

# TABLE OF CONTENTS

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<b>I.</b>	<b><u>Introduction</u></b>	<b><u>Page</u></b>
	Background	2
	Data Limitations	3
<b>II.</b>	<b><u>Maps</u></b>	
	Kentucky Area Development Districts (ADD Populations)	4
<b>III.</b>	<b><u>Disease Summaries</u></b>	
	5-year Reportable Diseases Summary	5
	Campylobacteriosis	6
	Chlamydia	7
	Cryptosporidiosis	8
	Gonorrhea	9
	Hepatitis A, Acute	10
	Hepatitis B, Acute	11
	Hepatitis C, Acute	12
	Histoplasmosis	13
	HIV/AIDS	14
	Influenza	15
	Legionellosis	16
	Pertussis	17
	Salmonellosis	18
	Shiga toxin-producing <i>Escherichia coli</i> (STEC)	19
	Shigellosis	20
	Syphilis	21
	Tuberculosis	22
<b>IV.</b>	<b><u>Diseases of Low Frequency</u></b>	<b>23</b>
	References	24

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# BACKGROUND

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## **The Reportable Diseases Summary**

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 2008 and provides valuable information to health service providers and the citizens of the Commonwealth. This summary only includes 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).

## **Reportable (Notifiable) Diseases**

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 of the Centers for Disease Control and Prevention’s 2007 Summary of Notifiable Diseases:

*<http://www.cdc.gov/mmwr/summary.html>*

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# DATA LIMITATIONS

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*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 key public health information for policy development and planning of health related activities. Further, it provides insight on the disease burden/trends in your community and will help facilitate the appropriation of 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. 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 may 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.

Rates in this report are not age adjusted, they are crude rates per 100,000 population.

Finally, the 2008 HIV/AIDS data are not finalized. As stated in the December 2008 HIV/AIDS Semi-Annual Report, "[due to] reporting delays, case numbers for the most recent years of diagnosis may not be complete and therefore, the data from 2008 are considered provisional"<sup>†</sup>.

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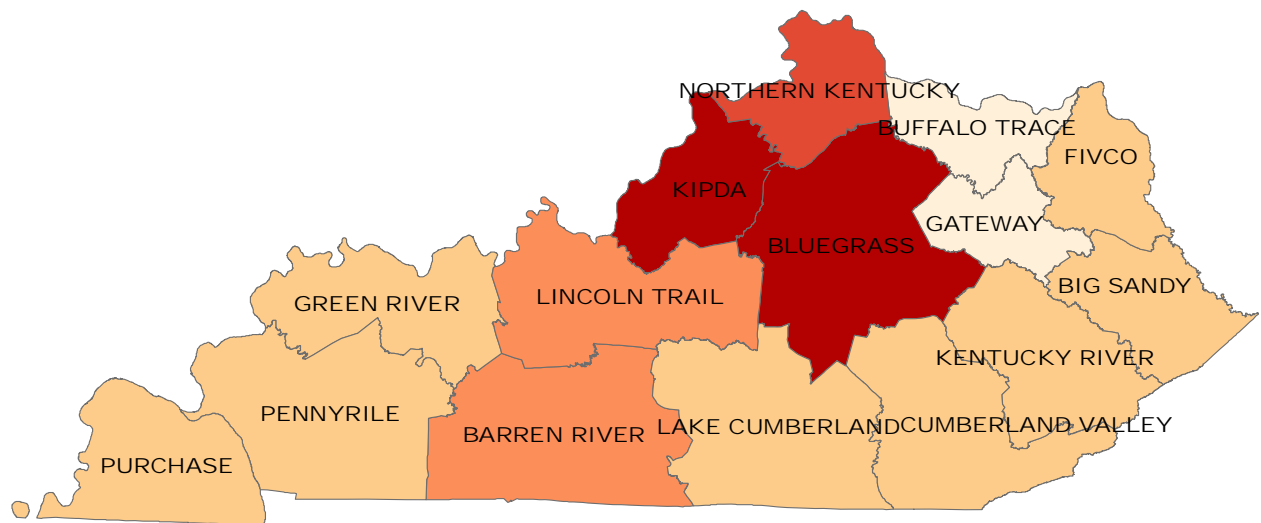
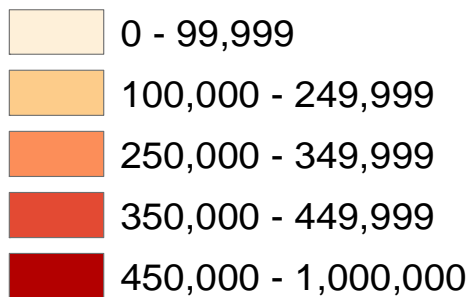
<sup>†</sup>Kentucky Department for Public Health (KDPH) and Centers for Disease Control and Prevention (CDC). Kentucky HIV/AIDS Semi-Annual Report, December 2008. Frankfort, Kentucky: Cabinet for Health and Family Services, Kentucky Department for Public Health, 2008.

# KENTUCKY POPULATION MAP

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## Kentucky Area Development Districts (ADD) Populations

### Legend



Source: United States Census Bureau, 2008

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# 5-YEAR REPORTABLE DISEASES SUMMARY

Disease Condition	2004 Cases	2004 Crude Rate	2005 Cases	2005 Crude Rate	2006 Cases	2006 Crude Rate	2007 Cases	2007 Crude Rate	2008 Cases	2008 Crude Rate
Acquired Immunodeficiency Syndrome (AIDS)	211	5.1	176	4.2	212	5.0	242	5.7	216	5.1
Botulism Infant	1	<0.1	1	<0.1	-	-	1	<0.1	-	-
Brucellosis	2	<0.1	-	-	1	<0.1	-	-	-	-
Campylobacteriosis	273	6.6	288	6.9	250	6.0	283	6.7	348	8.2
Chlamydia	6470	156.4	8351	200.5	8939	212.9	8798	207.7	12162	284.9
Cholera	-	-	-	-	-	-	1	<0.1	-	-
Cryptosporidiosis	47	1.1	149	3.6	44	1.0	249	5.9	36	0.8
Ehrlichiosis/Anaplasmosis	2	<0.1	5	0.1	4	0.1	4	0.1	13	0.3
Encephalitis/California	-	-	-	-	-	-	-	-	1	0.0
Encephalitis/St. Louis	-	-	-	-	1	<0.1	-	-	-	-
Encephalitis/West Nile Virus	1	<0.1	5	0.1	5	0.1	4	0.1	3	0.1
Gonorrhea	2758	66.7	2935	70.5	3276	78.0	3449	81.4	4548	106.5
<i>Haemophilus Influenza, invasive disease</i>	16	0.4	14	0.3	7	0.2	10	0.2	10	0.2
Hansen Disease (Leprosy)	-	-	1	<0.1	-	-	-	-	-	-
Hepatitis A	31	0.7	25	0.6	33	0.8	20	0.5	30	0.7
Hepatitis B, Acute	85	2.1	67	1.6	71	1.7	76	1.8	101	2.4
Hepatitis B, Perinatal <sup>†</sup>	47	-	49	-	49	-	55	-	71	-
Hepatitis C, Acute	27	0.7	16	0.4	36	0.9	29	0.7	68	1.6
Histoplasmosis	47	1.1	51	1.2	54	1.3	46	1.1	42	1.0
Influenza Virus Isolates	621	-	595	-	508	-	738	-	1251	-
Legionellosis	44	1.1	33	0.8	48	1.1	50	1.2	58	1.4
Listeriosis	4	0.1	5	0.1	3	0.1	2	<0.1	7	0.2
Lyme Disease	15	0.4	5	0.1	7	0.2	6	0.1	5	0.1
Malaria	5	0.1	10	0.2	4	0.1	9	0.2	6	0.1
Meningococcal disease	18	0.4	20	0.5	11	0.3	14	0.3	9	0.2
Mumps	-	-	-	-	1	<0.1	-	-	-	-
Pertussis	98	2.4	157	3.8	61	1.5	47	1.1	183	4.3
Q Fever	6	0.1	2	<0.1	4	0.1	3	0.1	1	<0.1
Rabies, Animal	23	0.6	17	0.4	29	0.7	21	0.5	45	1.1
Rocky Mountain spotted fever	3	0.1	3	0.1	3	0.1	5	0.1	1	<0.1
Rubella	-	-	1	<0.1	-	-	-	-	-	-
Salmonellosis	361	8.7	488	11.7	463	11.0	576	13.6	484	11.3
Shiga Toxin <i>E. Coli</i> (STEC)	41	1.0	76	1.8	101	2.4	123	2.9	101	2.4
Shigellosis	75	1.8	335	8.0	238	5.7	505	11.9	263	6.2
Streptococcal disease, invasive, group A	62	1.5	35	0.8	44	1.0	41	1.0	45	1.1
Streptococcal, toxic shock syndrome	11	0.3	4	0.1	1	<0.1	4	0.1	4	0.1
<i>Streptococcus, pneumoniae, invasive disease, drug resistant</i>	32	0.8	35	0.8	39	0.9	29	0.7	80	1.9
Syphilis	151	3.7	129	3.1	188	4.5	90	2.1	140	3.3
Tetanus	2	<0.1	1	<0.1	-	-	-	-	-	-
Toxic Shock Syndrome	11	0.3	4	0.1	4	0.1	6	0.1	2	<0.1
Toxoplasmosis	1	0.0	1	<0.1	1	<0.1	-	-	-	-
Tuberculosis	127	3.1	124	3.0	84	2.0	120	2.8	101	2.4
Tularemia	5	0.1	3	0.1	.	.	1	<0.1	2	<0.1
Typhoid Fever	3	0.1	2	<0.1	2	<0.1	-	-	-	-
Vibriosis	3	0.1	-	-	2	<0.1	-	-	2	<0.1

<sup>†</sup>Perinatal Hepatitis B Cases are listed as the number of infants born to mothers with a positive Hepatitis B surface antigen test results. Due to the inadequate data on the mother, rates were not calculated.

