

2006
Reportable Disease
Summary Report



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The Cover: The Broad Street Pump, *Safe & Sound*, Penguin, 1971 in
English MP. *Victorian Values -- The Life and Times of Dr. Edwin
Lankester*, 1990.

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 diseases reported for calendar year 2006 and provides valuable information to health service providers and the citizens of the Commonwealth. This summary only reports cases that meet the “confirmed” case definitions of the Commonwealth and the Centers for Disease Control and Prevention (CDC).

EHP collects reports from physicians, hospitals, laboratories and local health departments. The case information entered electronically into the Disease Surveillance Module is used for passive surveillance of reportable diseases in the Commonwealth of Kentucky and for a weekly report sent to the CDC. The CDC in turn publishes this information in the Morbidity and 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 a disease. The list of notifiable diseases is revised periodically. A disease might be added to the list as a new pathogen emerges, deleted as a disease's incidence declines, redefined due to its epidemiology or changes in a lab diagnostics. Although disease reporting is mandated by legislation/regulation at the state level, Kentucky reporting to CDC is voluntary.

For further information see the Background section:

<http://www.cdc.gov/mmwr//preview/mmwrhtml/mm5254a1.htm>

Data Limitations

*It is a capital mistake to theorize before one has data.
Insensibly one begins to twist facts to suit theories, instead
of theories to suit facts.*

Sir Arthur Conan Doyle

What are the benefits of the report?

This report provides, you the reader, with key public health information for policy development and planning of your health related activities. Further, it provides insight on the disease burden/trends in your community and will help facilitate the appropriation of your limited health resources.

What are the limitations of these data?

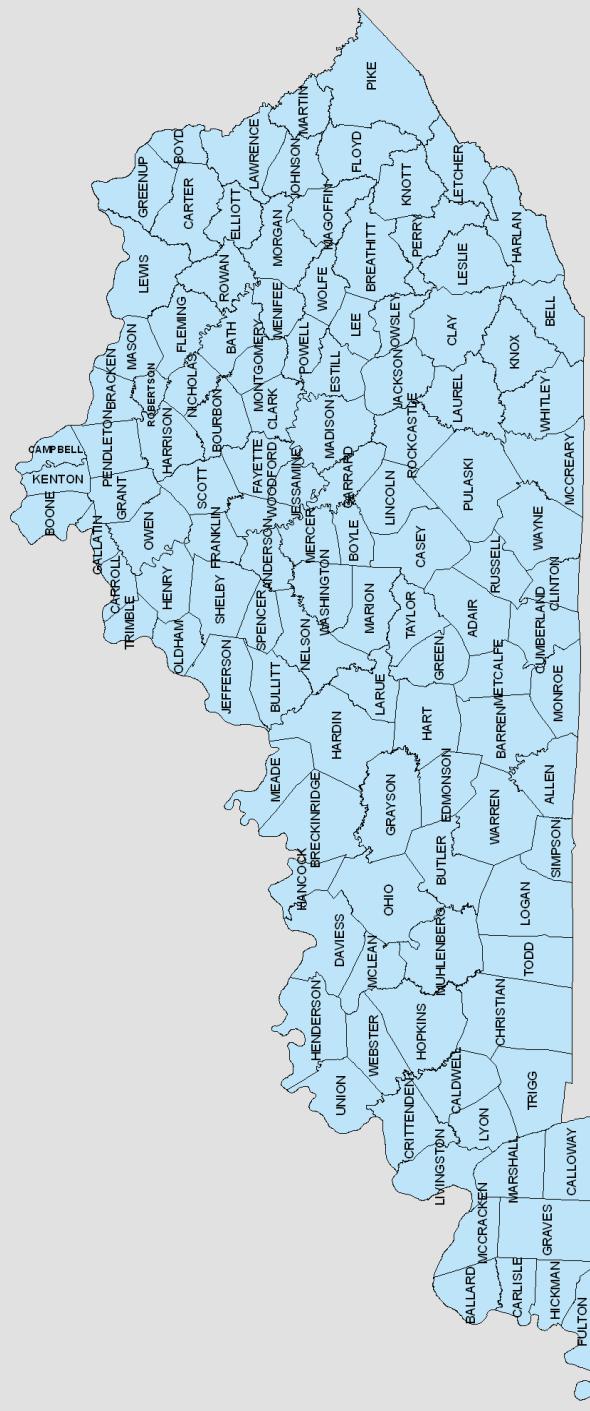
Data in the disease reporting system are limited by the availability of complete demographic information. For example, thirty-five percent of the *Salmonella* cases were reported “unknown” for race. Incomplete information inhibits our ability to accurately report a disease’s impact when it comes to race, ethnicity, or any other descriptor, which in turn may manifest itself in other areas such as lab confirmation, spatial analysis, and underreporting.

Tardiness with case reporting, inconsistencies in receiving case reports, inadequate follow-up testing, and underreporting obscure the true burden of disease in the state. In many cases, a confirmed case requires a follow-up confirmatory test. An initial screening or acute test may be performed but without the second test (confirmatory test) a disease case sometimes cannot be confirmed. Therefore, it is not recorded and relayed to CDC.

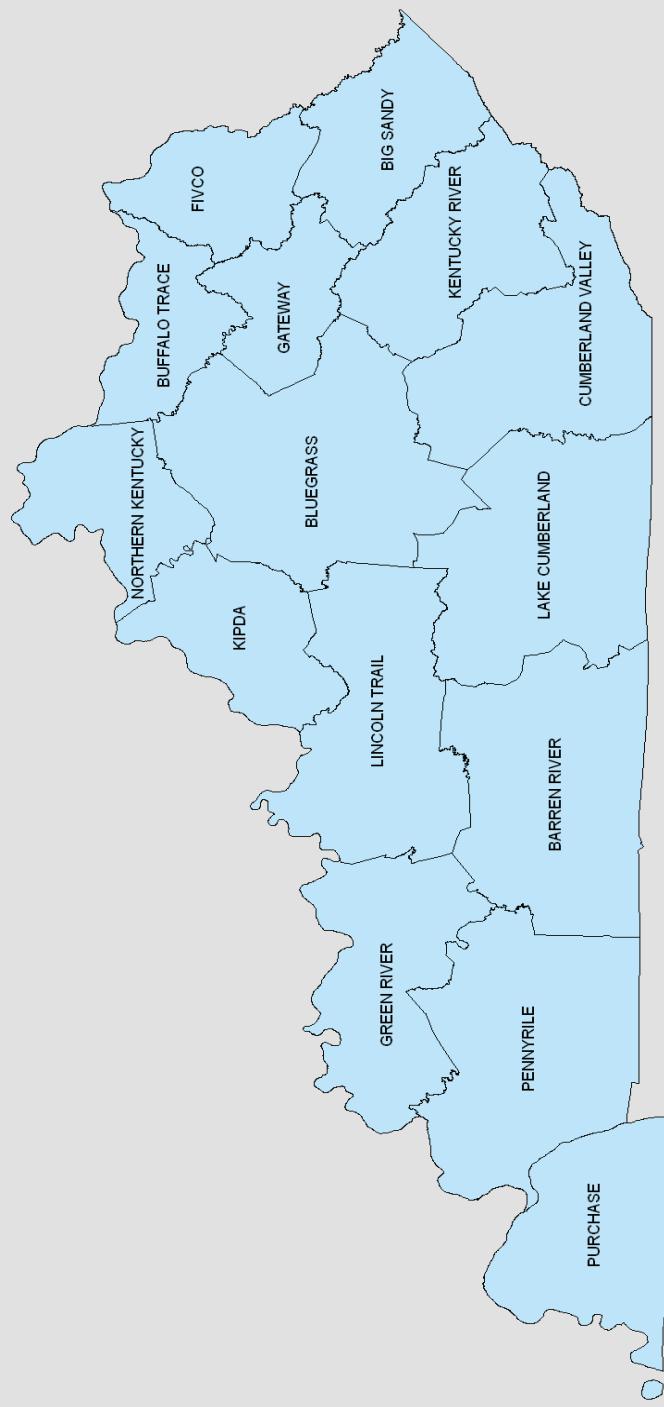
In this report, due to the high percentage of “unknowns” race is not reported. Further, rates in this report are not age adjusted, they are crude rates.

