

CHAPTER 3

REPORTABLE DISEASES, ARIZONA, 2000-2010

3A. NON-SEXUALLY TRANSMITTED DISEASES

3B. SEXUALLY TRANSMITTED DISEASES

**3C. HUMAN IMMUNODEFICIENCY VIRUS (HIV)
DISEASE AND ACQUIRED IMMUNODEFICIENCY
SYNDROME (AIDS)**



3A.

NON-SEXUALLY TRANSMITTED DISEASES

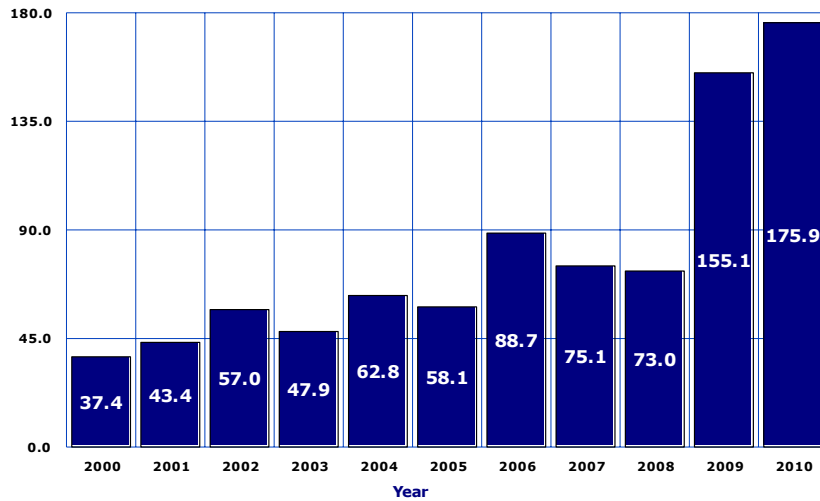
The infectious diseases designated as notifiable vary slightly by state. A notifiable disease is one for which regular, frequent, and timely information regarding individual cases is considered necessary for the prevention and control of the disease. All states generally report the internationally quarantinable diseases (i.e., cholera or plague) in compliance with the World Health Organization's International Health Regulations.

Data on morbidity, levels of disease and disability in the Arizona population, are obtained for certain infectious diseases that must be reported by law. The Bureau of Epidemiology and Disease Control Services conducts surveillance and monitoring of these reportable diseases and it provided data for the respective sections of this chapter and sections 5F, 6A, and 6B.

This section provides some illustrative findings from the tabulated data. It is not intended to be an exhaustive analysis of the incidence of infectious diseases in the State. There is more information available online on the website of the Office of Infectious Disease Services at http://www.azdhs.gov/phs/oids/data_reports.htm

3A. NON-SEXUALLY TRANSMITTED DISEASES

Figure 3A-1
Trends in the Incidence Rates of Valley Fever (Coccidioidomycosis) by Year, Arizona, 2000-2010

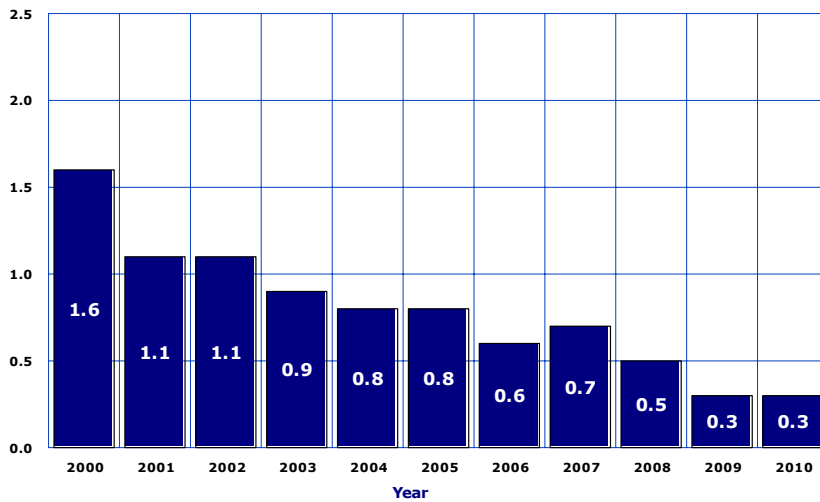


Number of cases per 100,000 population.

Coccidioidomycosis or *Valley Fever* is a fungal infection caused by inhalation of airborne spores that are present in the soil of southwestern United States, California, and parts of Central and South America. Most infections are asymptomatic or self-limited in patients with healthy immune systems. In rare instances, severe lung disease or disseminated infection can develop in patients. In 2009 (the latest available year), 87 percent of *coccidioidomycosis* in the United States occurred in Arizona.

Valley Fever imposed the greatest burden on morbidity among all non-sexually transmitted, notifiable diseases in Arizona in 2010. The reported incidence of Valley Fever increased sharply from 4,768 cases in 2008 to 10,233 cases in 2009 and 11,246 cases in 2010, primarily because certain laboratories in the State adopted a less stringent case definition. The 2010 incidence rate of 175.9/100,000 (**Figure 3A-1, Table 5F-2**) was 4.7 times greater than the incidence rate of 37.4/100,000 in 2000.