# CAMPYLOBACTERIOSIS

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.

## Campylobacteriosis Cases Diagnosed in 2008

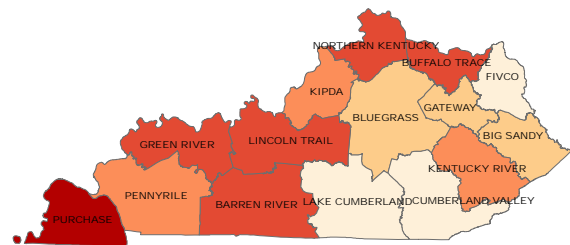
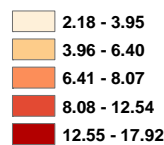
Number of new diagnoses, 2008	348
Kentucky diagnosis rate, 2008**	8.2
United States rate, 2007 †	13.0
Age of case patients (years)	
Mean	33.9
Median	32.0
Diagnosis Rate by gender**	
Female	7.0
Male	9.3
Diagnosis Rate by Race/Ethnicity**	
White, not Hispanic	5.8
Black, not Hispanic	3.7
Hispanic	2.9

\*\*Based on 2008 Kentucky Population Estimates from the US Census Bureau—Rate per 100,000 population

†CDC. Summary of Notifiable Disease—United States, 2007. MMWR, 56(53): 1-94, <http://www.cdc.gov/mmwr/PDF/wk/mm5653.pdf>

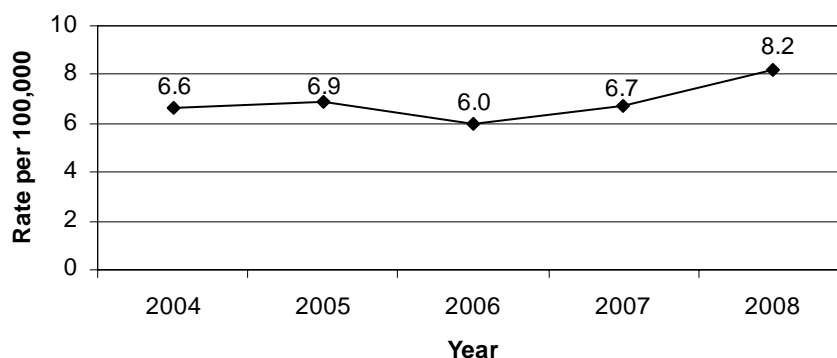
## Campylobacteriosis: Crude rate per 100,000 persons, by Area Development District (ADD)

### Legend



Source: Kentucky Disease Surveillance Module, 2008

## Campylobacteriosis Diagnosis Rate, 2004-2008



# CHLAMYDIA

Chlamydia 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.

## ***Chlamydia Cases Diagnosed in 2008\****

Number of new diagnoses, 2008	12,162
Kentucky diagnosis rate, 2008**	285.7
United States rate, 2008†	401.3
Age of case patients (years)	
Mean	19.0
Median	26.0
Diagnosis Rate by gender**	
Female	395.2
Male	168.1
Diagnosis Rate by Race/Ethnicity**	
White, not Hispanic	105.4
Black, not Hispanic	1114.0
Hispanic	253.0

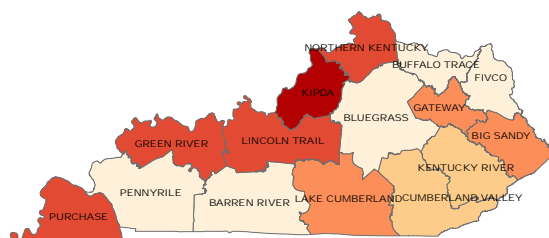
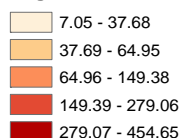
\*Source: Sexually Transmitted Disease Management Information System (STD\*MIS)

\*\*Based on 2008 Kentucky Population Estimates from the US Census Bureau—Rates per 100,000 population.

†CDC. Sexually Transmitted Diseases in the United States, 2008, <http://www.cdc.gov/stdstats08/2008survFactSheet.PDF>, accessed December 2, 2009.

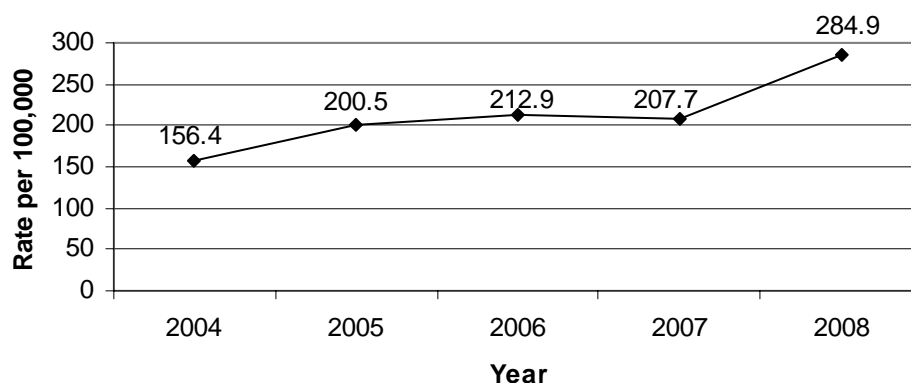
## **Chlamydia: Crude rate per 100,000 persons, by Area Development District (ADD)**

### **Legend**



Source: Sexually Transmitted Disease Management Information System (STD\*MIS), 2008

## **Chlamydia Diagnosis Rate, 2004-2008**



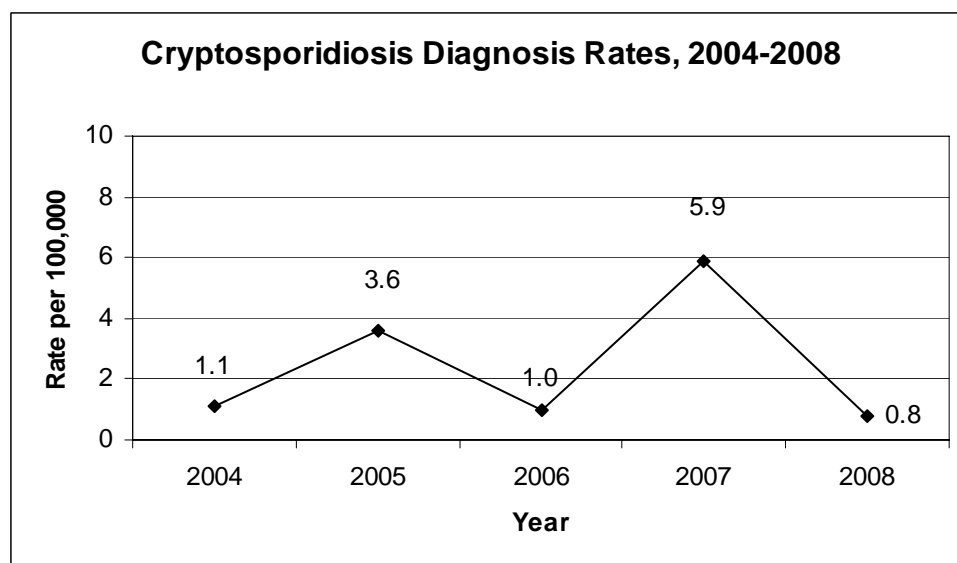
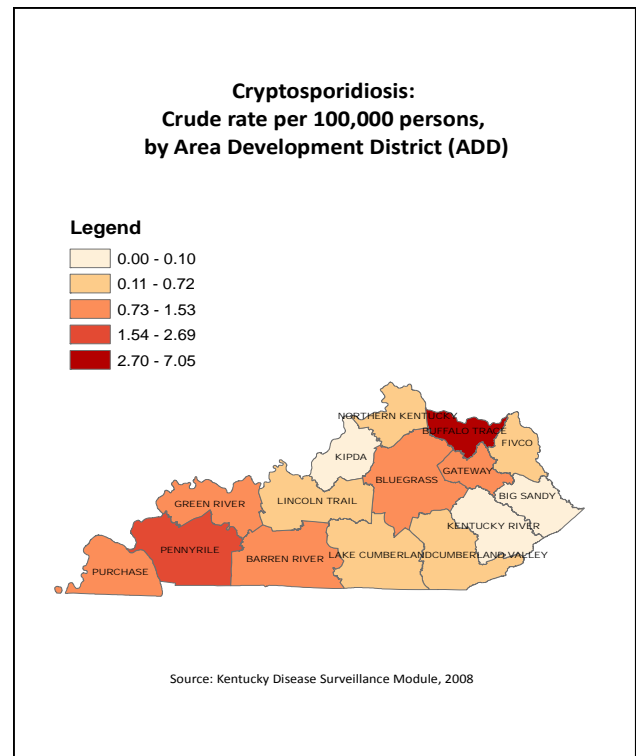
# CRYPTOSPORIDIOSIS

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

Cryptosporidiosis Cases Diagnosed in 2008	
Number of new diagnoses, 2008	36
Kentucky diagnosis rate, 2008**	0.8
United States rate, 2007 †	3.7
Age of case patients (years)	
Mean	20.1
Median	13.0
Diagnosis Rate by gender**	
Female	0.6
Male	1.1
Diagnosis Rate by Race/Ethnicity**	
White, not Hispanic	0.6
Black, not Hispanic	0.3
Hispanic	-

\*\*Based on 2008 Kentucky Population Estimates from the US Census Bureau—Rate per 100,000 population

†CDC. Summary of Notifiable Disease—United States, 2007. MMWR, 56(53): 1-94, <http://www.cdc.gov/mmwr/PDF/wk/mm5653.pdf>