Finally, the HIV/AIDS data are not finalized. This report may not reflect the true magnitude of the disease in Kentucky for 2006.

Kentucky's Counties



Kentucky's Area Development Districts (ADD)



SUMMARY

Disease (rates per 100,000)	2004 Count	2004 Rate	2005 Count	2005 Rate	2006 Count	2006 Rate
AIDS	210	5.1	168	4.0	144	3.4
Botulism, Infant	1	0.0	1	0.0	0	0.0
Brucellosis	2	0.1	0	0.0	1	0.0
Campylobacteriosis	273	6.6	288	6.9	250	5.9
Chlamydia	6470	157.1	8351	200.1	8939	212.5
Cryptosporidiosis	47	1.1	149 ⁽¹⁾	3.6	44	1.1
Encephalitis, California	1	0.0	0	0.0	0	0.0
Encephalitis, West Nile	1	0.0	5	0.1	5	0.1
<i>Escherichia coli</i> Non-O157:H7 ^{**}	1	0.0	7	0.2	0	0.0
<i>Escherichia coli</i> O157:H7 ^{**}	31	0.8	48	1.2	0	0.0
<i>Escherichia coli</i> shigatoxin ^{**}	10	0.2	21	0.5	101	2.4
Ehrlichiosis ⁽²⁾	2	0.1	5	0.1	4	0.1
Gonorrhea	2758	66.6	2935	70.3	3276	77.9
<i>Haemophilus influenzae</i> , type b	16	0.4	14	0.3	5	0.1
Hansen's Disease	0	0.0	1	0.0	0	0.0
Hepatitis A,	31	0.8	24	0.6	33	0.8
Hepatitis B, acute	85	2.1	67	1.6	71	1.7
Hepatitis B, perinatal ⁽³⁾	47	n/a	60	n/a	36	n/a
Hepatitis C, acute	27	0.7	16	0.4	36	0.9
Histoplasmosis	47	1.1	50	1.2	54	1.3
Influenza virus isolates	621	14.9	602	14.2	508	12.1
Legionellosis	44	1.1	33	0.8	48	1.1
Listeriosis	4	0.1	5	0.1	3	0.1
Lyme Disease	15	0.4	5	0.1	7	0.2
Malaria	5	0.1	10	0.2	4	0.1
Meningococcal infection	18	0.4	20	0.5	11	0.3
Pertussis	98	2.4	155	3.8 ⁽¹⁾	6	1.4
Q Fever	6	0.2	2	0.0	4	0.1
Rabies (Animal) ⁽⁴⁾	23	19.0	17	0.4	29	0.7
RMSF ⁽⁵⁾	3	0.1	3	0.1	3	0.1
Rubella	0	0.0	1	0.0	0	0.0
Salmonellosis	361	8.7	488	11.7	463	11.0
Shigellosis	75	1.8	335	8.0	237	63.0
Streptococcal Disease, Invasive Group A	62	1.5	35	0.8	44	1.1
<i>Streptococcus pneumoniae</i> , Drug-Resistant Invasive Disease	32	0.8	32	0.8	39	0.9
Syphilis	151	3.7	129	3.1	188	4.5

Disease (rates per 100,000)	2004 Count	2004 Rate	2005 Count	2005 Rate	2006 Count	2006 Rate
Tetanus	2	0.1	1	0.0	0	0.0
Toxic Shock Syndrome	11	0.3	4	0.1	4	0.1
Toxoplasmosis	1	0.0	1	0.0	1	0.0
Tuberculosis	127	3.1	124	3.0	84	2.0
Tularemia	5	0.1	3	0.1	0	0.0
Typhoid Fever	3	0.1	2	0.1	2	0.1
<i>Vibrio vulnificus</i>	1	0.0	0	0.0	1	0.0
<i>Vibrio parahaemolyticus</i>	2	0.1	0	0.0	1	0.0
West Nile Fever, Human	6	0.2	0	0.0	0	0.0

1)Elevated case count due to outbreak.

2)Combined with human monocytic ehrlichiosis.

3) Definition: number of infants born whose mother was hepatitis B surface antigen positive. Due to the inadequate data on the mother rates were not developed.

4) Method of calculation of rate: annual number of confirmed cases of rabies in animals/total number of animals tested in that year x 1000.

5) Rocky Mountain Spotted Fever.

** *Escherichia coli* case definition has been redefined, see:

http://www.cdc.gov/epo/dphsi/casedef/shiga_current.htm.

Source: Kentucky State Data Center (<http://ksdc.louisville.edu/kpr/popest/nst-est2005-01.xls>) for population estimates in the rate calculation.

No Cases Reported (2002 through 2006)

Anthrax
 Chancroid
 Cholera
 Diphtheria
 Granuloma inguinale
 Hantavirus Pulmonary Syndrome
 Lymphogranuloma venereum
 Measles
 Plague
 Poliomyelitis
 Psittacosis
 Rabies, Human
 Yellow Fever

AIDS

Number of cases 144[†]

Kentucky rate * 3.4 per 100,000

U.S. rate** 13.9 per 100,000

Age of case-patients Mean - 41 years

Median - 41 years

Range - 20 to 73 years

Rate by sex Female - 1.3 per 100,000

Male - 5.7 per 100,000

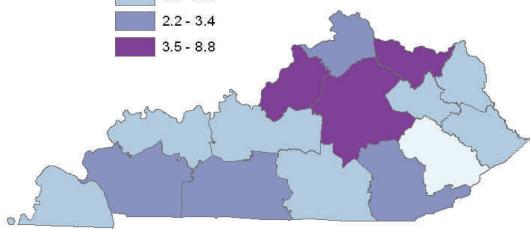
*<http://ksdc.louisville.edu/kpr/popest/est.htm>

**Calculation based on 2005 U.S. Census estimates for population and 2005 MMWR report (AIDS U.S. case count), March 30, 2007 / 54(53);2-92

Crude Rate per 100,000 by
Area Development District
(ADD)

Legend

- 0.0
- 0.5 - 2.1
- 2.2 - 3.4
- 3.5 - 8.8



† **2006 case numbers are preliminary.**

Background

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.

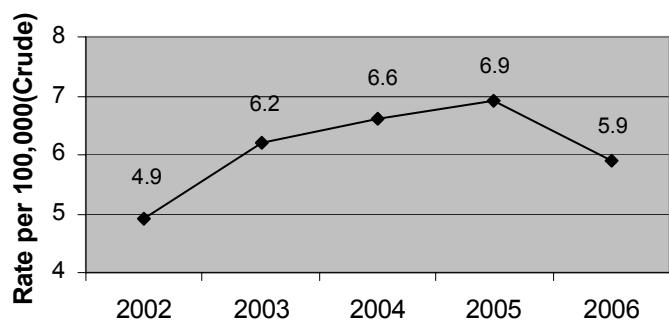
Source: Kentucky Department for Public Health (KDPH) and Centers for Disease Control and Prevention (CDC). *HIV/AIDS Surveillance*. Frankfort, Kentucky: Cabinet for Health and Family Services, Kentucky Department for Public Health, 2006.

