 days. The mode of transmission is by ingestion of organisms from inadequately cooked chicken or pork, contaminated food or water, raw milk, or from contact with infected pets (kittens and puppies), farm animals or infected infants.

Number of cases

273

Change from 2003

Increased 7.9 percent

Kentucky rate

6.6 per 100,000

U.S. rate

15 per 100,000

Age of case-patients

Mean - 32 years

Median - 33 years

Range - 1 to 91 years

Rate by sex

Female - 5.7 per 100,000

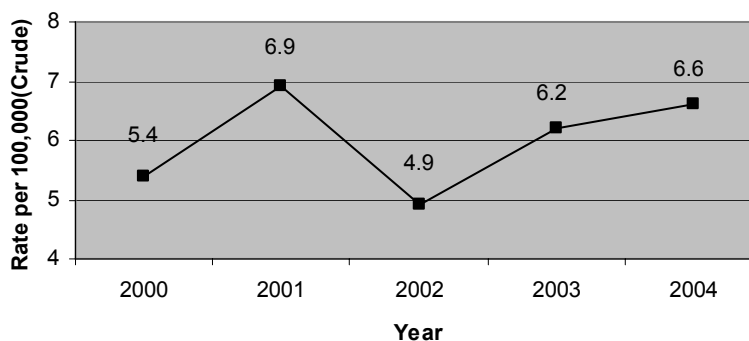
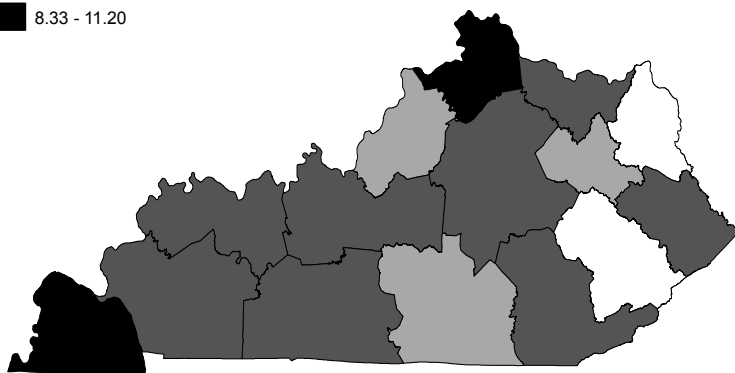
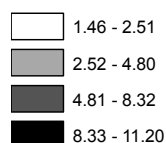
Male - 7.4 per 100,000

*Rates based on Census 2003
Population Estimates

Campylobacteriosis Incidence per 100,000 by ADD, 2004

Source: NETSS—KY-CDC Reporting System

Legend



Chlamydia

Chlamydial infection is a sexually transmitted disease (STD) caused by obligate intracellular bacteria, *Chlamydia trachomatis*. The disease is characterized by urethritis in males and mucopurulent cervicitis in females, however, asymptomatic infections are common. Possible complications in males include epididymitis that can lead to sterility. In females, a complication is salpingitis with risk of infertility or ectopic pregnancy. Eye and lung infections in newborns are the consequences of genital infections in their mothers, which are transmitted during birth. Endocervical chlamydial infection has been associated with increased risk of HIV infection.

Number of cases

6470

Change from 2003

Decreased by 18.7 percent

Kentucky rate

157.1 per 100,000

U.S. rate

304.3 per 100,000

Rate by sex*

Female - 240.4 per 100,000

Male - 71.6 per 100,000

Rate by race**

White - 83.7 per 100,000

Black - 631.5 per 100,000

All Other - 226.1 per 100,000

Rates based on Census 2003

Population Estimates

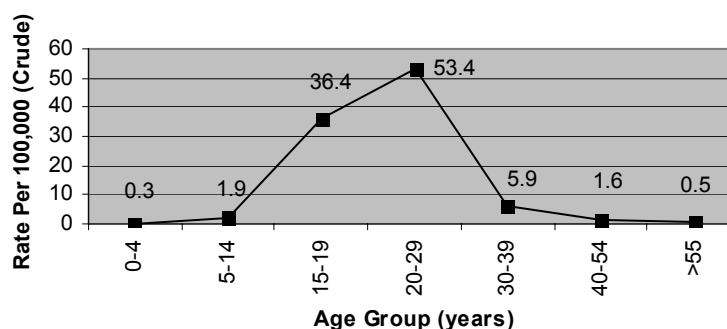
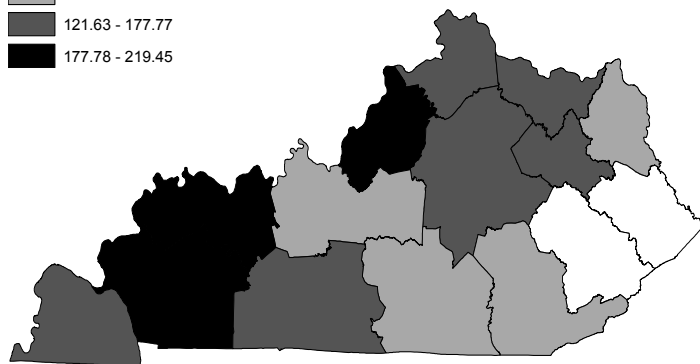
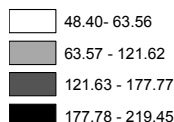
*9 unknown cases

** 1190 unknown cases

Chlamydia Incidence per 100,000 by ADD, 2004

Source: Sexually Transmitted Disease Management Information System (STD*MIS)

Legend



Cryptosporidiosis

Cryptosporidiosis is an illness caused by the coccidian protozoa *Cryptosporidium parvum* characterized by diarrhea, abdominal cramps, anorexia, low-grade fever, nausea and vomiting. Infected persons may be asymptomatic. The disease can be prolonged and life-threatening in severely immunocompromised persons. Transmission is fecal-oral and includes person to person, animal to person, waterborne and foodborne routes.

Cryptosporidia parasites occur worldwide affecting humans, cattle, poultry, reptiles and many other vertebrate species.

Number of cases

47

Change from 2003

Increased 74.1 percent

Kentucky rate

1.1 per 100,000

U.S. rate

1.18 per 100,000

Age of case-patients

Mean - 32 years

Median - 28 years

Range - 1 to 97 years

Rate by sex

Female - 1.0 per 100,000

Male - 1.2 per 100,000

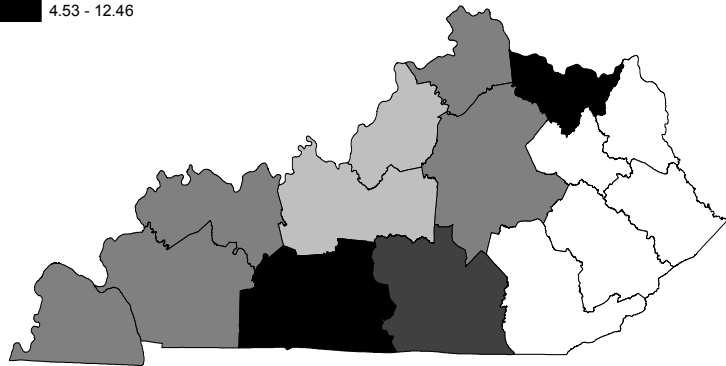
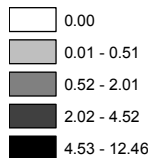
*Rates based on Census 2003
Population Estimates

**2003 had 23 cases; may be
misleading by % percent change.

Cryptosporidiosis Incidence per 100,000 by ADD, 2004

Source: NETSS—KY-CDC Reporting System

Legend



Escherichia coli O157:H7

Escherichia coli O157:H7, an enterohemorrhagic strain of *E.coli* (EHEC), is the agent for an illness of variable severity characterized by diarrhea (often bloody) and abdominal cramps. Hemolytic uremic syndrome (HUS) and thrombotic thrombocytopenic purpura (TTP) are serious complications. Approximately 2-7 percent of patients with EHEC diarrhea progress to HUS, with children under 5 years of age being at greatest risk. Transmission is mainly by ingestion of contaminated food, e.g. inadequately cooked beef, raw milk or other foods contaminated with animal feces. Direct transmission occurs person to person in families, child care centers and custodial institutions. Further, waterborne transmission occurs.