# GONORRHEA

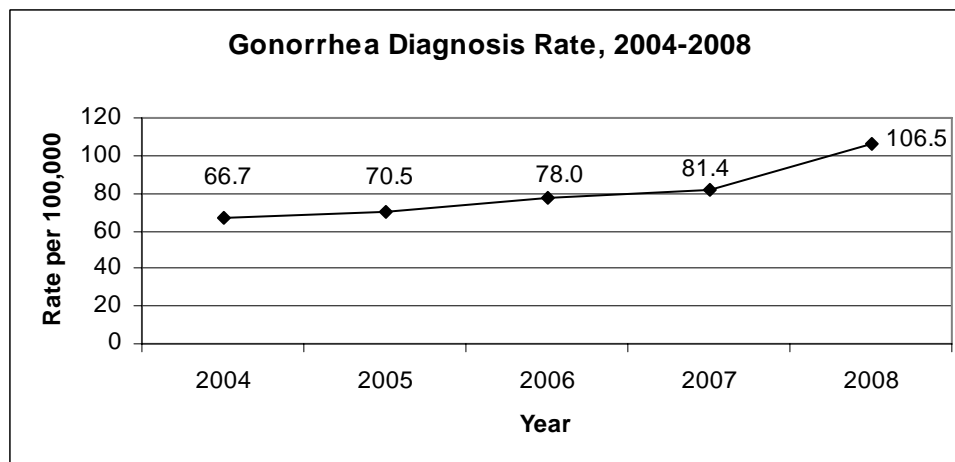
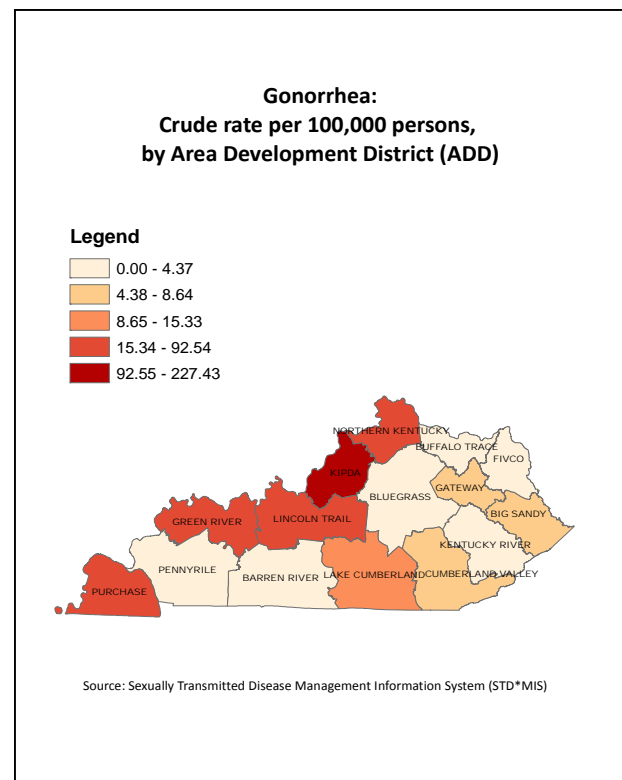
Gonorrhea is a bacterial sexually transmitted infection (STI) caused by *Neisseria gonorrhoeae*. In males, it is usually characterized by a purulent urethral discharge and dysuria. In females, initially there is a urethritis or cervicitis often so mild it may pass unnoticed. Depending upon sexual practices, pharyngeal and anorectal infections can occur. In males, the urethral infection is usually self-limiting; however, it may progress to epididymitis. In rare cases, males or females, the disease 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.

Gonorrhea Cases Diagnosed in 2008	
Number of new diagnoses, 2008	4,548
Kentucky diagnosis rate, 2008**	106.5
United States rate, 2008†	111.6
Age of case patients (years)	
Mean	22.0
Median	24.0
Diagnosis Rate by gender**	
Female	115.1
Male	97.3
Diagnosis Rate by Race/Ethnicity**	
White, not Hispanic	26.0
Black, not Hispanic	658.2
Hispanic	46.0

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

\*\*Based on 2008 Kentucky Population Estimates from the US Census Bureau—Rates per 100,000 population.

†CDC. Sexually Transmitted Diseases in the United States, 2008, <http://www.cdc.gov/std/stats08/2008survFactSheet.PDF>, accessed December 2, 2009.



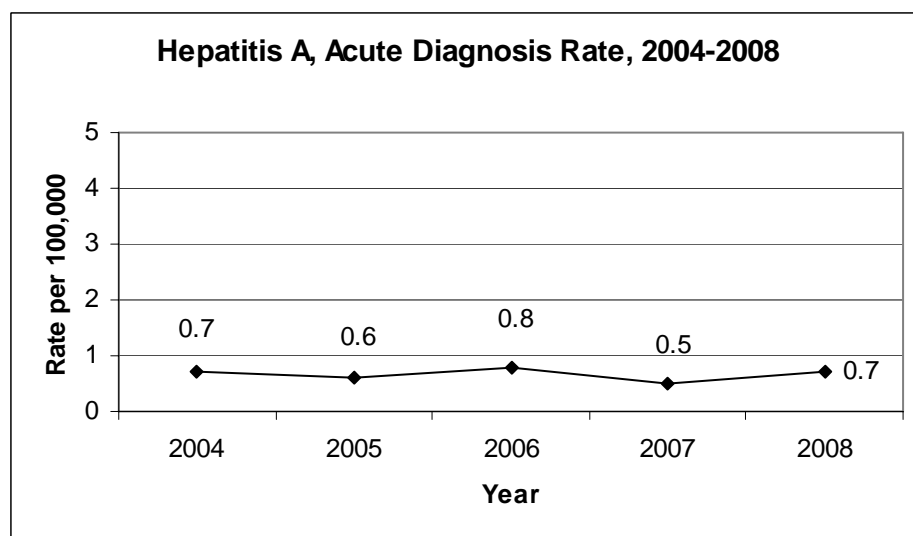
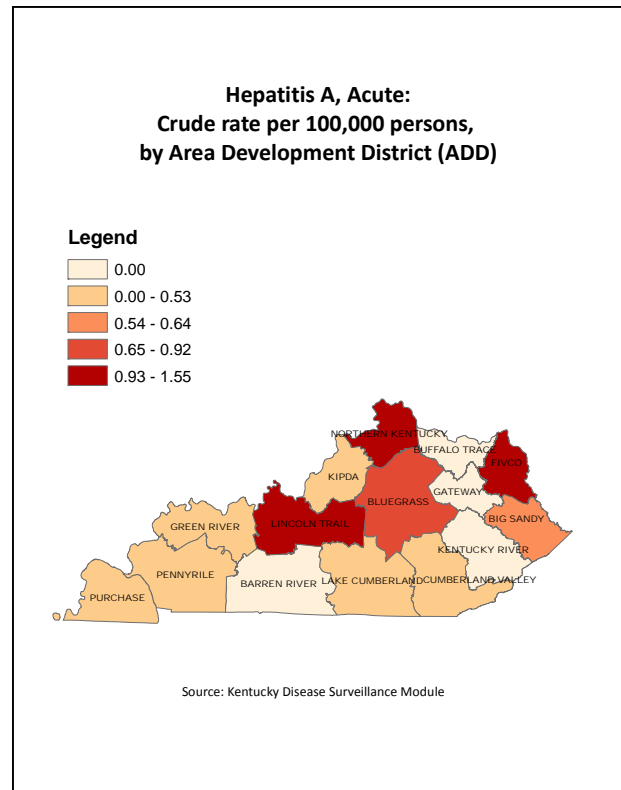
# HEPATITIS A, ACUTE

Acute Hepatitis A is an illness with abrupt onset of symptoms including fever, malaise, anorexia, nausea and abdominal discomfort, followed within a few days by jaundice. The Hepatitis A virus (HBV) is transmitted from person to person primarily through exposure to contaminated feces of infected persons through common sources including: contaminated water, food contaminated by infected food handlers, and consumption of raw or contaminated foods. In about half of the cases no source of infection is identified. No chronic infection of Hepatitis A is known to occur.

Hepatitis A, Acute Cases Diagnosed in 2008	
Number of new diagnoses, 2008	30
Kentucky diagnosis rate, 2008**	0.7
United States rate, 2007 †	1.0
Age of case patients (years)	
Mean	39.5
Median	40.5
Diagnosis Rate by gender**	
Female	0.7
Male	0.7
Diagnosis Rate by Race/Ethnicity**	
White, not Hispanic	0.4
Black, not Hispanic	0.3
Hispanic	4.9

\*\*Based on 2008 Kentucky Population Estimates from the US Census Bureau

†CDC. Summary of Notifiable Disease—United States, 2007. MMWR, 56(53): 1-94, <http://www.cdc.gov/mmwr/PDF/wk/mm5653.pdf>