Campylobacteriosis

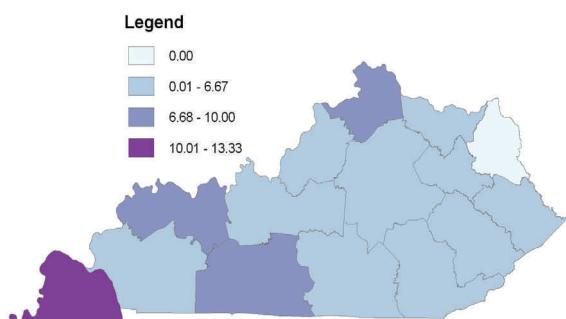
Number of cases	250
Kentucky rate	5.9 per 100,000*
U.S. rate	12.7 per 100,000**
Age of case-patients	Mean - 31 years
	Median - 30 years
	Range - 1 to 87 years
Rate by sex	Female - 5.1 per 100,000
	Male - 6.7 per 100,000

*<http://ksdc.louisville.edu/kpr/popest/est.htm>

**<http://www.cdc.gov/MMWR/preview/mmwrhtml/mm5614a4.htm>



Crude Rate per 100,000 by Area Development District (ADD)



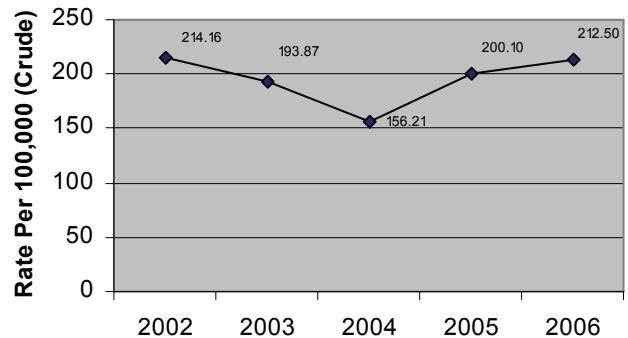
Source: Kentucky Disease Surveillance Module

Background

Campylobacteriosis is an acute 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.

Chlamydia

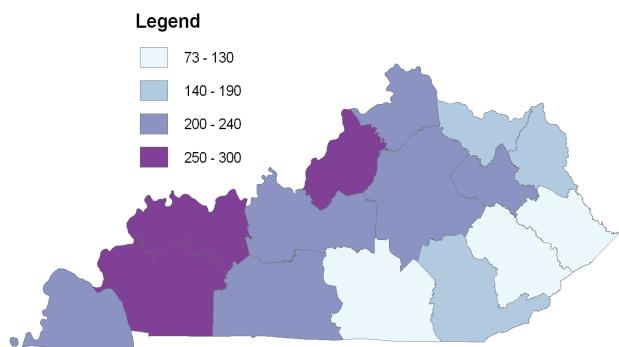
Number of cases	8939
Kentucky rate	212.5 per 100,000*
U.S. rate	319.6 per 100,000**
Rate by sex	Female - 295.4 per 100,000 Male - 125.2 per 100,000



*<http://ksdc.louisville.edu/kpr/popest/est.htm>

** <http://www.cdc.gov/MMWR/preview/mmwrhtml/mm5353a1.htm>

Crude Rate per 100,000 by Area Development District (ADD)



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

Background

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, that are transmitted during birth. Endocervical chlamydial infection has been associated with increased risk for HIV infection.

Cryptosporidiosis

Number of cases 44

Kentucky rate 1.1 per 100,000*

U.S. rate 1.2 per 100,000**

Age of case-patients Mean - 34 years

Median - 31 years

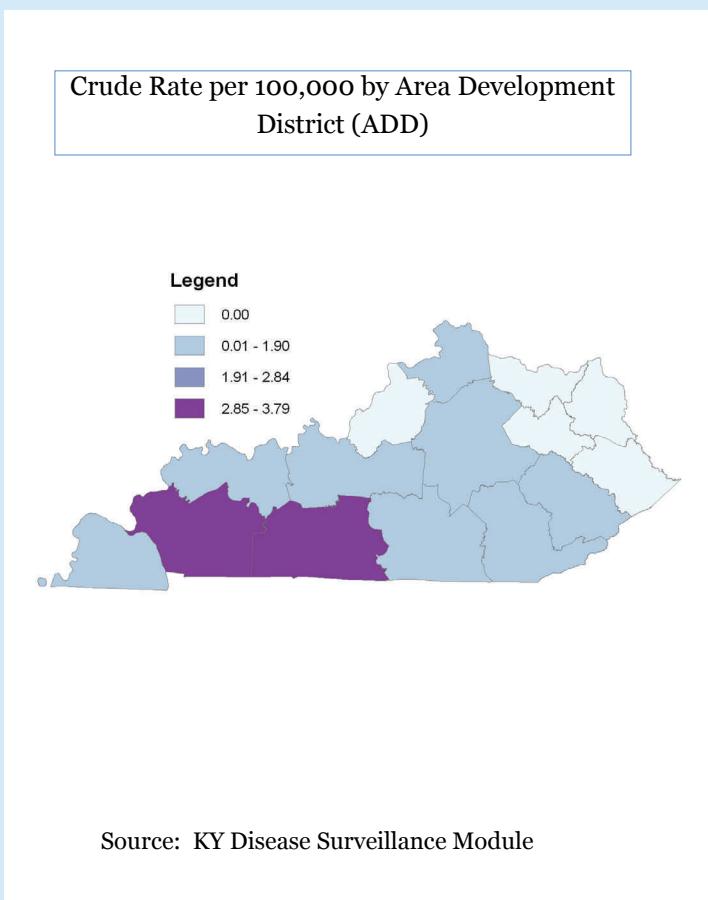
Range - <1 to 90 years

Rate by sex Female - 1.0 per 100,000

Male - 1.0 per 100,000

*<http://ksdc.louisville.edu/kpr/popest/est.htm>

**<http://www.cdc.gov/MMWR/preview/mmwrhtml/mm5353a1.htm>



Background

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.

Escherichia coli, Shiga Toxin-Producing *

Number of cases

101

Kentucky rate

2.4 per 100,000**

U.S. rate

N/A

Age of case-patients Mean - 30 years

Median - 27 years

Range - 1 to 81 years

Rate by sex

Female - 3.1 per 100,000

Male - 1.6 per 100,000

Background

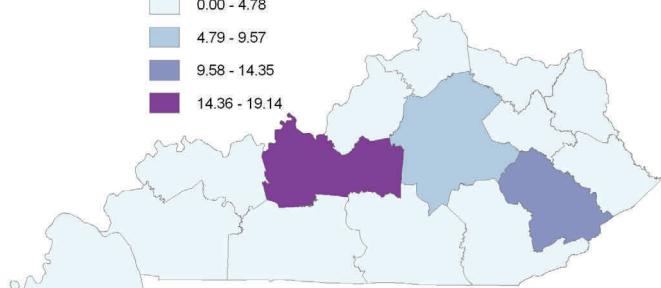
An infection of variable severity characterized by diarrhea (often bloody) and abdominal cramps. Illness may be complicated by hemolytic uremic syndrome (HUS) or thrombotic thrombocytopenic purpura (TTP); asymptomatic infections also may occur and the organism may cause extraintestinal infections.