Number of cases

31

Change from 2003

Increased 6.9 percent

Kentucky rate

0.75 per 100,000

U.S. rate

0.92 per 100,000

Age of case-patients

Mean - 23 years

Median - 13 years

Range - 1 to 95 years

Rate by sex

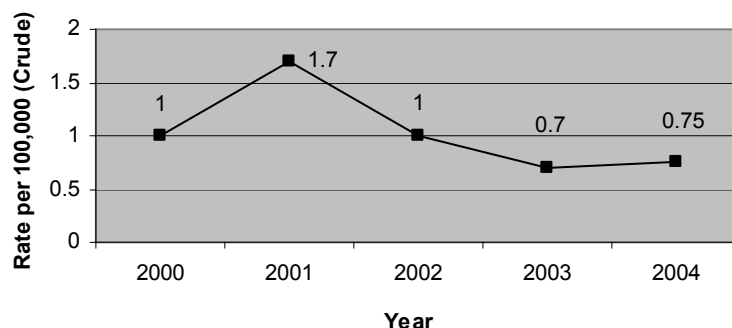
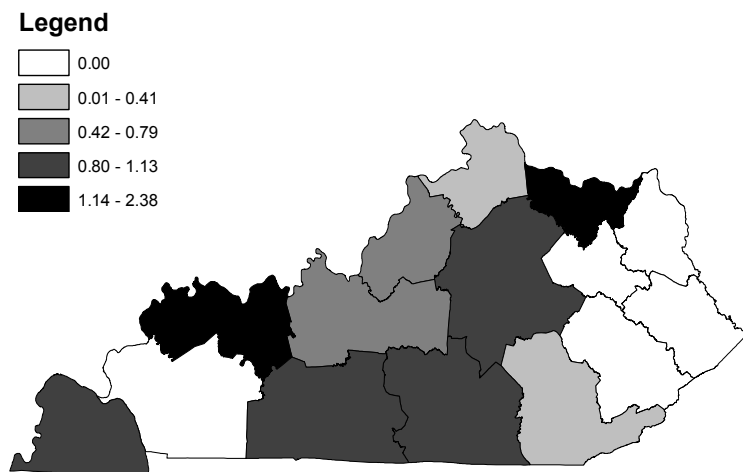
Female - 0.8 per 100,000

Male - 0.7 per 100,000

*Rates based on Census 2003
Population Estimates

E Coli O157:H7 Incidence per 100,000 by ADD, 2004

Source: NETSS—KY-CDC Reporting System



Gonorrhea

Gonorrhea is a sexually transmitted bacterial disease (STD) caused by *Neisseria gonorrhoeae*. In males, it is usually characterized by a purulent urethral discharge and dysuria. In females, initially there is a urethritis or cervicitis often so mild it may pass unnoticed. Depending upon sexual practices, pharyngeal and anorectal infections can occur. In males, the urethral infection is usually self-limiting; however, it may progress to epididymitis, and in rare cases, it can disseminate into an arthritis-dermatitis syndrome, endocarditis, and meningitis. Twenty percent of women infected with gonorrhea may progress to uterine infection, which may lead to endometritis, salpingitis, the subsequent risk of infertility or ectopic pregnancy.

Number of cases

2758

Change from 2003

Decreased 22.9 percent

Kentucky rate

66.5 per 100,000

U.S. rate

116.2 per 100,000

Rate by sex

Female - 67.7 per 100,000

Male - 66.8 per 100,000

Rate by race

White - 20.7 per 100,000

Black - 489.7 per 100,000

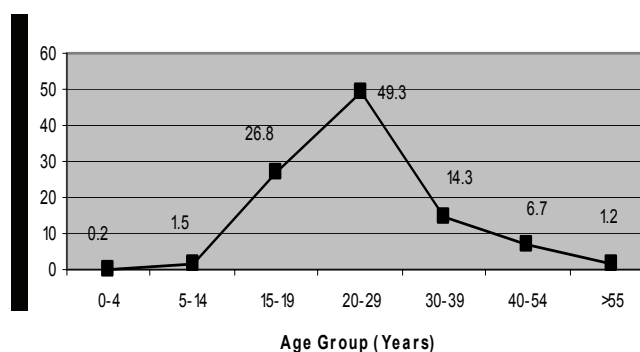
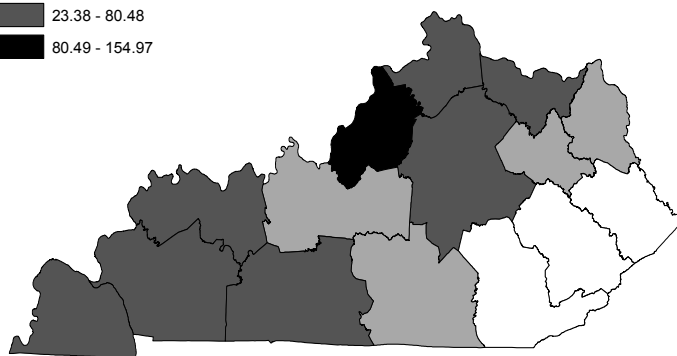
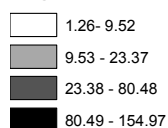
All other - 590.1 per 100,000

*Rates based on Census 2003
Population Estimates

Gonorrhea Incidence per 100,000 by ADD, 2004

Source: Sexually Transmitted Disease Management Information
System (STD*MIS)

Legend



Haemophilus influenzae, Invasive

The organism *Haemophilus influenzae* type b causes meningitis, epiglottitis, septic arthritis and pneumonia, as well as localized infections such as conjunctivitis, sinusitis, otitis media and bronchitis in infants and young children. In adults, the organism often causes pneumonia. Droplets from the nose and throat spread the organism during the infectious period. A vaccine which protects against invasive disease caused by *H. influenzae* type b (Hib) is recommended for all infants beginning at two months of age. The vaccine has been available since 1998. Substantial decrease in rates occurred after the introduction of this vaccine.

Number of cases

16

Change from 2003

Increased 33 percent

Kentucky rate

0.39 per 100,000

U.S. rate

0.68 per 100,000

Age of case-patients

Mean - 55 years

Median - 67 years

Range - 1 to 90 years

Rate by sex

Female - 0.52 per 100,000

Male - 0.25 per 100,000

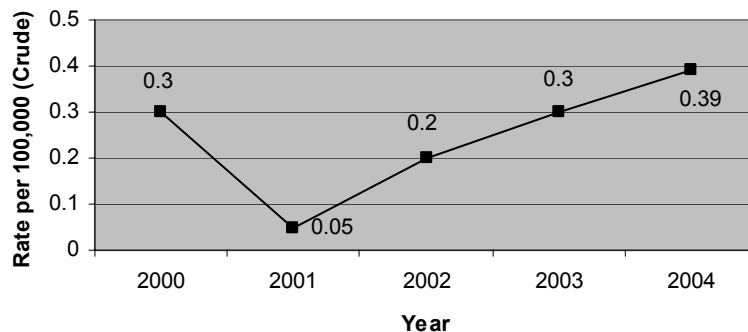
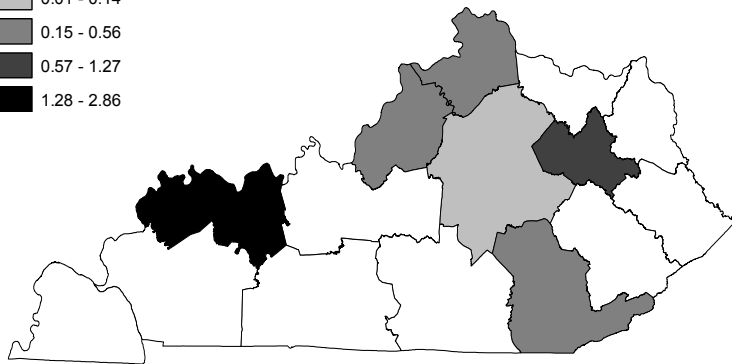
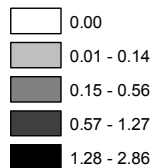
*Rates based on Census 2003
Population Estimates

**2003 had 12 cases; may be
misleading by % change.

Haemophilus influenzae, Invasive Incidence per 100,000 by ADD, 2004

Source: NETSS—KY-CDC Reporting System

Legend



Hepatitis A, Acute

Hepatitis A is an illness caused by the hepatitis A virus. It is characterized by abrupt onset of fever, malaise, nausea, abdominal discomfort and fatigue: followed within a few days by jaundice. Severity of illness is highly variable and can be mild or asymptomatic in young children. Severity varies from person to person, but the mortality rate is low, ranging from 0.1% to 0.3%. The virus is transmitted person to person by the fecal-oral route. Poor environmental sanitation, poor personal hygiene, and close personal contact promote transmission. Transmission occurs sporadically in daycare centers. Common source outbreaks have been related to contaminated water, food contaminated by infected food handlers, raw and undercooked mollusks taken from contaminated water, and contaminated produce.