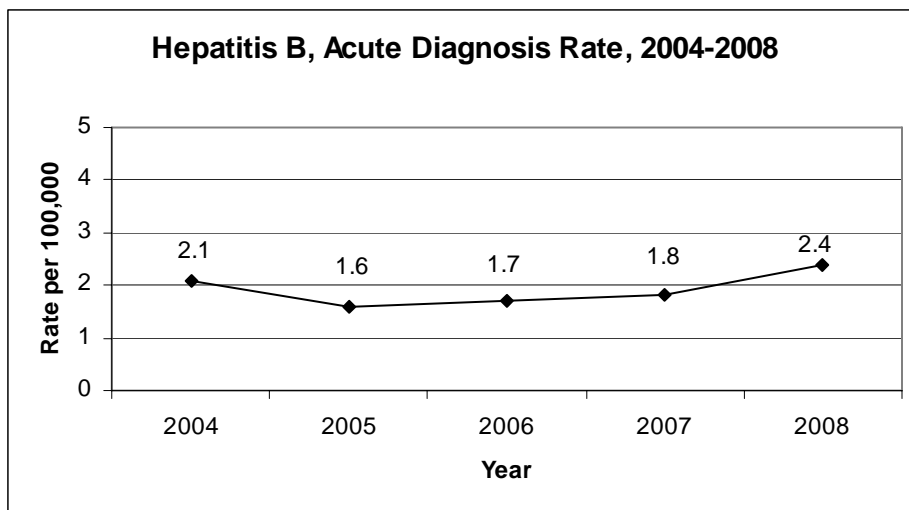
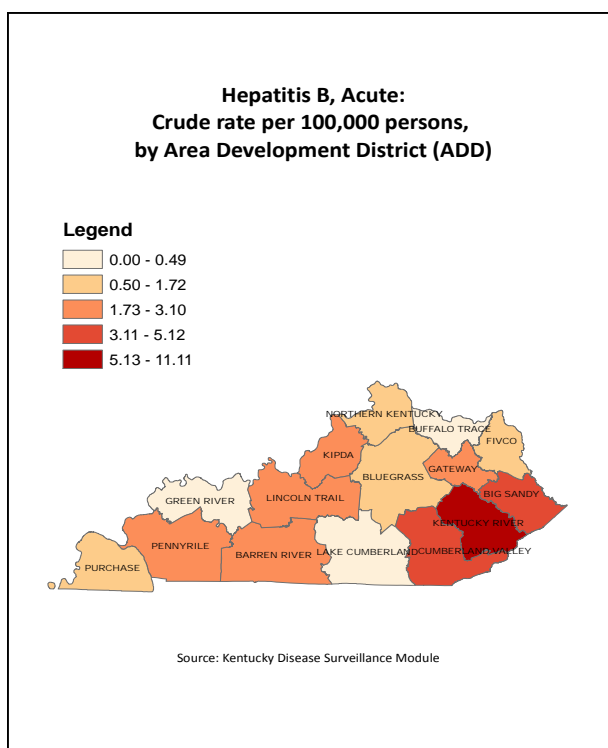
# HEPATITIS B, ACUTE

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 liver cancer and other forms of disease in the future.

Hepatitis B, Acute Cases Diagnosed in 2008	
Number of new diagnoses, 2008	101
Kentucky diagnosis rate, 2008**	2.4
United States rate, 2007 †	1.5
Age of case patients (years)	
Mean	42.0
Median	41.0
Diagnosis Rate by gender**	
Female	2.1
Male	2.7
Diagnosis Rate by Race/Ethnicity**	
White, not Hispanic	1.7
Black, not Hispanic	2.2
Hispanic	1.0

\*\*Based on 2008 Kentucky Population Estimates from the US Census Bureau—Rate per 100,000 population

†CDC. Summary of Notifiable Disease—United States, 2007. MMWR, 56(53): 1-94, <http://www.cdc.gov/mmwr/PDF/wk/mm5653.pdf>



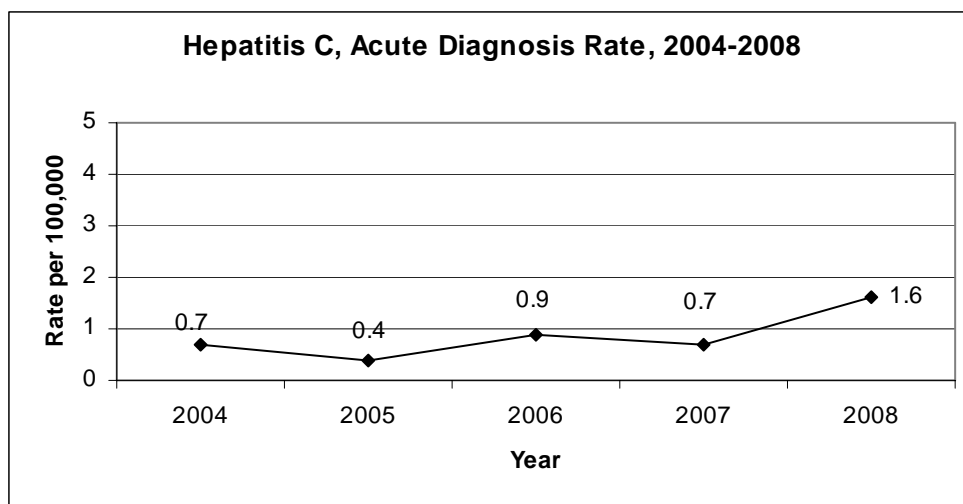
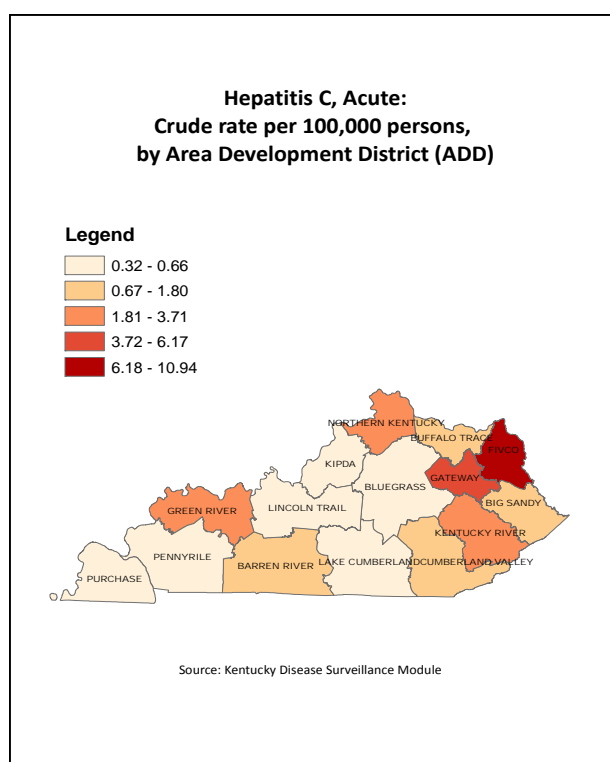
# HEPATITIS C, ACUTE

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.

Hepatitis C, Acute Cases Diagnosed in 2008	
Number of new diagnoses, 2008	68
Kentucky diagnosis rate, 2008**	1.6
United States rate, 2007 †	0.3
Age of case patients (years)	
Mean	33.7
Median	31.0
Diagnosis Rate by gender**	
Female	1.7
Male	1.4
Diagnosis Rate by Race/Ethnicity**	
White, not Hispanic	1.4
Black, not Hispanic	0.3
Hispanic	-

\*\*Based on 2008 Kentucky Population Estimates from the US Census Bureau—Rate per 100,000 population

†CDC. Summary of Notifiable Disease—United States, 2007. MMWR, 56(53): 1-94, <http://www.cdc.gov/mmwr/PDF/wk/mm5653.pdf>



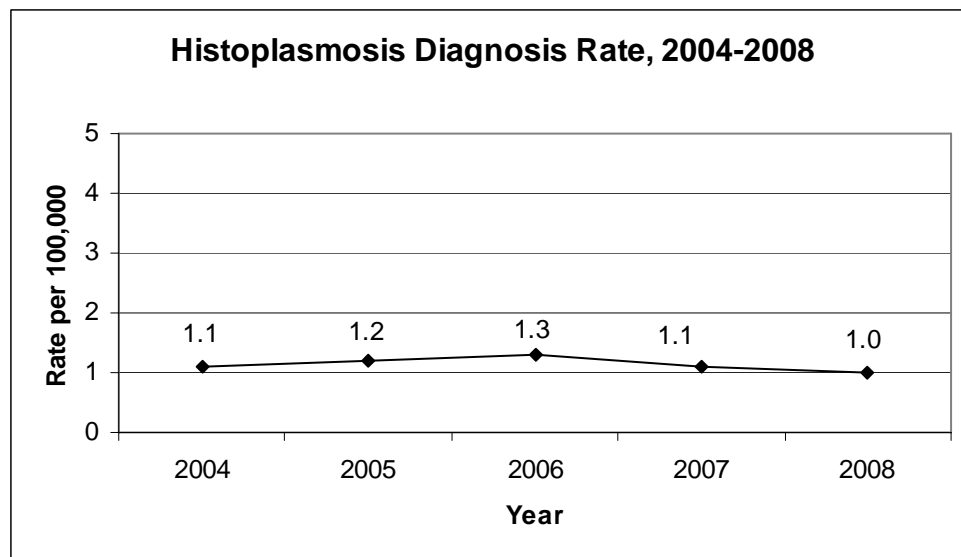
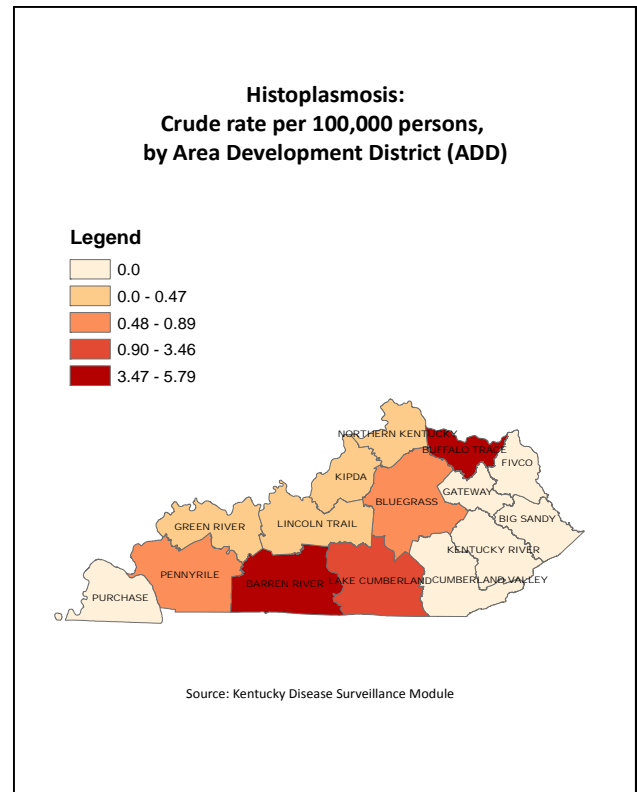
# HISTOPLASMOSIS

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.