**<http://ksdc.louisville.edu/kpr/popest/est.htm>

Crude Rate per 100,000 by Area Development District (ADD)

Legend

- 0.00 - 4.78
- 4.79 - 9.57
- 9.58 - 14.35
- 14.36 - 19.14



Source: KY Disease Surveillance Module

*CSTE and CDC redefined the case definition for *E. coli*. See the this link for details:

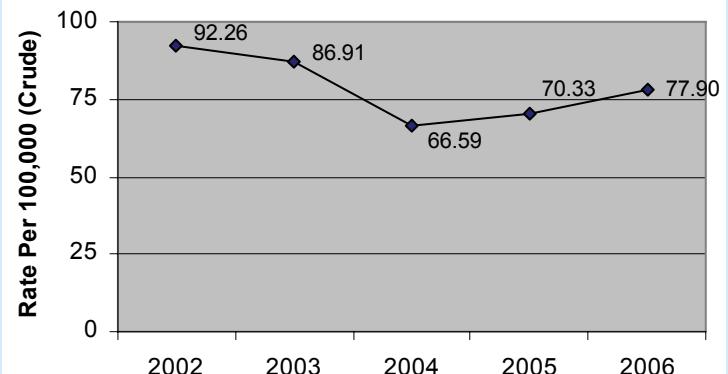
http://www.cdc.gov/epo/dphsi/casedef/shiga_current.htm

Gonorrhea

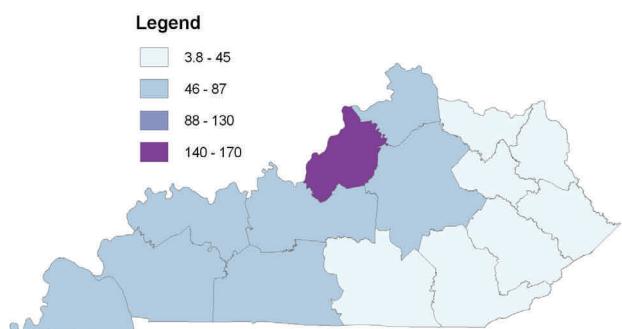
Number of cases	3276
Kentucky rate	77.9 per 100,000*
U.S. rate	113.5 per 100,000**
Rate by sex	Female - 79.6 per 100,000
	Male - 158.9 per 100,000

*<http://ksdc.louisville.edu/kpr/popest/est.htm>

**<http://www.cdc.gov/MMWR/preview/mmwrhtml/mm5353a1.htm>



Crude Rate per 100,000 by Area Development District (ADD)



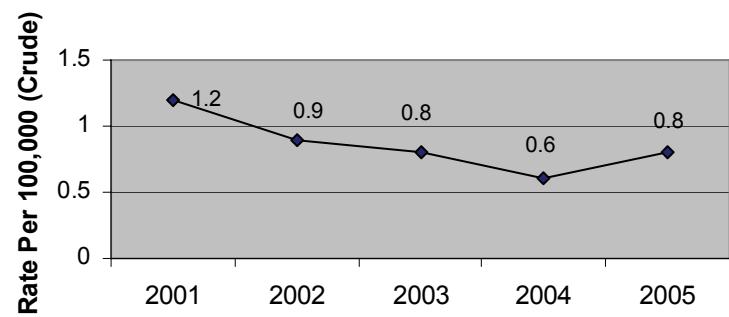
Source: Sexually Transmitted Disease Management Information System (STD*MIS)

Background

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. In rare cases in male or female 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.

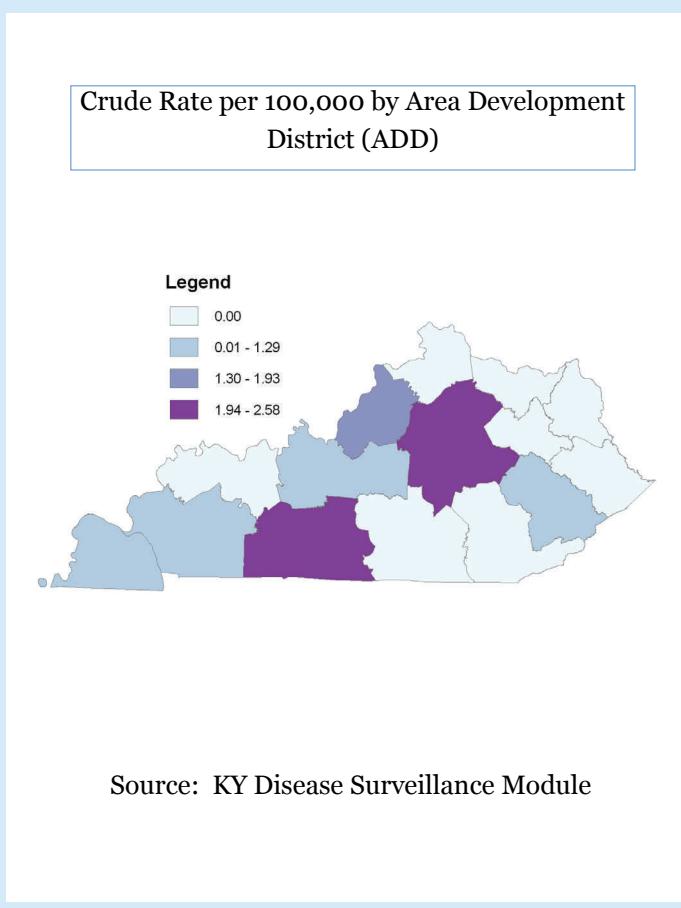
Hepatitis A, Acute

Number of cases	33
Kentucky rate	0.8 per 100,000*
U.S. rate	1.9 per 100,000**
Age of case-patients	Mean - 28 years Median - 26 years Range - 2 to 79 years
Rate by sex	Female - 0.75 per 100,000 Male - 0.82 per 100,000



*<http://ksdc.louisville.edu/kpr/popest/est.htm>

**<http://www.cdc.gov/MMWR/preview/mmwrhtml/mm5353a1.htm>



Background

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.

Hepatitis B, Acute

Number of cases

71

Kentucky rate

1.7 per 100,000*

U.S. rate

2.1 per 100,000**

Age of case-patients Mean - 38 years

Median - 40 years

Range - 22 to 71 years

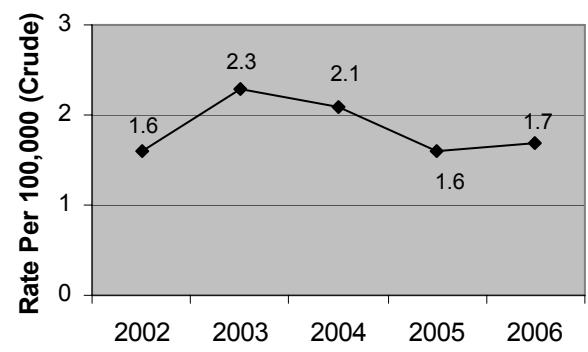
Rate by sex

Female - 1.3 per 100,000

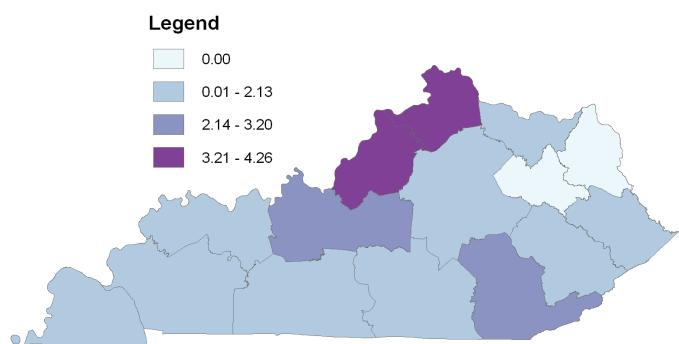
Male - 2.0 per 100,000

*<http://ksdc.louisville.edu/kpr/popest/est.htm>

**<http://www.cdc.gov/MMWR/preview/mmwrhtml/mm5353a1.htm>



Crude Rate per 100,000 by Area Development District (ADD)



Source: KY Disease Surveillance Module

Background

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 liver cancer and other forms of disease in the future.