Number of cases

31

Change from 2003

Decreased 14 percent

Kentucky rate

0.75 per 100,000

U.S. rate

2.57 per 100,000

Age of case-patients

Mean - 51 years

Median - 52 years

Range - 1 to 89 years

Rate by sex

Female - 0.85 per 100,000

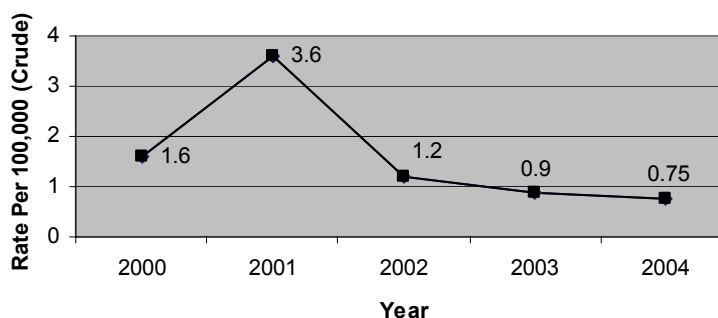
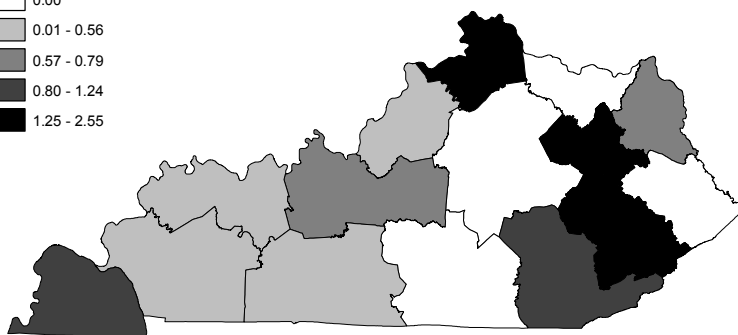
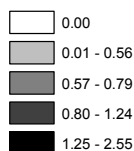
Male - 0.64 per 100,000

*Rates based on Census 2003
Population Estimates

Hepatitis A Incidence per 100,000 by ADD, 2004

Source: NETSS—KY-CDC Reporting System

Legend



Hepatitis B, Acute

Acute hepatitis B is an illness with insidious onset of symptoms including anorexia, vague abdominal discomfort, nausea, vomiting, sometimes arthralgias and rash, often progressing to jaundice. The hepatitis B virus (HBV) is transmitted from person to person primarily through exposure to blood or other body fluids of infected persons. Infection can occur through sexual contact, injecting drug use, occupational exposure in healthcare settings, perinatal exposure, and household contact with a carrier. Only a small proportion of infections are clinically recognized. Five to 10 percent of infected adults and 90 percent of infected infants develop chronic infections. These individuals have a significantly higher risk of developing some form of serious liver disease in the future.

Number of cases

85

Change from 2003

Decreased 10.5 percent

Kentucky rate

2.05 per 100,000

U.S. rate

2.53 per 100,000

Age of case-patients

Mean - 36 years

Median - 36 years

Range - 18 to 71 years

Rate by sex

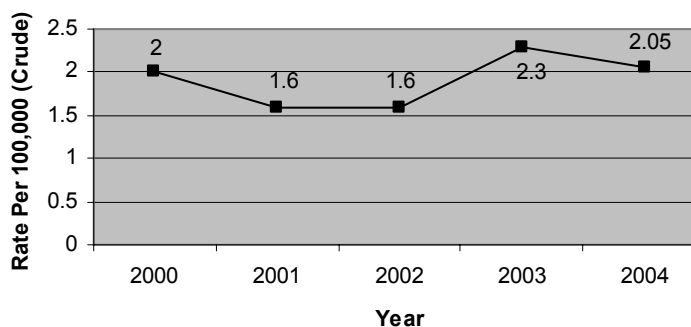
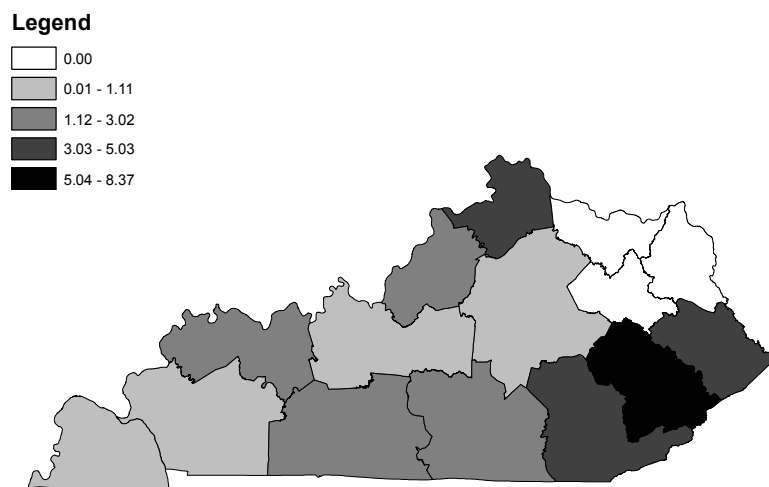
Female - 1.4 per 100,000

Male - 2.7 per 100,000

*Rates based on Census 2003
Population Estimates

Hepatitis B Incidence per 100,000 by ADD, 2004

Source: NETSS—KY-CDC Reporting System



Hepatitis C, Acute

Hepatitis C is a liver disease caused by the hepatitis C virus (HCV), which is found in the blood of persons who have this disease. HCV is primarily spread by contact with the blood of an infected person (parenteral) and less frequently by sexual contact or perinatal transmission. Hepatitis C often produces an illness with insidious onset of symptoms, including anorexia, abdominal discomfort, nausea, vomiting, and progressing to jaundice less frequently than hepatitis B. Ninety percent of cases are asymptomatic, but chronic infection is common (50 to 80 percent of cases). Of these about half will develop cancer or cirrhosis of the liver. Groups at high risk of acquiring HCV are injecting drug users, recipients of blood products prior to 1992, and hemodialysis patients.

Number of cases

27

Change from 2003

Increased 3.9 percent

Kentucky rate

0.65 per 100,000

U.S. rate

0.37 per 100,000

Age of case-patients

Mean - 35 years

Median - 34 years

Range - 20 to 53 years

Rate by sex

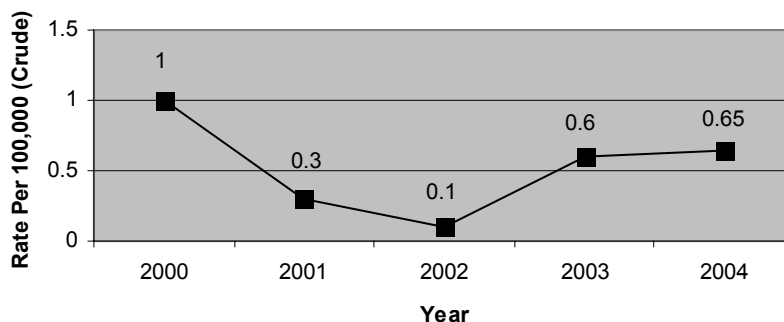
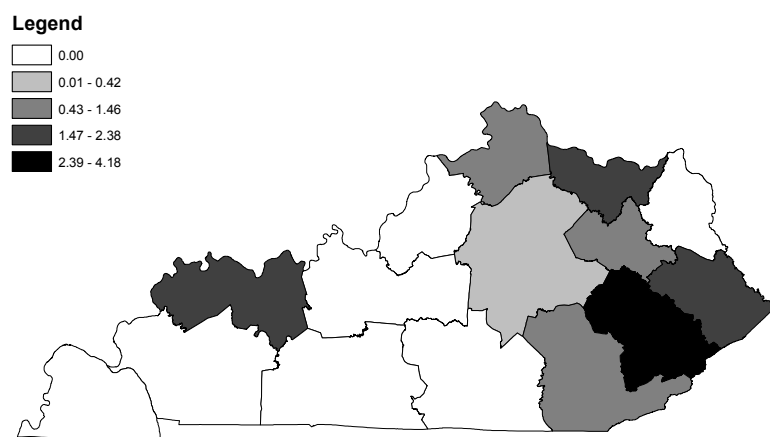
Female - 0.47 per 100,000

Male - 0.83 per 100,000

*Rates based on Census 2003
Population Estimates

Acute, Hepatitis C Incidence per 100,000 by ADD, 2004

Source: NETSS—KY-CDC Reporting System



Histoplasmosis

Histoplasmosis is caused by the fungus *Histoplasma capsulatum* variety *capsulatum* that grows as a mold in soil and as a yeast in human and animal hosts. Common reservoirs are soil around old chicken houses, in caves with bats, around starling and blackbird roosts, and in decaying trees. The organism growing in soil produces spore forms (conidia). Breathing the airborne conidia causes infection.