Histoplasmosis Cases Diagnosed in 2008	
Number of new diagnoses, 2008	42
Kentucky diagnosis rate, 2008**	1.0
United States rate, 2007 †	N/A
Age of case patients (years)	
Mean	48.8
Median	48.0
Diagnosis Rate by gender**	
Female	1.0
Male	1.0
Diagnosis Rate by Race/Ethnicity**	
White, not Hispanic	0.9
Black, not Hispanic	1.5
Hispanic	-

\*\*Based on 2008 Kentucky Population Estimates from the US Census Bureau—Rate per 100,000 population

†CDC. Summary of Notifiable Disease—United States, 2007. MMWR, 56(53): 1-94, <http://www.cdc.gov/mmwr/PDF/wk/mm5653.pdf>



# HIV/AIDS

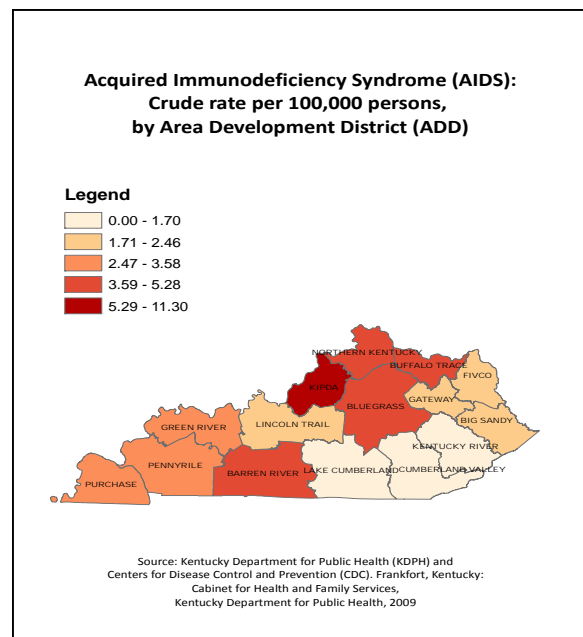
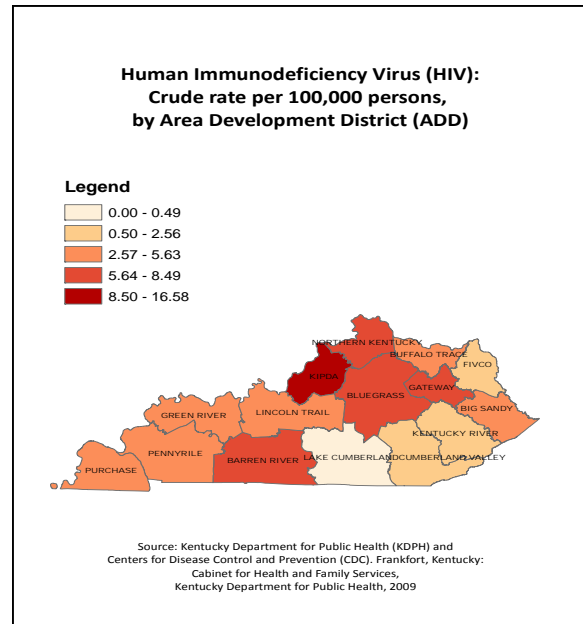
The Centers for Disease Control and Prevention defines Human Immunodeficiency Virus (HIV) as the virus that causes Acquired Immunodeficiency Syndrome (AIDS). This virus may be passed from one person to another when infected blood, semen, or vaginal secretions come in contact with an uninfected person's broken skin or mucous membranes. In addition, infected pregnant women can pass HIV to their babies during pregnancy or at 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.

HIV Diagnoses* and AIDS cases diagnosed in 2008, based on data reported through June 30, 2009		
	HIV*	AIDS
Number of new diagnoses, 2008	375	258
Kentucky diagnosis rate, 2008**	8.7	6.0
United States rate, 2007***	22.8	12.5
Age of case patients (years)		
Mean	36	38.8
Median	36	39
Diagnosis Rate by gender**		
Female	2.7	2.2
Male	15.2	10.0
Diagnosis Rate by Race/Ethnicity**		
White, not Hispanic	5.4	3.7
Black, not Hispanic	44.0	30.3
Hispanic	25.5	25.5

\*HIV diagnoses includes all individuals diagnosed with the HIV virus regardless of the stage of disease progression (i.e., HIV or AIDS).

\*\*Based on 2008 Kentucky Population Estimates from the US Census Bureau—Rate per 100,000 population

\*\*\*Centers for Disease Control and Prevention. *HIV/AIDS Surveillance Report*, Department of Health and Human Services, 2009 <http://www.cdc.gov/hiv/topics/surveillance/resources/reports/>.



**Source:** Kentucky Department for Public Health (KDHP) and Centers for Disease Control and Prevention (CDC). *HIV/AIDS Surveillance*. Frankfort, Kentucky: Cabinet for Health and Family Services, Kentucky Department for Public Health, 2009.

# INFLUENZA

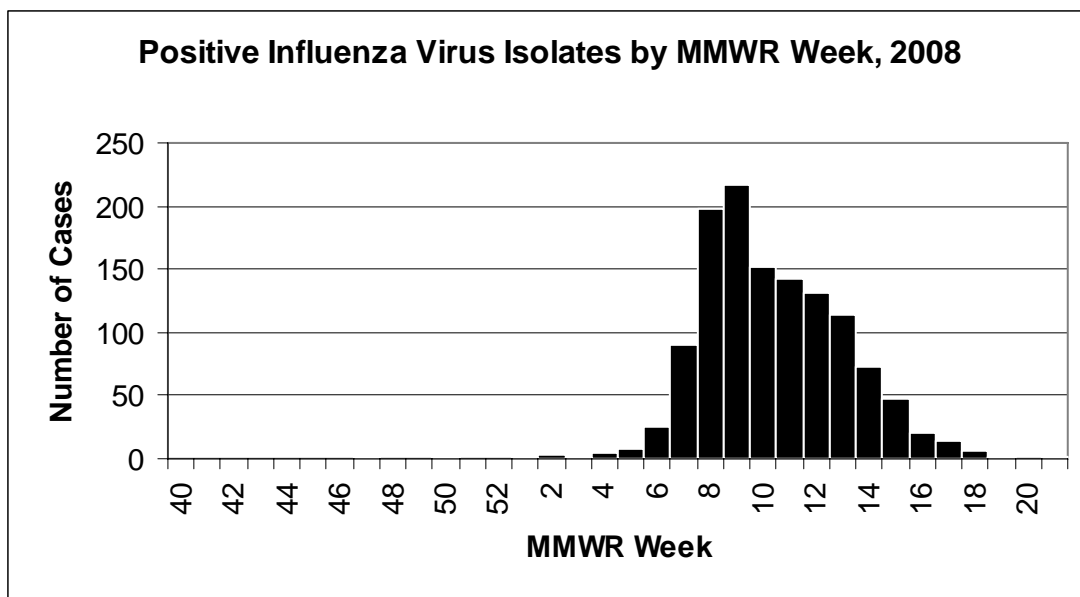
According to the Centers for Disease Control and Prevention (CDC), more than 200,000 people are hospitalized each year from complications of influenza (flu) and more than 36,000 die annually. Signs and symptoms of flu are: fever (usually high), headache, extreme tiredness, dry cough, runny or stuffy nose, muscle aches, nausea, vomiting and diarrhea (more common in children).

Complications of the flu include: bacterial pneumonia, ear infections, sinus infections, dehydration and worsening of chronic medical conditions such as congestive heart failure, diabetes and asthma.

The flu virus is spread by people who are ill through airborne droplets emitted by coughing and sneezing. You may contract influenza by touching objects contaminated with the flu virus.

According to the CDC, most healthy adults may be able to infect others beginning one day before symptoms develop and up to five days after becoming sick. While it is a serious viral disease, it is also a preventable one. The best method of prevention is to receive your influenza vaccination every year.

**Total number of influenza virus isolates\*:** 1251  
**Kentucky rate:** Not Available



\*Positive Influenza virus isolates are voluntarily reported from sentinel health providers, laboratories, vital statistics offices, and/or local health departments which allows the state of Kentucky to develop a statewide picture of influenza activity, geographic distribution of the virus, and the clinical impact of the virus on those living in Kentucky. Due to this sentinel reporting, we are unable to determine rates. The traditional influenza surveillance season is from October through mid-May. The flu season for 2007-08 started at week 40 of 2007 and ended week 21 of 2008. The influenza season is based on MMWR weeks and is shown in the above graph.