Hepatitis C, Acute

Number of cases

36

Kentucky rate

0.9 per 100,000*

U.S. rate

0.3 per 100,000**

Age of case-patients Mean - 32 years

Median - 30 years

Range - 18 to 54 years

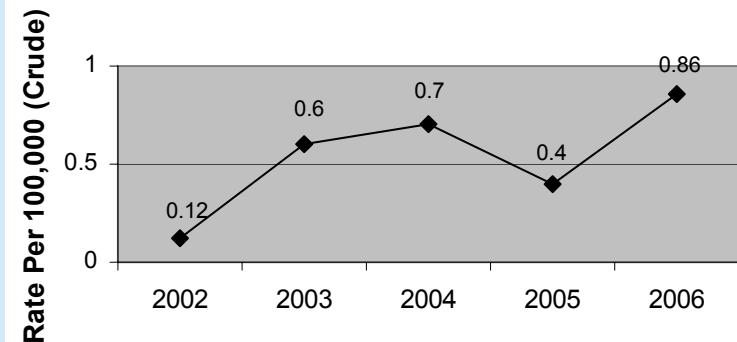
Rate by sex

Female - 0.8 per 100,000

Male - 0.9 per 100,000

*<http://ksdc.louisville.edu/kpr/popest/est.htm>

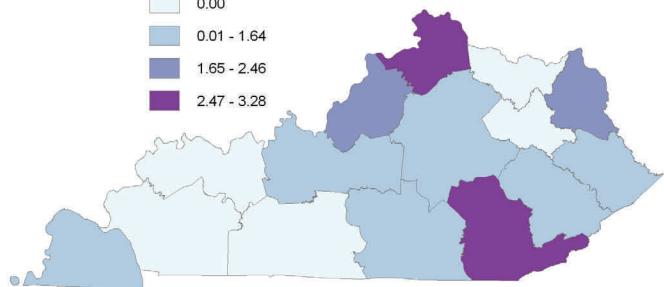
**<http://www.cdc.gov/MMWR/preview/mmwrhtml/mm5353a1.htm>



Crude Rate per 100,000 by Area Development District (ADD)

Legend

0.00
0.01 - 1.64
1.65 - 2.46
2.47 - 3.28



Source: KY Disease Surveillance Module

Background

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.

Histoplasmosis

Number of cases

54

Kentucky rate

1.3 per 100,000*

U.S. rate

N/A

Age of case-patients Mean - 44 years

Median - 47 years

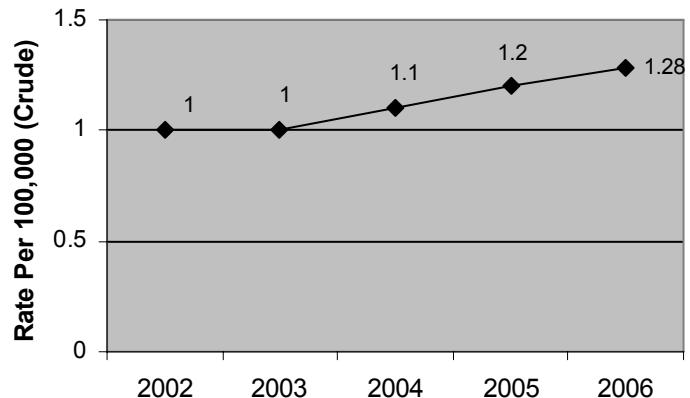
Range - 4 to 74 years

Rate by sex

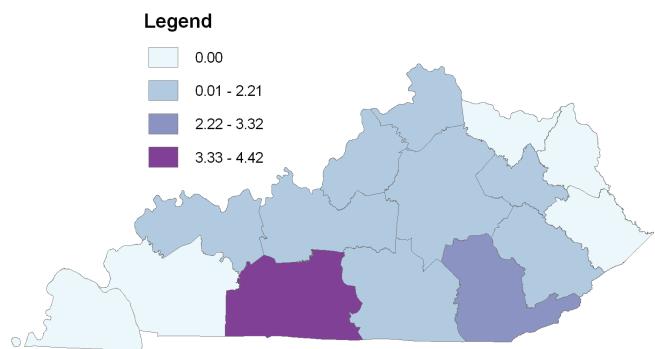
Female - 0.5 per 100,000

Male - 2.0 per 100,000

*<http://ksdc.louisville.edu/kpr/popest/est.htm>



Crude Rate per 100,000 by Area Development District (ADD)



Source: KY Disease Surveillance Module

Background

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.

Influenza

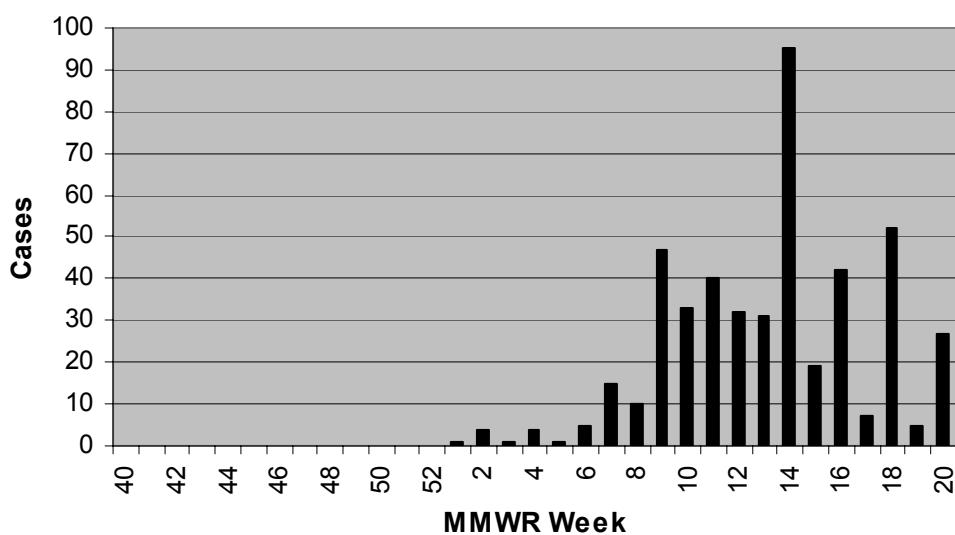
Number of influenza virus isolates	471
Kentucky rate	not available*
U.S. rate	not available

*Positive Influenza virus isolates are mainly reported from sentinel physicians; therefore unable to determine rates. The influenza season is based on MMWR weeks. The flu season for 2006 starts at week 40 of 2005 and ends week 21 of 2006.

Background

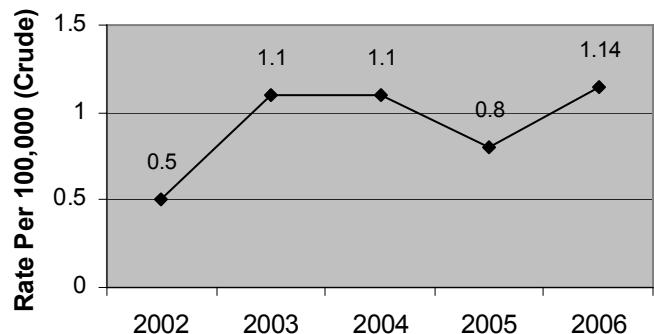
Influenza is an acute respiratory disease most frequently caused by influenza type A or B viruses. Typical features of influenza include abrupt onset of fever, respiratory symptoms, such as cough, sore throat, coryza and systemic symptoms, such as headache, muscle aches and fatigue. Only influenza virus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

Positive Influenza Virus Isolates by MMWR Week



Legionellosis

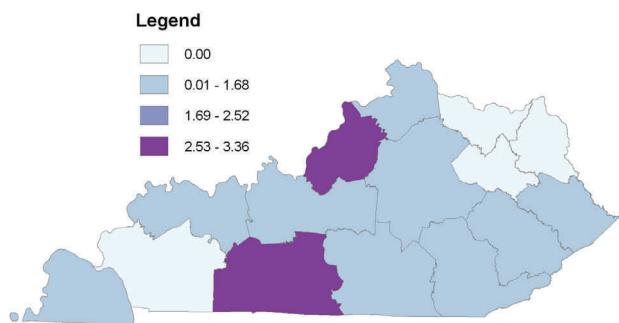
Number of cases	48
Kentucky rate	1.1 per 100,000*
U.S. rate	0.7 per 100,000**
Age of case-patients	Mean - 60 years Median - 59 years Range - 29 to 88 years
Rate by sex	Female - 0.7 per 100,000 Male - 1.6 per 100,000



*<http://ksdc.louisville.edu/kpr/popest/est.htm>

**<http://www.cdc.gov/MMWR/preview/mmwrhtml/mm5353a1.htm>

Crude Rate per 100,000 by Area Development District (ADD)



Source: KY Disease Surveillance System

Background

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 have a milder disease without 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.