Number of cases

47

Change from 2003

Increased 20.5 percent

Kentucky rate

1.13 per 100,000

U.S. rate

not reported

Age of case-patients

Mean - 51 years

Median - 53 years

Range - 2 to 86 years

Rate by sex

Female - 0.85 per 100,000

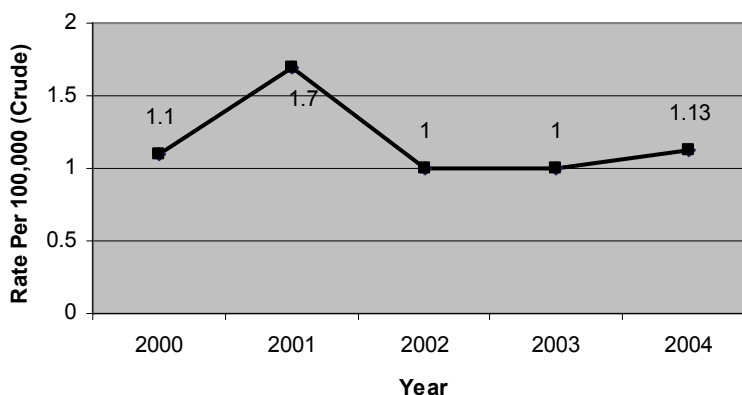
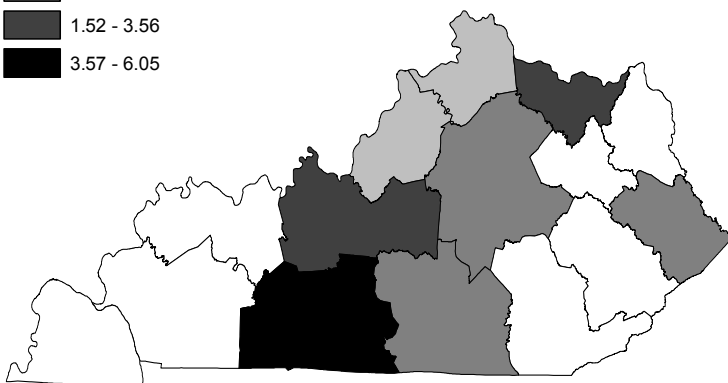
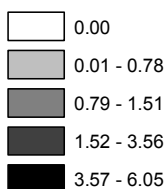
Male - 1.43 per 100,000

*Rates based on Census 2003
Population Estimates

Histoplasmosis Incidence per 100,000 by ADD, 2004

Source: NEDSS—KY-CDC Reporting System

Legend



Influenza

Influenza is an acute respiratory disease most frequently caused by influenza type A or B viruses. Typical features of influenza include abrupt onset of fever, respiratory symptoms, such as cough, sore throat, coryza and systemic symptoms, such as headache, muscle aches and fatigue. Only influenza culture isolates are reportable in Kentucky; the true number of cases is undetermined.

Number of cases

621

Change from 2003

Increased 9.9 percent

Kentucky rate

14.9 per 100,000

U.S. rate

not available

Age of case-patients

Mean - 25 years

Median - 22 years

Range - 1 to 102 years

Rate by sex

Female -14.2 per 100,000

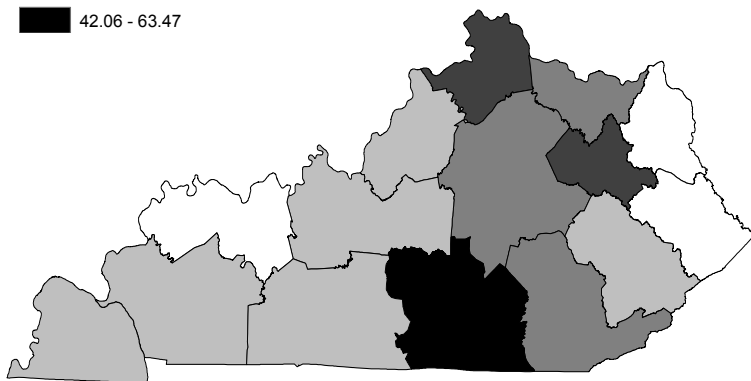
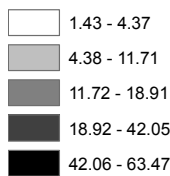
Male - 15.5 per 100,000

*Rates based on Census 2003
Population Estimates

Influenza Isolate Incidence Rate per 100,000 by ADD Flu season (2004-2005)

Source: NETSS—KY-CDC Reporting System

Legend



Legionellosis

Legionellosis, a bacterial disease caused primarily by *Legionella pneumophila*, has two distinct manifestations: Legionnaires' disease and Pontiac fever. Both illnesses have an acute onset characterized by malaise, headache and fever. In Legionnaires' disease pneumonia may develop, and progress to respiratory failure. Patients with Pontiac fever do not develop pneumonia, and recover within two to five days. Airborne transmission by aerosol producing devices (e.g. spas, humidifiers, air conditioning cooling towers) is the most likely method of transmission. Legionnaires' disease occurs both sporadically and in outbreaks. Pontiac fever is identified primarily in community outbreaks.

Number of cases

44

Change from 2003

Decreased 4.2 percent

Kentucky rate

1.1 per 100,000

U.S. rate

0.8 per 100,000

Age of case-patients

Mean - 59 years

Median - 61 years

Range - 26 to 68 years

Rate by sex

Female - 0.8 per 100,000

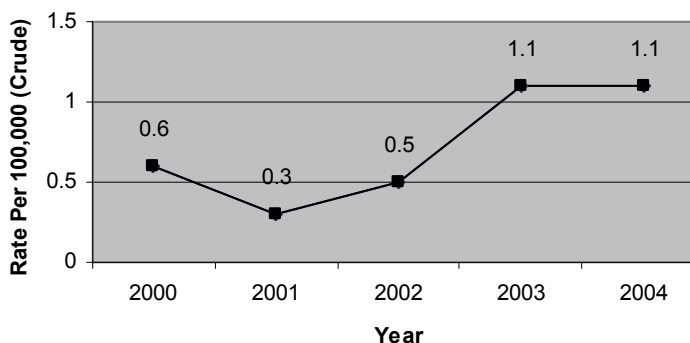
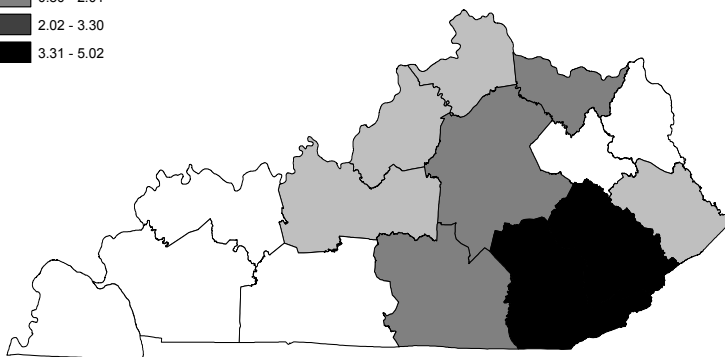
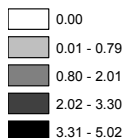
Male - 1.3 per 100,000

*Rates based on Census 2003
Population Estimates

Legionellosis Incidence per 100,000 by ADD, 2004

Source: NETSS—KY-CDC Reporting System

Legend



Lyme Disease

Lyme disease, caused by the spirochete *Borrelia burgdorferi*, is transmitted by the bite of *Ixodes* ticks. The acute phase of the illness is characterized by erythema migrans (EM), a red circular patch that usually appears three days to one month after the bite of an infected tick, at the site of the bite, and is accompanied by mild systemic symptoms. EM occurs in 60 to 80 percent of the patients. The chronic phase may occur within weeks to months after the initial infection and consists of arthritic, cardiac or neurologic manifestations. Chronic phase symptoms of Lyme diseases are similar to many other diseases, which can make a definitive diagnosis difficult.