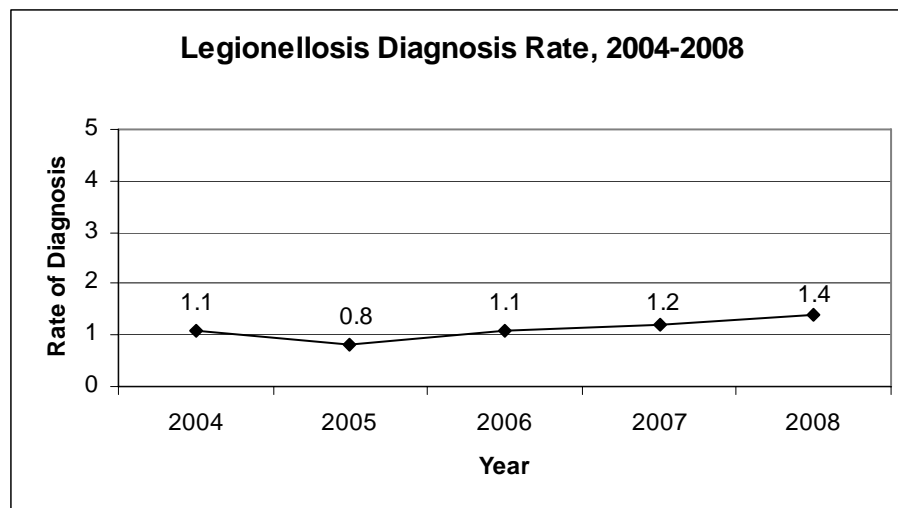
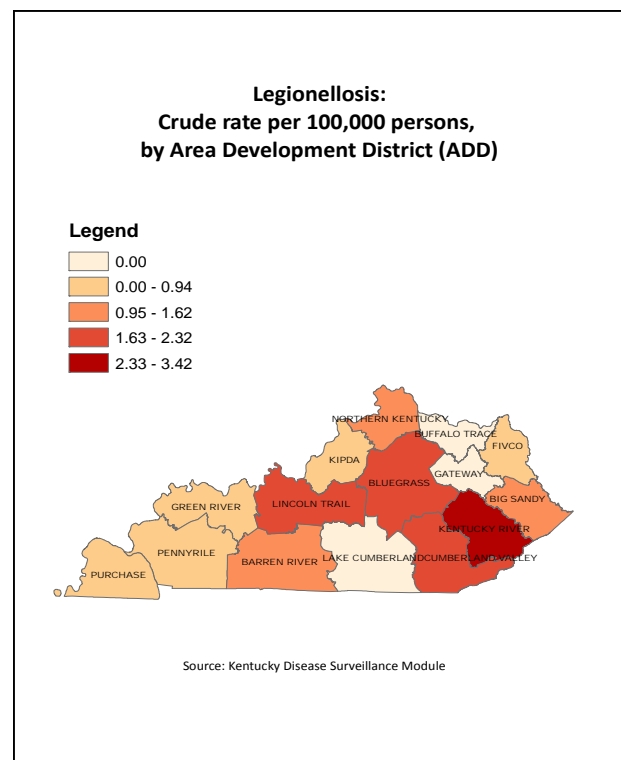
# LEGIONELLOSIS

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 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.

Legionellosis Cases Diagnosed in 2008	
Number of new diagnoses, 2008	58
Kentucky diagnosis rate, 2008**	1.4
United States rate, 2007 †	0.9
Age of case patients (years)	
Mean	59.6
Median	59.0
Diagnosis Rate by gender**	
Female	1.1
Male	1.6
Diagnosis Rate by Race/Ethnicity**	
White, not Hispanic	1.1
Black, not Hispanic	0.9
Hispanic	-

\*\*Based on 2008 Kentucky Population Estimates from the US Census Bureau—Rate per 100,000

†CDC. Summary of Notifiable Disease—United States, 2007. MMWR, 56(53): 1-94, <http://www.cdc.gov/mmwr/PDF/wk/mm5653.pdf>





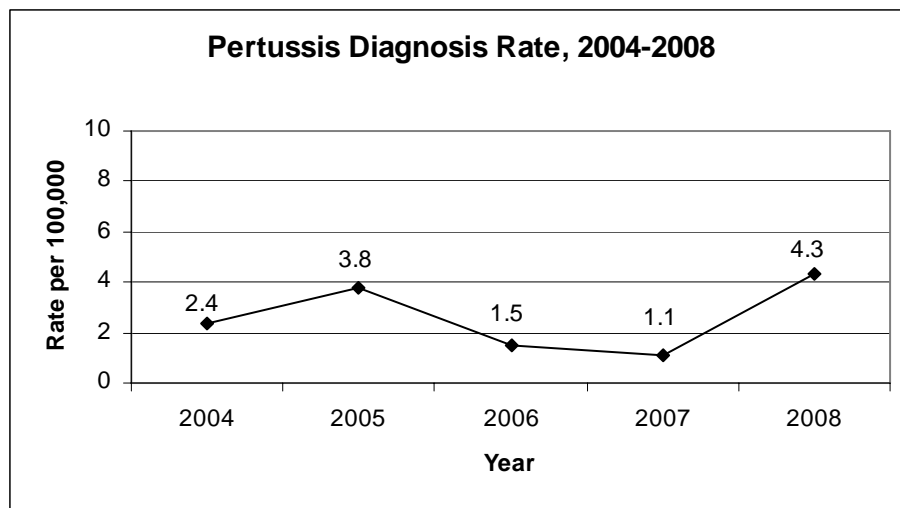
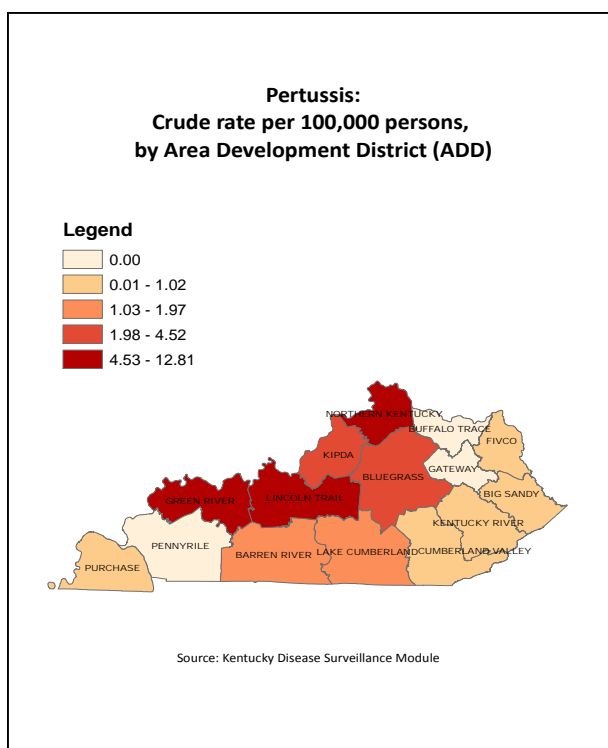
# PERTUSSIS

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.

Pertussis Cases Diagnosed in 2008	
Number of new diagnoses, 2008	183
Kentucky diagnosis rate, 2008**	4.3
United States rate, 2007 †	3.5
Age of case patients (years)	
Mean	11.1
Median	9.0
Diagnosis Rate by gender**	
Female	4.5
Male	4.0
Diagnosis Rate by Race/Ethnicity**	
White, not Hispanic	3.8
Black, not Hispanic	1.2
Hispanic	2.9

\*\*Based on 2008 Kentucky Population Estimates from the US Census Bureau—Rate per 100,000

†CDC. Summary of Notifiable Disease—United States, 2007. MMWR, 56(53): 1-94, <http://www.cdc.gov/mmwr/PDF/wk/mm5653.pdf>



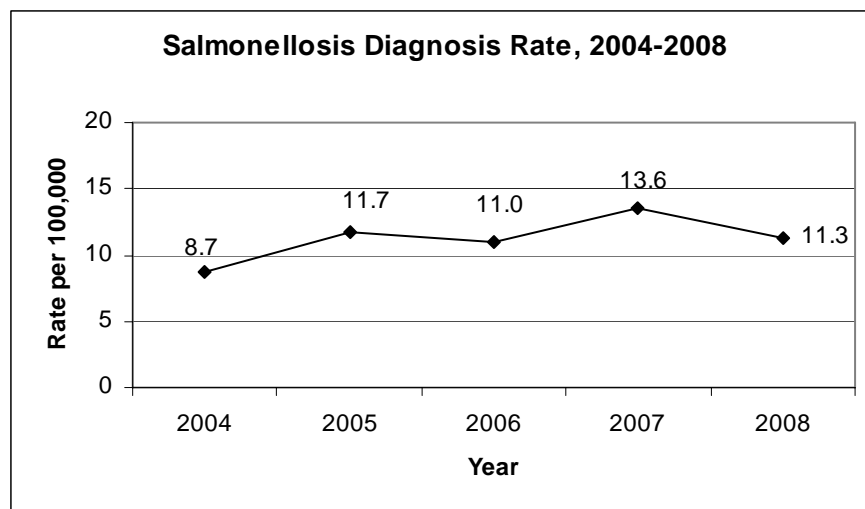
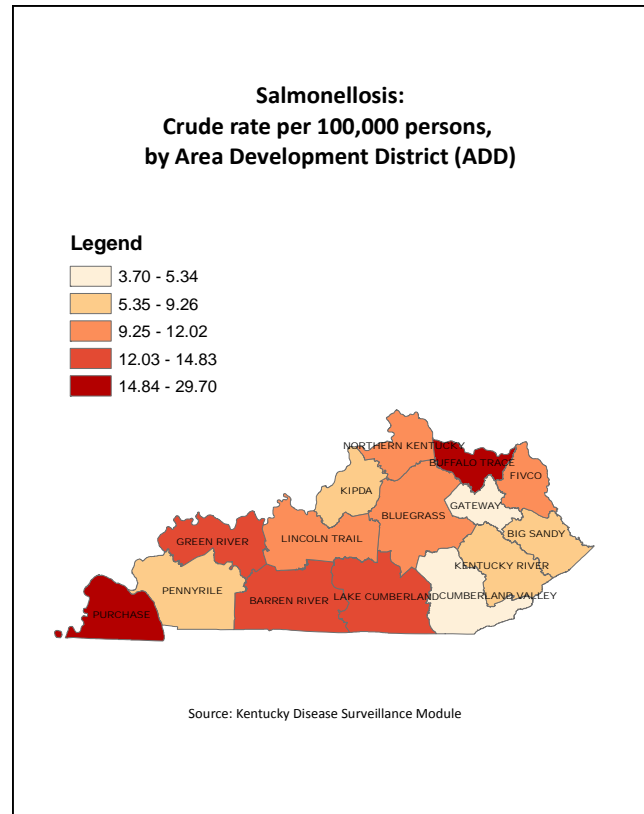
# SALMONELLOSIS

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*.