Meningococcal Infections

Number of cases

11

Kentucky rate

0.3 per 100,000*

U.S. rate

0.5 per 100,000**

Age of case-patients Mean - 33 years

Median - 26 years

Range - 2 to 78 years

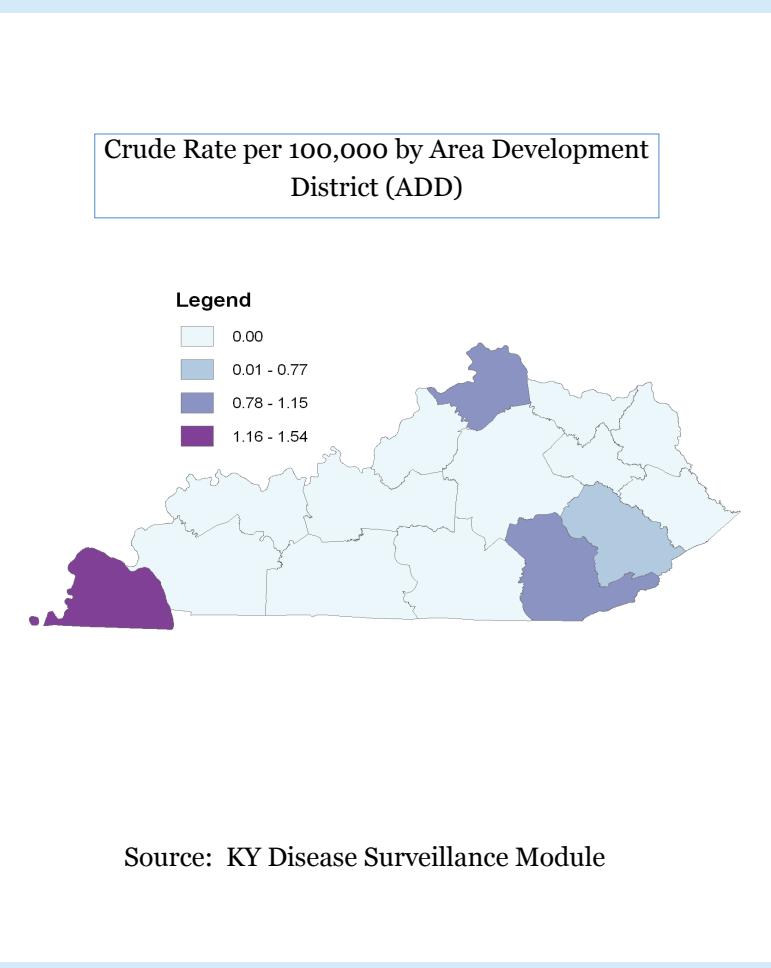
Rate by sex

Female - 0.3 per 100,000

Male - 0.2 per 100,000

*<http://ksdc.louisville.edu/kpr/popest/est.htm>

**<http://www.cdc.gov/MMWR/preview/mmwrhtml/mm5353a1.htm>



Background

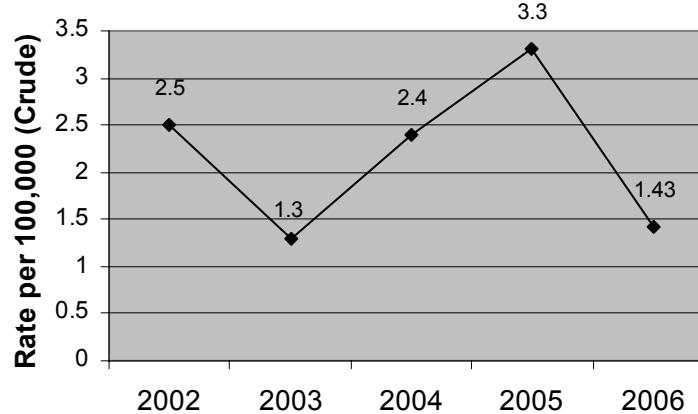
Invasive meningococcal infections caused by *Neisseria meningitidis* is most commonly manifested as meningitis, but it is also reportable if confirmed in other normally sterile sites. The disease is characterized by a sudden onset of fever, intense headache, stiff neck, nausea and vomiting, and often 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 or secretions from the nose and throat, more often from infected carriers than from cases.

Pertussis

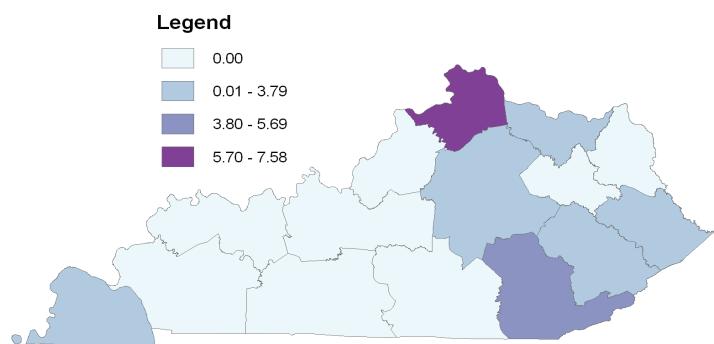
Number of cases	60
Kentucky rate	1.4 per 100,000*
U.S. rate	8.9 per 100,000**
Age of case-patients	Mean - 10 years Median - 7 years Range - <1 to 62 years
Rate by sex	Female - 1.4 per 100,000 Male - 1.5 per 100,000

*<http://ksdc.louisville.edu/kpr/popest/est.htm>

**<http://www.cdc.gov/MMWR/preview/mmwrhtml/mm5353a1.htm>



Crude Rate per 100,000 by Area Development District (ADD)



Source: KY Disease Surveillance Module

Background

Pertussis (whooping cough) is a highly contagious bacterial disease of the respiratory tract caused by *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 protective immunity in children. In 2005, pertussis containing vaccines were approved for administration to adolescents and adults.

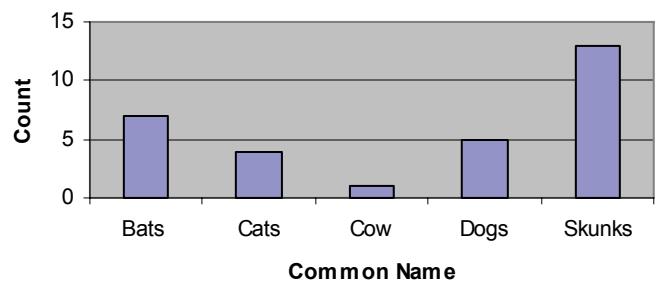
Rabies, Animal

Number of cases 30

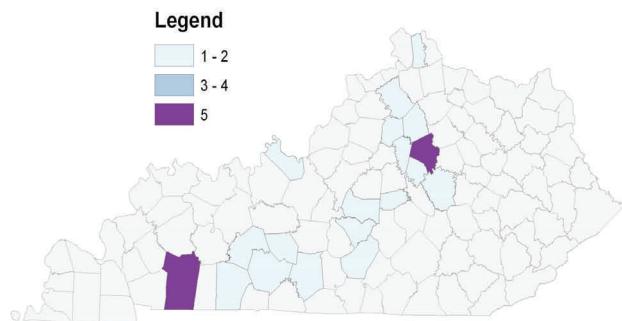
Background

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. 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 2006 there were *no human rabies cases*.