Number of cases

15

Change from 2003

Decreased 11.2 percent

Kentucky rate

0.4 per 100,000

U.S. rate

7.2 per 100,000

Age of case-patients

Mean - 48 years

Median - 54 years

Range - 11 to 84 years

Rate by sex

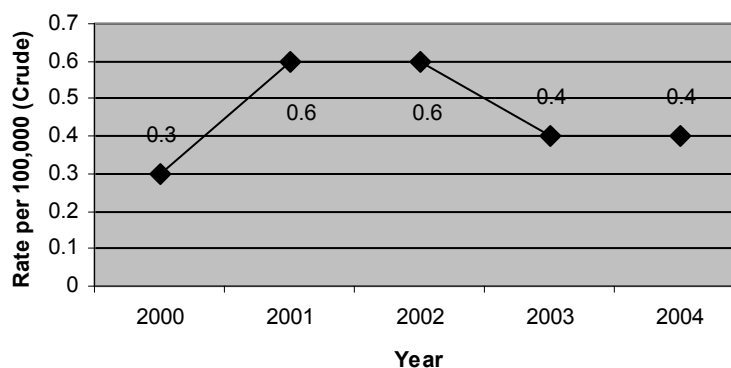
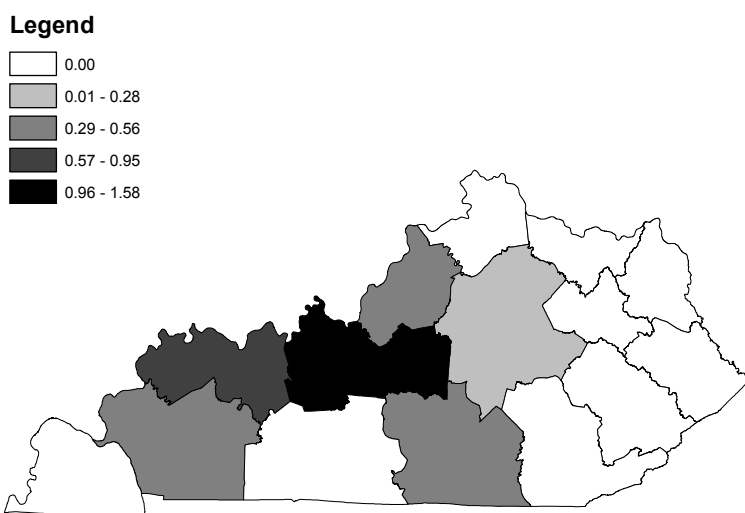
Female - 0.4 per 100,000

Male - 0.3 per 100,000

*Rates based on Census 2003
Population Estimates

Lyme Disease Incidence per 100,000 by ADD, 2004

Source: NETSS—KY-CDC Reporting System



Neisseria meningitidis

Neisseria meningitidis is most commonly manifested as meningitis, but it is also reportable if confirmed in other normally sterile sites. The disease is characterized by a sudden onset of fever, intense headache, stiff neck, nausea and vomiting, and often a petechial rash. Delirium and coma often appear and fulminant cases may exhibit sudden prostration, ecchymoses and shock. With early diagnosis and therapy the case fatality rate is between 5 and 15 percent. Transmission of the organism is from person to person through infected droplets of discharges from the nose and throat, more often from infected carriers than from cases.

Number of cases

18

Change from 2003

Decreased 21.7 percent

Kentucky rate

0.4 per 100,000

U.S. rate

not available

Age of case-patients

Mean - 28 years

Median - 22 years

Range - 1 to 76 years

Rate by sex

Female - 0.3 per 100,000

Male - 0.5 per 100,000

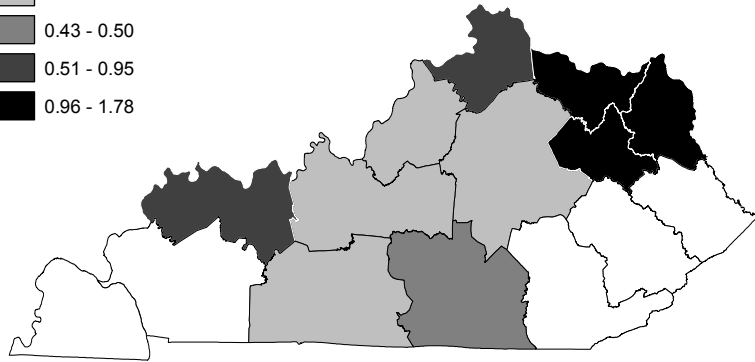
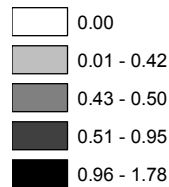
*Rates based on Census 2003
Population Estimates

**2003 had 23 cases; may be
misleading by % change.

Neisseria meningitidis Incidence per 100,000 by ADD, 2004

Source: NETSS—KY-CDC Reporting System

Legend



Pertussis

Pertussis (whooping cough) is a highly contagious disease of the respiratory tract caused by the bacterium *Bordetella pertussis*. The disease can progress to severe paroxysms of cough, often with a characteristic inspiratory whoop. Pertussis can be particularly severe in infants less than one year of age. Older siblings and parents may have mild or atypical pertussis. Transmission occurs by direct contact with aerosol droplets from the respiratory tract of infected persons. Immunization beginning at two months of age is recommended and completion of the four-injection series is required for transient protective immunity in children. In 2005, pertussis containing vaccines were approved for administration to adolescents and adults.

Number of cases

98

% change from 2003

Increased 84%

Kentucky rate

2.4 per 100,000

U.S. rate

4.0 per 100,000

Age of case-patients

Mean - 13 years

Median - 10 years

Range - 1 to 59 years

Rate by sex

Female - 2.5 per 100,000

Male - 2.2 per 100,000

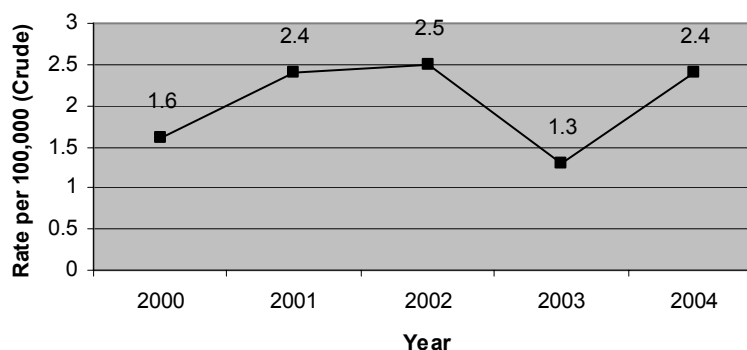
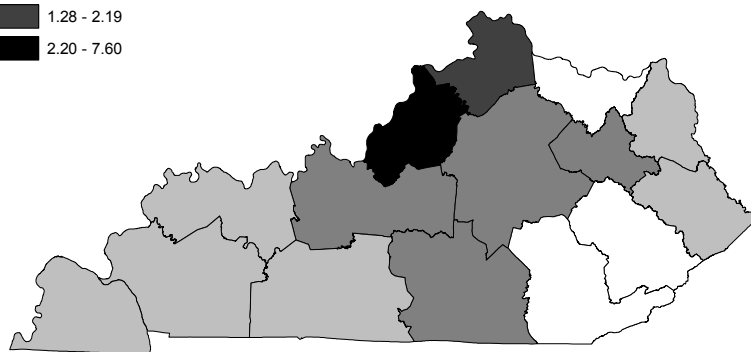
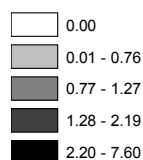
*Rates based on Census 2003
Population Estimates

**2003 had 53 cases; Outbreak
in 2004 increased case count.

Pertussis Incidence per 100,000 by ADD, 2004

Source: NETSS—KY-CDC Reporting System

Legend



Q Fever

Q fever is a zoonotic disease caused by *Coxiella burnetii*, a species of bacteria that is distributed globally. Cattle, sheep, and goats are the primary reservoirs of *C. burnetii*. Infection has been noted in a wide variety of other animals, including other species of livestock and in domesticated pets. Organisms are excreted in milk, urine, and feces of infected animals. Most importantly, during birthing the organisms are shed in high numbers within the amniotic fluids and the placenta. Infection of humans usually occurs by inhalation of these organisms from air that contains airborne barnyard dust contaminated by dried placental material, birth fluids, and excreta of infected herd animals.

Number of cases

6

Change from 2003

Decreased 33 percent

Kentucky rate

0.2 per 100,000

U.S. rate

0.02 per 100,000

Age of case-patients

Mean - 56 years

Median - 56 years

Range - 44 to 72 years

Rate by sex

Female - 0.1 per 100,000

Male - 0.3 per 100,000

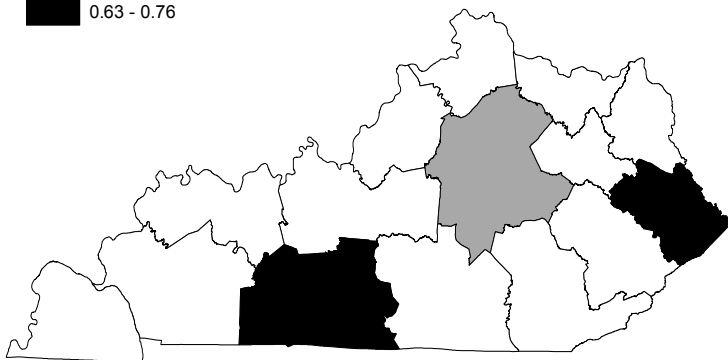
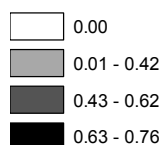
*Rates based on Census 2003
Population Estimates