Salmonella Cases Diagnosed in 2008	
Number of new diagnoses, 2008	484
Kentucky diagnosis rate, 2008**	11.3
United States rate, 2007 †	16.0
Age of case patients (years)	
Mean	34.1
Median	33.0
Diagnosis Rate by gender**	
Female	12.0
Male	10.7
Diagnosis Rate by Race/Ethnicity**	
White, not Hispanic	8.3
Black, not Hispanic	6.5
Hispanic	6.9

\*\*Based on 2008 Kentucky Population Estimates from the US Census Bureau—Rate per 100,000

†CDC. Summary of Notifiable Disease—United States, 2007. MMWR, 56(53): 1-94, <http://www.cdc.gov/mmwr/PDF/wk/mm5653.pdf>



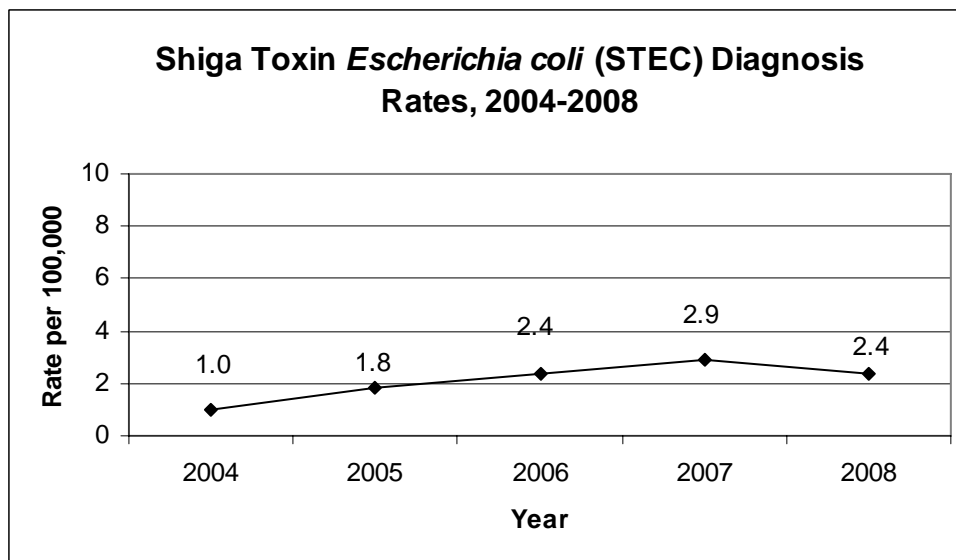
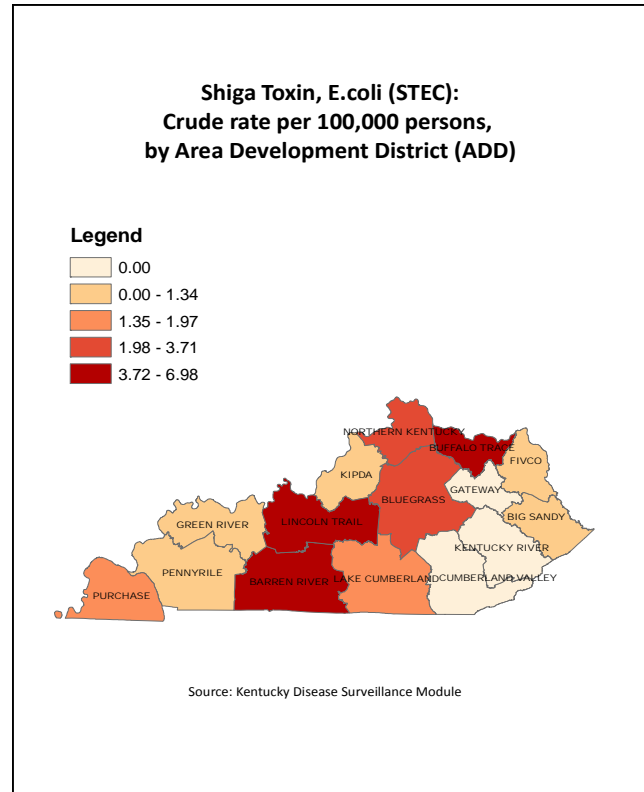
# SHIGA TOXIN-PRODUCING *ESCHERICHIA COLI* (STEC) \*

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 extra intestinal infections.

<b><i>Shiga Toxin, Escherichia coli</i> (STEC) Cases Diagnosed in 2008</b>	
Number of new diagnoses, 2008	101
Kentucky diagnosis rate, 2008**	2.4
United States rate, 2007 †	1.6
Age of case patients (years)	
Mean	28.1
Median	16.0
Diagnosis Rate by gender**	
Female	2.2
Male	2.5
Diagnosis Rate by Race/Ethnicity**	
White, not Hispanic	1.8
Black, not Hispanic	0.3
Hispanic	2.0

\*\*Based on 2008 Kentucky Population Estimates from the US Census Bureau—Rate per 100,000 population

†CDC. Summary of Notifiable Disease—United States, 2007. MMWR, 56(53): 1-94, <http://www.cdc.gov/mmwr/PDF/wk/mm5653.pdf>



\*In 2005, the Council of State and Territorial Epidemiologists (CSTE) and CDC redefined the case definition for shiga toxin producing *E. coli*. See the this link for details: [http://www.cdc.gov/epo/dphsi/casedef/shiga\\_current.htm](http://www.cdc.gov/epo/dphsi/casedef/shiga_current.htm).

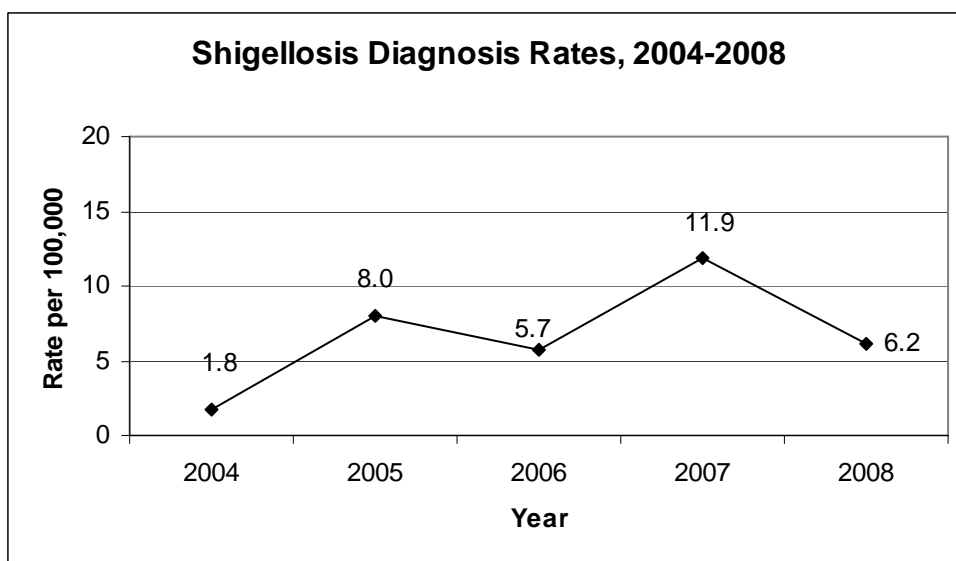
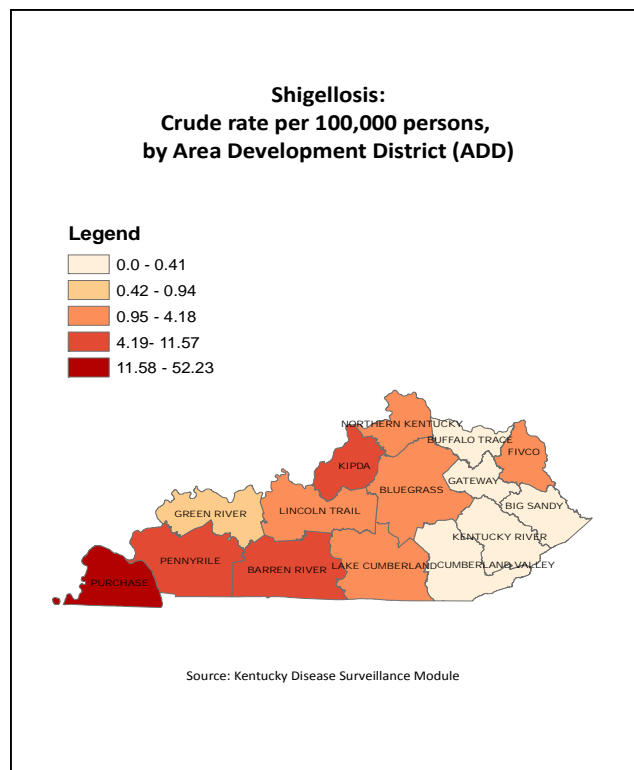
# SHIGELLOSIS

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.