Animal Rabies Cases by Common Name



Case Count by County, 2006



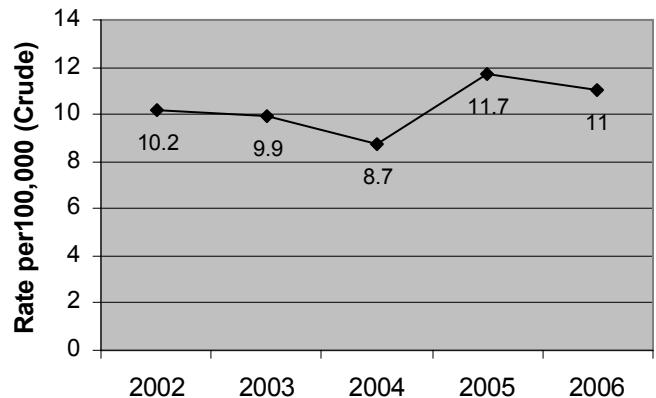
Source: KY Disease Surveillance Module

Salmonellosis

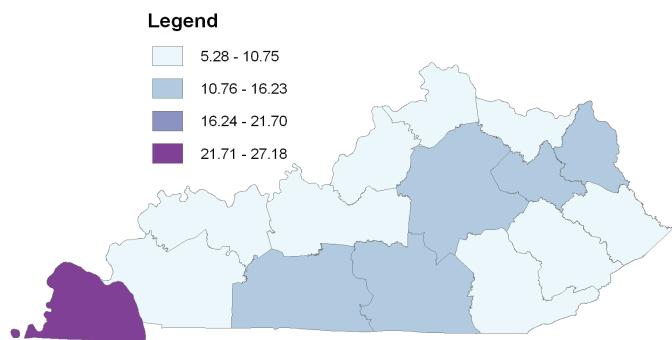
Number of cases	463
Kentucky rate	11.0 per 100,000*
U.S. rate	14.5 per 100,000**
Age of case-patients	Mean - 33 years Median - 33 years Range - <1 to 93 years
Rate by sex	Female - 11.7 per 100,000 Male - 9.8 per 100,000

*<http://ksdc.louisville.edu/kpr/popest/est.htm>

**<http://www.cdc.gov/MMWR/preview/mmwrhtml/mm5353a1.htm>



Crude Rate per 100,000 by Area Development District (ADD)



Source: KY Disease Surveillance Module

Background

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*.

Shigellosis

Number of cases

237

Kentucky rate

5.6 per 100,000*

U.S. rate

5.0 per 100,000**

Age of case-patients Mean - 13 years

Median - 6 years

Range - <1 to 73 years

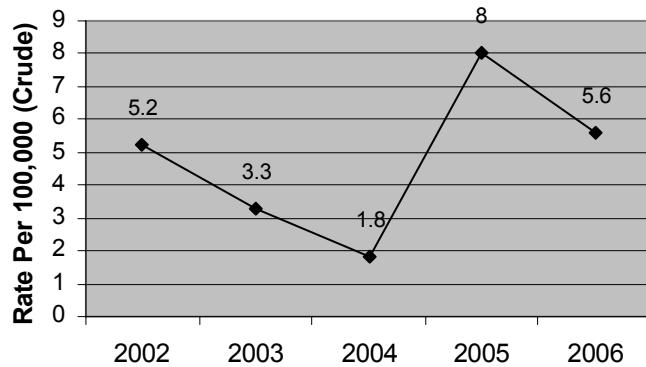
Rate by sex

Female - 5.6 per 100,000

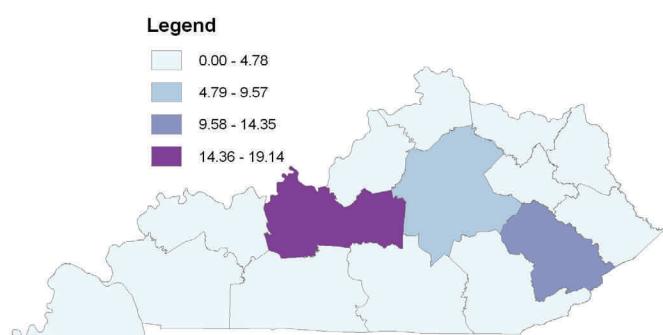
Male - 5.4 per 100,000

*<http://ksdc.louisville.edu/kpr/popest/est.htm>

**<http://www.cdc.gov/MMWR/preview/mmwrhtml/mm5353a1.htm>



Crude Rate per 100,000 by Area Development District (ADD)



Source: KY Disease Surveillance Module

Background

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.

Streptococcal (Group A), Invasive

Number of cases 44

Kentucky rate 1.1 per 100,000*

U.S. rate 1.8 per 100,000**

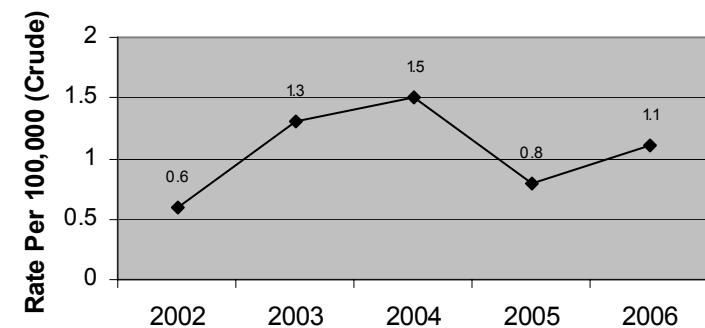
Age of case-patients Mean - 44 years

Median - 51 years

Range - <1 to 90 years

Rate by sex Female - 1.0 per 100,000

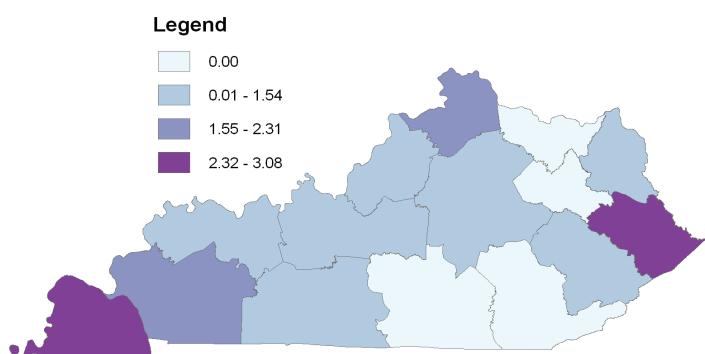
Male - 0.8 per 100,000



*<http://ksdc.louisville.edu/kpr/popest/est.htm>

**<http://www.cdc.gov/MMWR/preview/mmwrhtml/mm5353a1.htm>

Crude Rate per 100,000 by Area Development District (ADD)



Source: KY Disease Surveillance Module

Background

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 laboratory criteria for a confirmed case is an isolation of group A *Streptococcus* by culture from a normally sterile site (blood or cerebrospinal fluid, joint, pleural or pericardial fluid).