**2003 had 9 cases; may be
misleading by % change.

Q fever Incidence per 100,000 by ADD, 2004

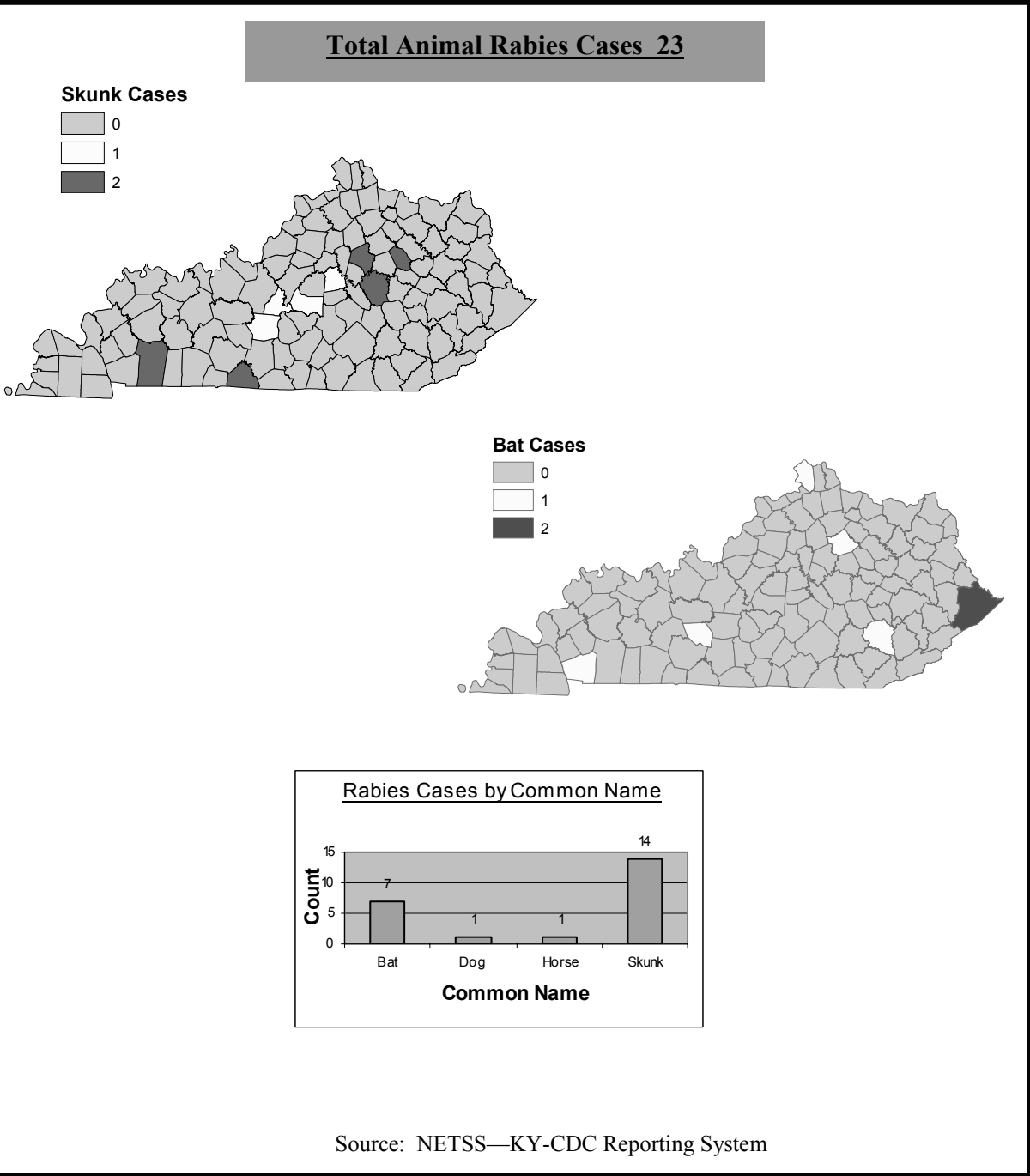
Source: NETSS—KY-CDC Reporting System

Legend



Rabies, Animal

Human rabies is an acute viral illness of the central nervous system. The disease almost always progresses to coma or death within 10 days of the first symptoms. Death is usually due to respiratory paralysis. Onset is often heralded by a sense of apprehension, headache, fever, malaise, and various sensory changes at the site of a rabies infected animal bite. In 2004 there were *no human cases* and 2 domestic animal cases: a dog in Larue County and a horse in Marion County.



Salmonellosis

Salmonellosis is a bacterial enteric infection caused by serovars of the genus *Salmonella* that infect animals and humans. The disease is characterized by sudden onset of headache, abdominal pain, diarrhea, nausea, and vomiting. Infection is transmitted by ingestion of contaminated food or liquids, from person to person by the fecal-oral route, and by contact with infected animals or contaminated animal products. There are more than 2,000 recognized serotypes/serovars of *Salmonella*.

Number of cases

361

Change from 2003

Decreased 10.6 percent

Kentucky rate

8.7 per 100,000

U.S. rate

14.7 per 100,000

Age of case-patients

Mean - 27 years

Median - 24 years

Range - 1 to 100 years

Rate by sex

Female - 8.2 per 100,000

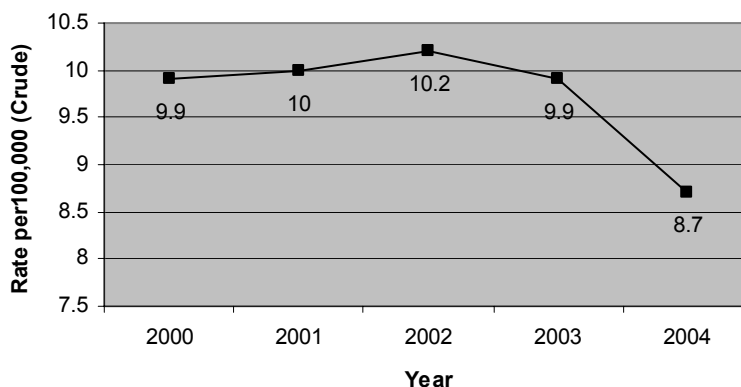
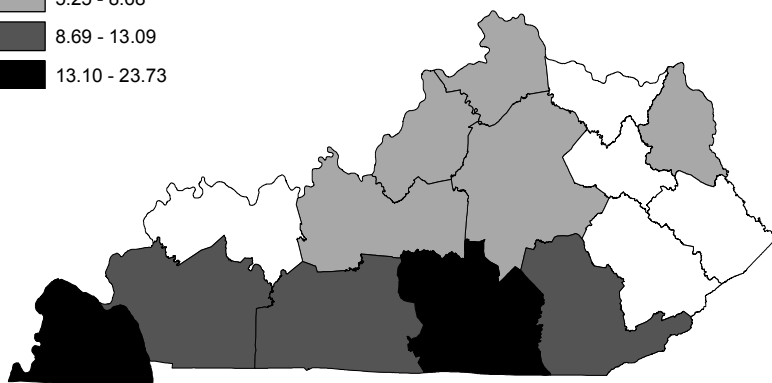
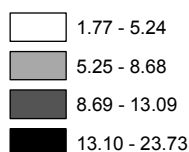
Male - 9.2 per 100,000

*Rates based on Census 2003
Population Estimates

Salmonellosis Incidence per 100,000 by ADD, 2004

Source: NETSS—KY-CDC Reporting System

Legend



Shigellosis

Shigellosis is an acute bacterial disease of the gastrointestinal tract caused by a bacillus of the *Shigella* species. It is characterized by diarrhea, frequently bloody, accompanied by fever, nausea, vomiting, and abdominal cramping. Transmission is by the fecal-oral route from person to person, or from contaminated food, water or milk. The disease is more severe in children than in adults and can be especially difficult to control in child care centers.