Shigella Cases Diagnosed in 2008	
Number of new diagnoses, 2008	263
Kentucky diagnosis rate, 2008**	6.2
United States rate, 2007 †	6.6
Age of case patients (years)	
Mean	14.7
Median	8.0
Diagnosis Rate by gender**	
Female	6.6
Male	5.7
Diagnosis Rate by Race/Ethnicity**	
White, not Hispanic	4.0
Black, not Hispanic	15.8
Hispanic	6.9

\*\*Based on 2008 Kentucky Population Estimates from the US Census Bureau—Rate per 100,000

†CDC. Summary of Notifiable Disease—United States, 2007. MMWR, 56(53): 1-94, <http://www.cdc.gov/mmwr/PDF/wk/mm5653.pdf>



# SYPHILIS

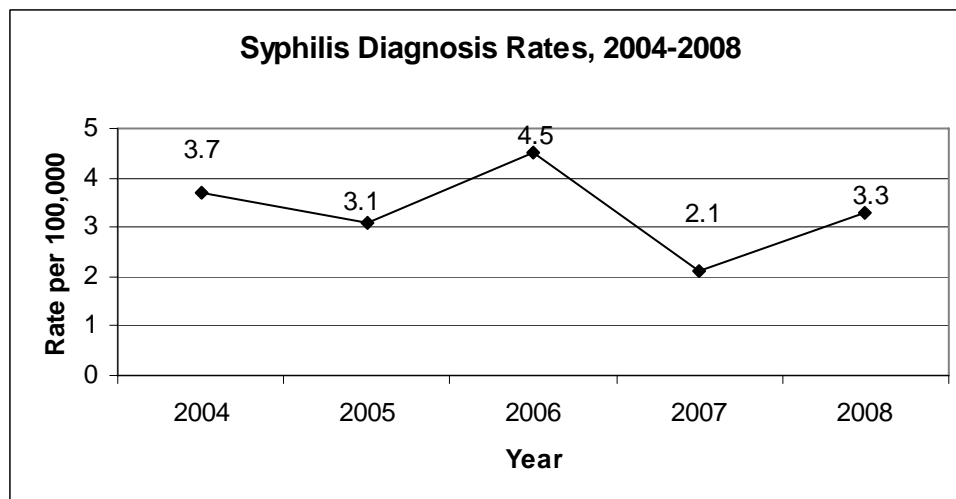
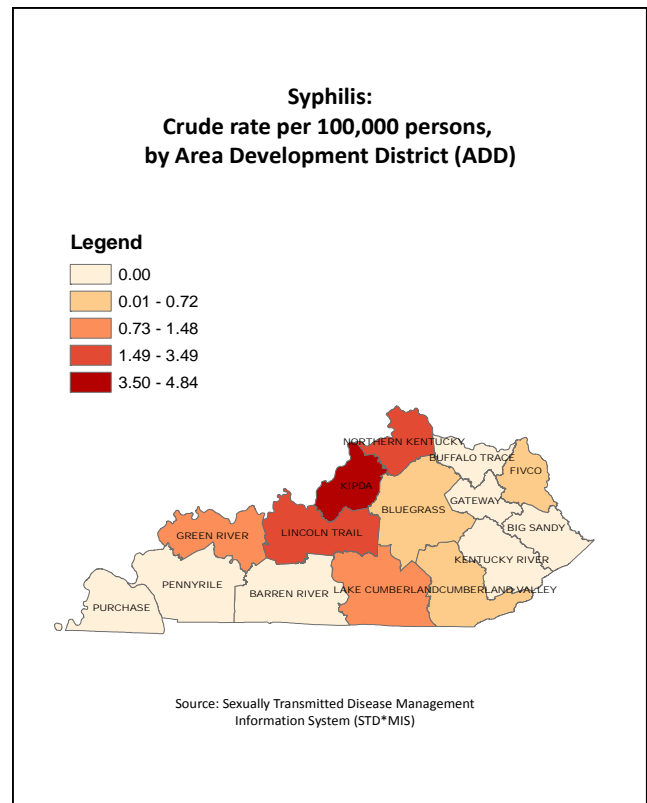
Syphilis is a sexually transmitted disease caused by the spirochete *Treponema pallidum*. The disease, which may be acute or chronic, is characterized clinically by a primary lesion (chancre); a secondary eruption involving skin and mucous membranes; long periods of latency; and late lesions of skin, 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. Neonatal infection may occur through placental transfer or at delivery.

Syphilis Cases Diagnosed in 2008	
Number of new diagnoses, 2008	140
Kentucky diagnosis rate, 2008**	3.3
United States rate, 2008 †	4.5
Age of case patients (years)	
Mean	28.0
Median	34.0
Diagnosis Rate by gender**	
Female	1.1
Male	5.5
Diagnosis Rate by Race/Ethnicity**	
White, not Hispanic	1.4
Black, not Hispanic	8.5
Hispanic	8.8

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

\*\*Based on 2008 Kentucky Population Estimates from the US Census Bureau—Rates per 100,000 population.

†CDC. Sexually Transmitted Diseases in the United States, 2008, <http://www.cdc.gov/stdstats08/2008survFactSheet.PDF>, accessed December 2, 2009.



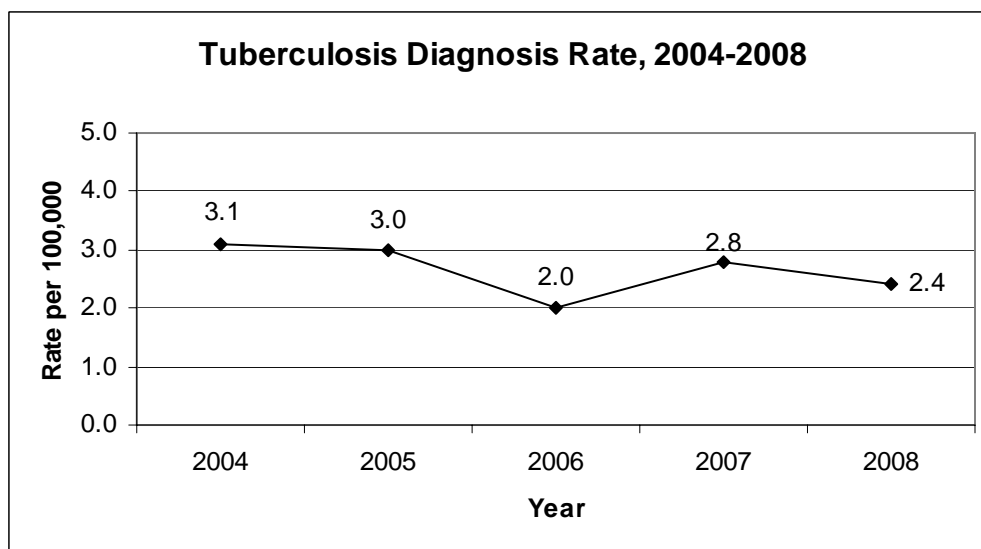
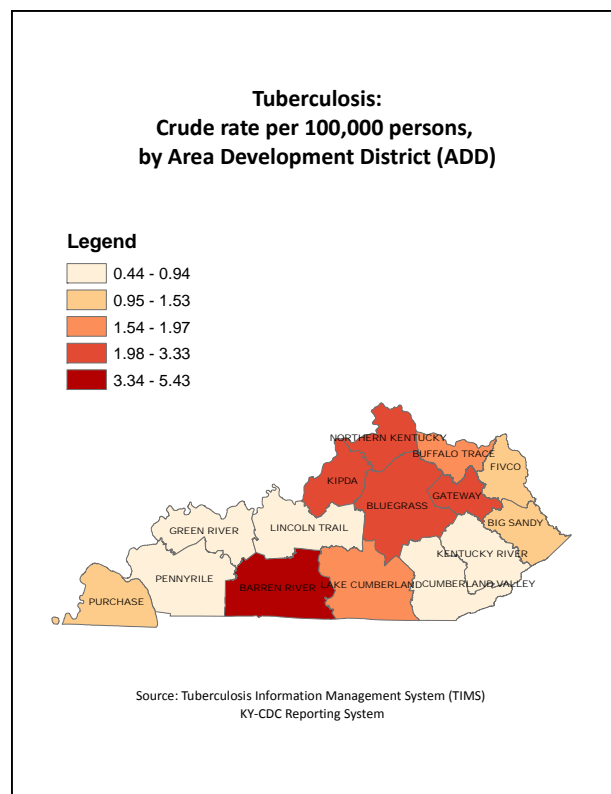
# TUBERCULOSIS

*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. Only active “TB disease” is counted within this summary.

Tuberculosis Cases Diagnosed in 2008	
Number of new diagnoses, 2008	101
Kentucky diagnosis rate, 2008**	2.4
United States rate, 2008 †	4.2
Age of case patients (years)	
Mean	45.0
Median	44.0
Diagnosis Rate by gender**	
Female	1.3
Male	3.5
Diagnosis Rate by Race/Ethnicity**	
White, not Hispanic	1.4
Black, not Hispanic	5.9
Hispanic	19.6

\*\*Based on 2008 Kentucky Population Estimates from the US Census Bureau—Rate per 100,000

†CDC. Morbidity Trend Table, United States , [http://www.cdc.gov/tb/statistics/reports/2008/pdf/4\\_MorbTrend.pdf](http://www.cdc.gov/tb/statistics/reports/2008/pdf/4_MorbTrend.pdf), accessed December 4, 2009.



# Diseases of Low Frequency, 2008

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Low Frequency Diseases	
<u>Diseases</u>	<u>Number of Cases</u>
Ehrlichiosis/Anaplasmosis	13
Encephalitis/California	1
Encephalitis/West Nile Virus	3
<i>Haemophilus influenza</i>	10
Listeriosis	7
Lyme Disease	5
Malaria	6
Meningococcal Disease	9
Q Fever	1
Rocky Mountain Spotted Fever	1
Streptococcal Toxic Shock Syndrome	4
Toxic Shock Syndrome	2
Tularemia	2
Vibriosis	2

No Confirmed Cases Reported
Anthrax
Botulism
Brucellosis
Chancroid
Cholera
Diphtheria
Encephalitis/St. Louis
Granuloma inguinale
Hansen Disease (Leprosy)
Hantavirus Pulmonary Syndrome
Lymphogranuloma venereum
Measles
Mumps
Plague
Poliomyelitis
Psittacosis
Rabies, Human
Tetanus
Toxoplasmosis
Typhoid Fever
Yellow Fever

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