Streptococcus pneumoniae

Drug Resistant, Invasive

Number of cases

39

Kentucky rate

0.9 per 100,000*

U.S. rate

1.5 per 100,000**

Age of case-patients Mean - 48 years

Median - 54 years

Range - <1 to 89 years

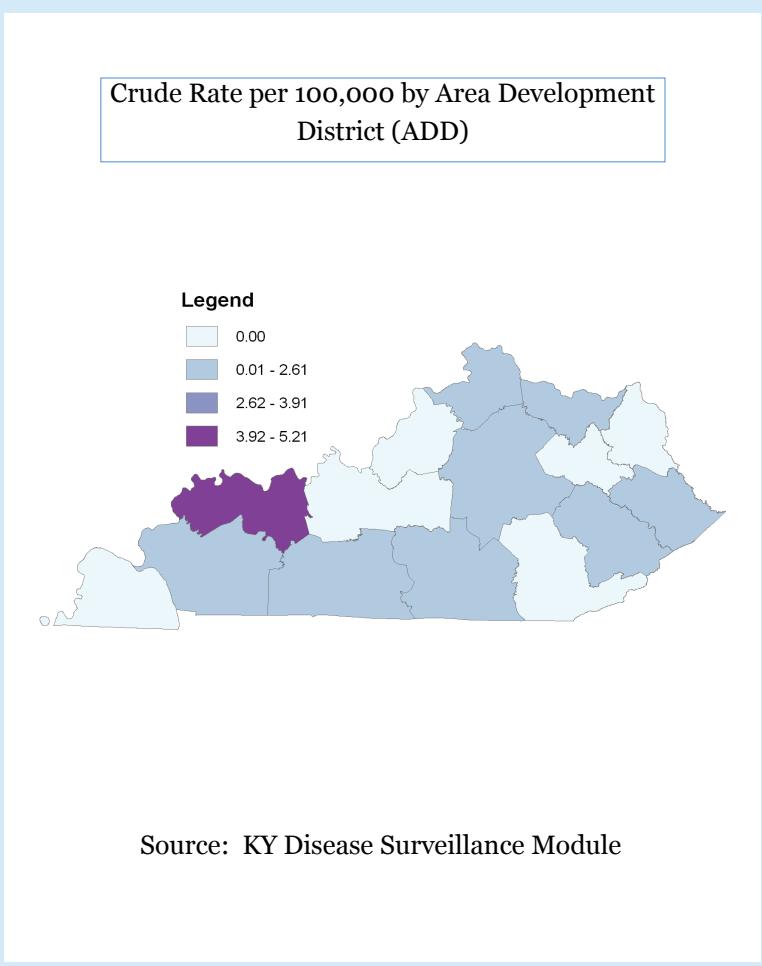
Rate by sex

Female - 0.8 per 100,000

Male - 1.1 per 100,000

*<http://ksdc.louisville.edu/kpr/popest/est.htm>

**<http://www.cdc.gov/MMWR/preview/mmwrhtml/mm5353a1.htm>

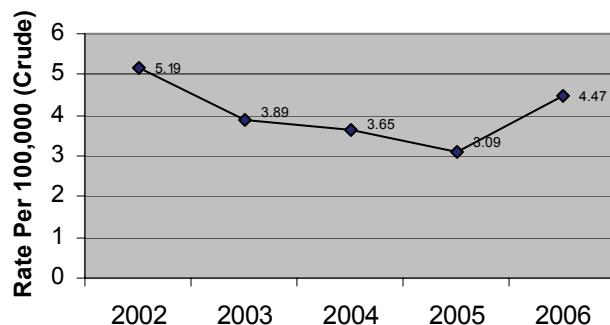


Background

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 laboratory criteria for a confirmed case requires isolation of pneumococci from a normally sterile site and a "nonsusceptible" isolate (intermediate or high level resistance to at least one antimicrobial agent currently approved for use in treating pneumococcal infections).

Syphilis

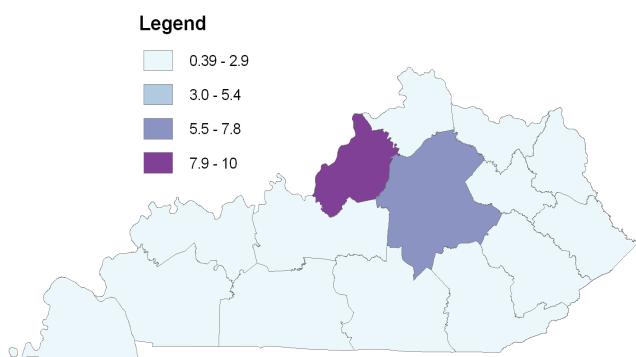
Number of cases	188
Kentucky rate	4.5 per 100,000*
U.S. rate	11.5 per 100,000**
Rate by sex	Female - 2.0 per 100,000
	Male - 7.1 per 100,000



*<http://ksdc.louisville.edu/kpr/popest/est.htm>

**<http://www.cdc.gov/MMWR/preview/mmwrhtml/mm5353a1.htm>

Crude Rate per 100,000 by Area Development District (ADD)



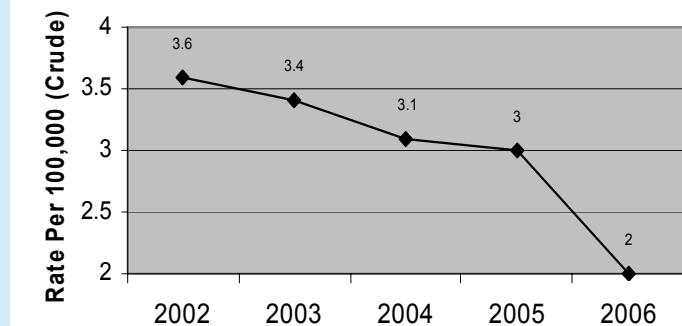
Source: Sexually Transmitted Disease Management Information System (STD*MIS)

Background

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.

Tuberculosis

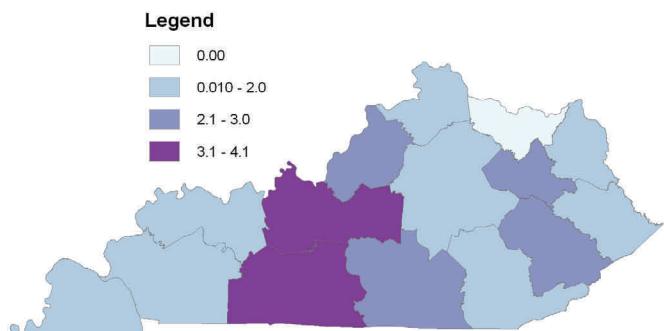
Number of cases	84
Kentucky rate	2.0 per 100,000*
U.S. rate	5.0 per 100,000**
Rate by sex	Female - 1.2 per 100,000
	Male - 2.8 per 100,000



*<http://ksdc.louisville.edu/kpr/popest/est.htm>

** <http://www.cdc.gov/MMWR/preview/mmwrhtml/mm5353a1.htm>

Crude Rate per 100,000 by Area Development District (ADD)



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

Background

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.

Diseases of Low Frequency

<u>Disease</u>	<u>Case Count</u>
Brucellosis	1
Ehrlichiosis, Human Monocytic	4
Encephalitis, St. Louis	1
<i>Haemophilus influenzae</i> , Invasive	7
Listeriosis	3
Lyme Disease	7
Malaria	4
Mumps	1
Q Fever	4
Rocky Mountain Spotted Fever	3
Streptococcal Toxic Shock Syndrome	1
Toxic Shock Syndrome	1
Toxoplasmosis	1
Typhoid Fever	2
<i>Vibrio parahaemolyticus</i>	1
<i>Vibrio vulnificus</i>	1



Cabinet for Health and Family Services
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Division of Epidemiology and Health Planning
Infectious Disease Branch
275 East Main, HS2E-B
Frankfort, KY 40621
Phone: 502-564-3418
Fax: 502-564-4015

<http://chfs.ky.gov/dph/epi/reportablediseases.htm>

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