Number of cases

75

Change from 2003

Decreased 44.8 percent

Kentucky rate

1.8 per 100,000

U.S. rate

7.9 per 100,000

Age of case-patients

Mean - 17 years

Median - 8 years

Range - 1 to 103 years

Rate by sex

Female - 1.9 per 100,000

Male - 1.7 per 100,000

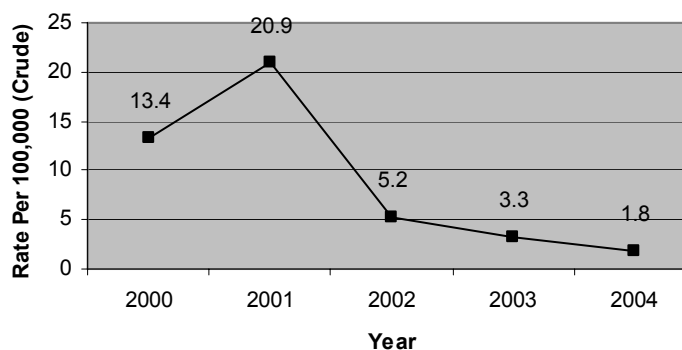
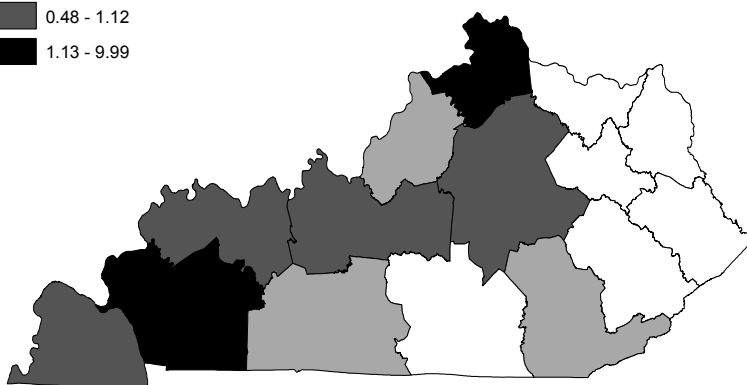
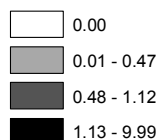
*Rates based on Census 2003
Population Estimates

**2003 had 136 cases; Outbreak
in 2003 increased case count.

Shigellosis Incidence per 100,000 by ADD, 2004

Source: NETSS—KY-CDC Reporting System

Legend



Streptococcal (Group A), Invasive

Group A (GAS) *Streptococcus* is a bacterium often found in the throat and on the skin. People may carry group A streptococci in the throat or on the skin and have no symptoms of illness. Most GAS infections are relatively mild illnesses such as strep throat, or impetigo. On rare occasions, these bacteria can cause other severe and even life-threatening diseases. These bacteria are spread through direct contact with mucus from the nose or throat of persons who are infected, or through contact with infected wounds or sores on the skin. Ill persons, such as those who have strep throat or skin infections, are most likely to spread the infection. The case definition is an isolation of group A *Streptococcus* by culture from a normally sterile site (blood or cerebrospinal fluid, joint, pleural or pericardial fluid).

Number of cases

62

Change from 2003

Increased 19.2 percent

Kentucky rate

1.5 per 100,000

U.S. rate

2.0 per 100,000

Age of case-patients

Mean - 47 years

Median - 51 years

Range - 1 to 98 years

Rate by sex

Female - 1.7 per 100,000

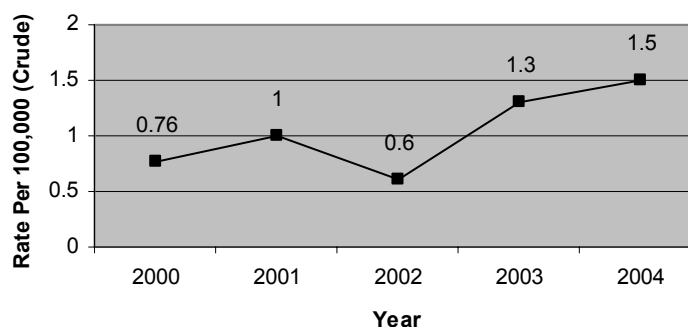
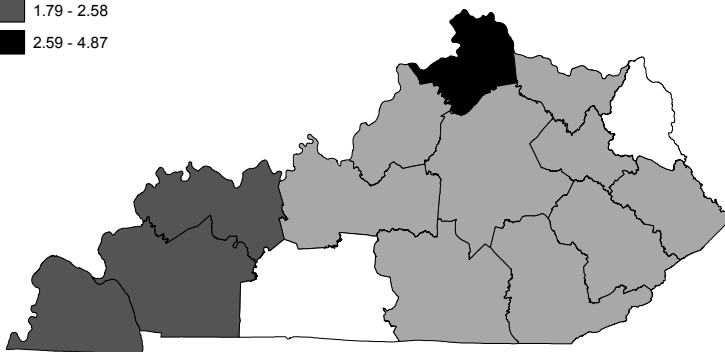
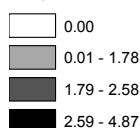
Male - 1.3 per 100,000

*Rates based on Census 2003
Population Estimates

Streptococcal (Group A) Incidence per 100,000 by ADD, 2004

Source: NETSS—KY-CDC Reporting System

Legend



Streptococcus pneumoniae

Drug Resistant, Invasive

Pneumococci are ubiquitous, with many people having colonization in their upper respiratory tracts. Transmission is from person to person, presumably by respiratory droplet contact. Pneumococcal infections are most prevalent during winter months; most common in infants, young children and the elderly and more common in black individuals and some American Indian populations. Clinical features are pneumonia, bacteremia, otitis media, meningitis, sinusitis, peritonitis and arthritis. More specifically the case definition is an invasive type isolated from a normally sterile site and a “nonsusceptible” isolate (intermediate or high level resistance).

Number of cases

32

Change from 2003

Increased 3.2 percent

Kentucky rate

0.77 per 100,000

U.S. rate

1.07 per 100,000

Age of case-patients

Mean - 48 years

Median - 61.5 years

Range - 1 to 95 years

Rate by sex

Female - 0.80 per 100,000

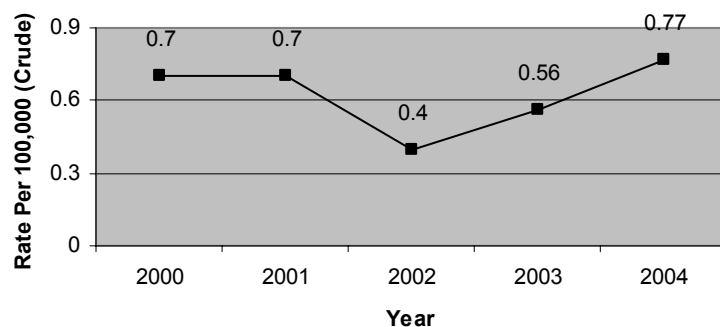
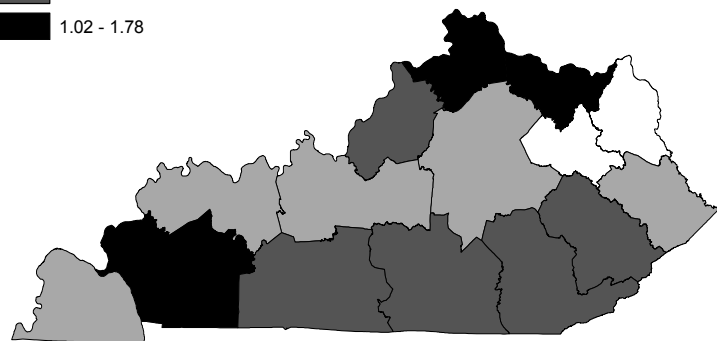
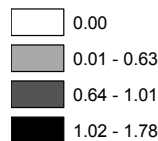
Male - 0.73 per 100,000

*Rates based on Census 2003
Population Estimates

Streptococcus pneumoniae Incidence per 100,000 by ADD, 2004

Source: NETSS—KY-CDC Reporting System

Legend



Syphilis

Syphilis is a sexually transmitted disease caused by the spirochete *Treponema pallidum*. The disease, which may be acute or chronic, is characterized clinically by a primary lesion (chancre); a secondary eruption involving skin and mucous membranes; long periods of latency; and late lesions of skin, bone, viscera, the central nervous system, and the cardiovascular system. Fetal infection occurs with high frequency in untreated early infections of pregnant women. Transmission occurs by direct contact with infectious exudates during sexual contact. Transmission may occur through blood transfusion if the donor is in the early stages of the disease. Fetal infection occurs through placental transfer or at delivery.

Number of cases

151

Change from 2003

Decreased 5.6 percent

Kentucky rate

3.7 per 100,000

U.S. rate

11.9 per 100,000

Rate by sex

Female - 2.3 per 100,000

Male - 5.1 per 100,000

Rate by race

White - 1.8 per 100,000

Black - 19.6 per 100,000

Other - 28.7 per 100,000

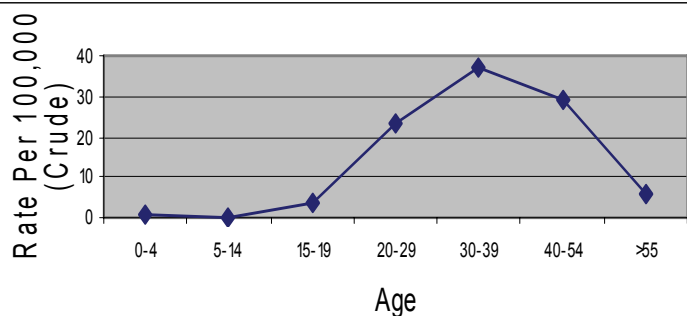
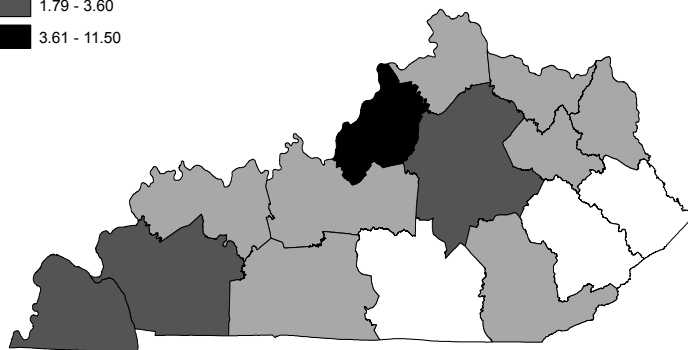
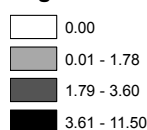
*Rates based on Census 2003
Population Estimates

**Incidence based on Stage I

Syphilis Incidence per 100,000 by ADD, 2004

Source: Sexually Transmitted Disease Management Information
System (STD*MIS)

Legend



Toxic Shock Syndrome (TSS)

Toxic shock syndrome (TSS) is caused by toxins produced by *Staphylococcus aureus* or *Streptococcus pyogenes* (group A *Streptococci*). These organisms cause an acute illness characterized by fever, rapid-onset hypotension, rapidly accelerated renal failure, and multisystem organ involvement. *S. aureus* commonly colonizes skin and mucous membranes in humans. TSS has been associated with use of tampons and intravaginal contraceptive devices in women and can occur as a complication of skin abscesses or surgery.

Number of cases

11

Change from 2003

Increased 83.3 percent
Kentucky rate

0.3 per 100,000

U.S. rate

0.1 per 100,000

Age of case-patients

Mean - 36 years

Median - 34 years

Range - 2 to 82 years

Rate by sex

Female - 0.2 per 100,000

Male - 0.3 per 100,000

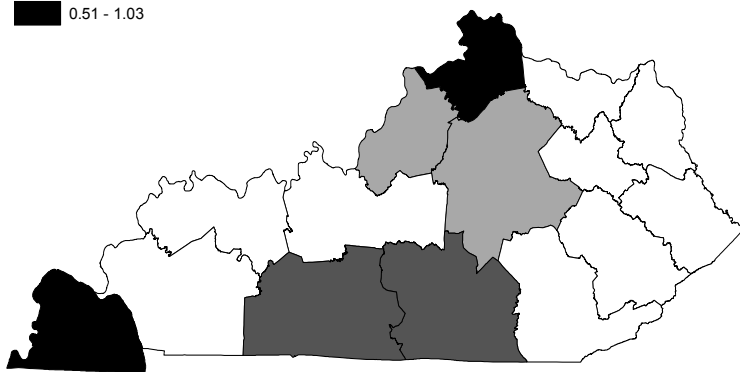
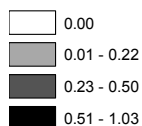
*Rates based on Census 2003
Population Estimates

**2003 had 6 cases; may be
misleading by % change.

Toxic Shock Syndrome Incidence per 100,000 by ADD, 2004

Source: NETSS—KY-CDC Reporting System

Legend



Tuberculosis

Mycobacterium tuberculosis is a rod-shaped bacterium that can cause disseminated disease but is most frequently associated with pulmonary infections. The bacilli are transmitted by the airborne route and, depending on host factors, may lead to latent tuberculosis infection (sometimes abbreviated LTBI) or tuberculosis disease (TB). Both conditions can usually be treated successfully with medications.

Number of cases

127

Change from 2003

Decreased 8 percent

Kentucky rate

3.1 per 100,000

U.S. rate

4.9 per 100,000

Age of case-patients

Mean - 48 years

Median - 61.5 years

Range - 1 to 95 years

Rate by sex

Female - 2.0 per 100,000

Male - 4.3 per 100,000

Rate by race

White - 2.8 per 100,000

Black - 6.3 per 100,000

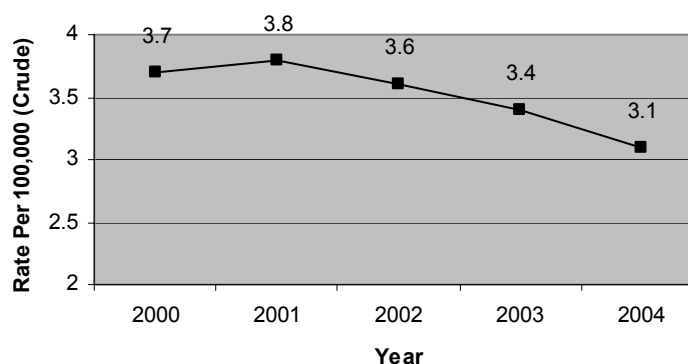
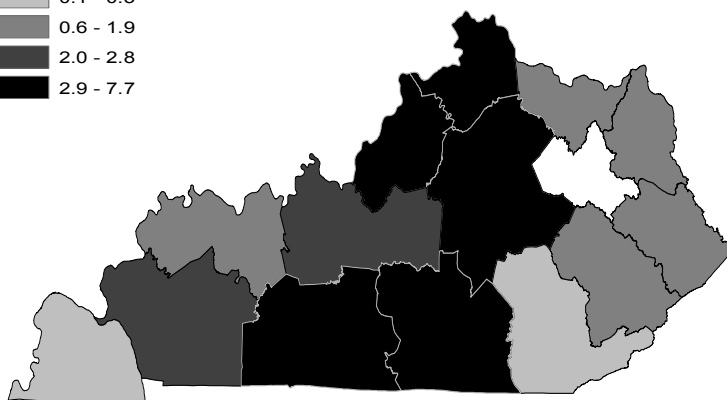
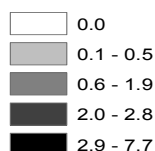
Asian 16.0 per 100,000

*Rates based on Census 2003
Population Estimates

Tuberculosis Incidence per 100,000 by ADD, 2004

Source: TIMS (Tuberculosis Information Management System) KY-CDC Reporting System

Legend



West Nile Virus, Human

West Nile Fever is a mosquito-borne disease that is transmitted from infected birds to humans and other mammals by mosquitoes. West Nile virus (WNV) infections can range from a non-neuroinvasive disease (mild fever) to a fatal neuroinvasive disease (aseptic meningitis, myelitis and encephalitis) in humans and horses, as well as mortality in certain domestic and wild birds. WNV has been a cause of human illness in the United States during the last five years.

Number of cases

7 Total cases
6 (Non-Neuroinvasive)
1 (Neuroinvasive)

Kentucky rate

0.2 per 100,000

U.S. rate

not available

Age of case-patients

Mean - 62 years
Median - 69 years
Range - 30 to 85 years

Rate by sex

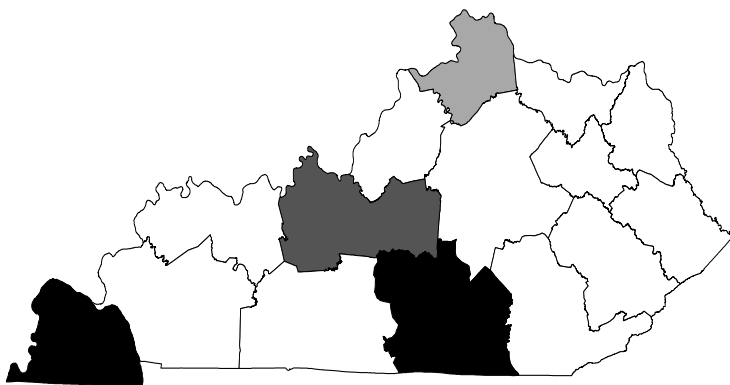
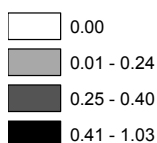
Female - 0.1 per 100,00
Male - 0.2 per 100,000

*Rates based on Census 2003
Population Estimates

West Nile Fever Incidence per 100,000 by ADD, 2004

Source: NETSS—KY-CDC Reporting System

Legend



Diseases of Low Frequency

<u>Disease</u>	<u>Case Count</u>
Botulism, Infant	1
Brucellosis	2
<i>E. Coli</i> - Non O157:H7(Shiga toxin +)	1
Ehrlichiosis Unsp.	1
Encephalitis, California	1
Listeriosis	4
Malaria	5
Rocky Mountain Spotted Fever	3
Tetanus	2
Toxoplasmosis	1
Tularemia	5
Typhoid Fever	3
<i>Vibrio parahaemolyticus</i>	2
<i>Vibrio vulnificus</i>	1



Equal Opportunity Employer, M/F/H

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Division of Epidemiology and Health Planning
Communicable Disease Branch
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<http://chfs.ky.gov/dph/epi/reportablediseases.htm>