Figure 3A-2
Trends in Case Fatality Rates for Valley Fever (Coccidioidomycosis) by Year, Arizona, 2000-2010



Number of deaths per 100 reported cases.

Despite the increase in the incidence rates, the annual mortality rates steadily declined. Thirty-nine from among 11,246 Arizonans who had *Valley Fever* in 2010, died from it (**Table 3A-2**) for a case fatality rate of 0.3 deaths per 100 cases, same case fatality rate as in 2009 (**Figure 3A-2**).

3A. NON-SEXUALLY TRANSMITTED DISEASES

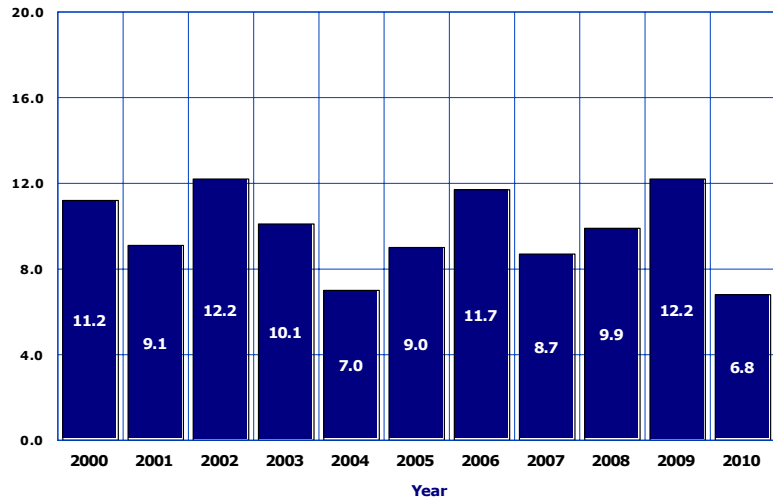
Figure 3A-3
Trends in the Incidence Rates of Shigellosis by Year,
Arizona, 2000-2010

Shigellosis is an infectious disease caused by a group of bacteria called *Shigella* that can cause diarrhea in humans. In addition to spread from one person to another, *Shigellae* can be transmitted through contaminated foods, sexual contact, and water used for drinking or recreational purposes.

In 2000 - 2010, *shigellosis* was the third most common enteric disease to afflict Arizonans after *salmonellosis* and *campylobacteriosis* (Table 3A-1).

The number of reported cases of *shigellosis* decreased from 806 in 2009 to 435 in 2010. The incidence rate of *shigellosis* declined to 6.8 cases per 100,000 in 2010 (Figure 3A-3). The risk of this disease was much higher in Apache County (35.0/100,000; Table 5F-2).

One Arizona resident who had *shigellosis* in 2010, died from it (Table 3A-2).



Number of reported cases per 100,000 population.

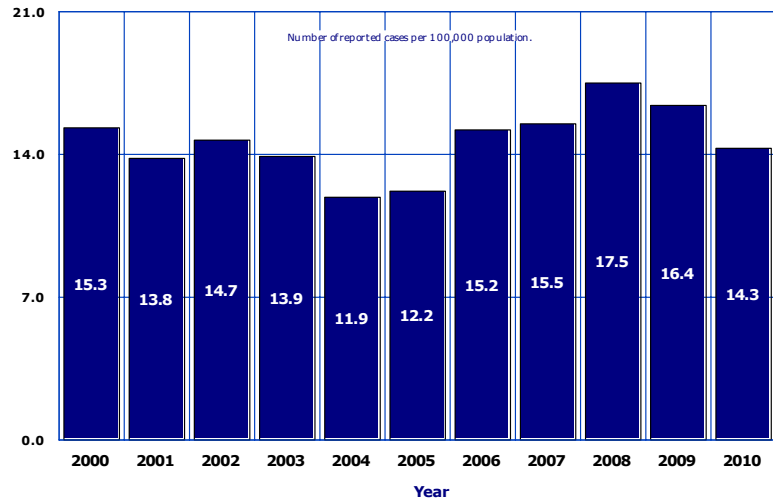
Figure 3A-4
Trends in the Incidence Rates of Salmonellosis* by Year,
Arizona, 2000-2010

Salmonellosis is a bacterial infection. Most of those who are infected with *Salmonella* develop diarrhea, fever, and abdominal cramps. In 2010, more than 49,000 cases of *Salmonellosis* were reported in the United States.

From 2000 to 2002, *salmonellosis* (excluding *S. Typhi* and *S. Paratyphi*) was the most common enteric disease in Arizona. In 2003 - 2005, *campylobacteriosis* was the most common, followed by *salmonellosis* (Table 3A-1). In 2006-2009, *salmonellosis* was again the most common enteric disease in the State.

The incidence rate of *salmonellosis* decreased from 17.5 cases per 100,000 population in 2008, to 16.4/100,000 in 2009, and 14.3/100,000 in 2010 (Figure 3A-4). The risk of *salmonellosis* was substantially higher in Navajo (31.6/100,000), and Graham (29.6/100,000) counties (Table 5F-2).

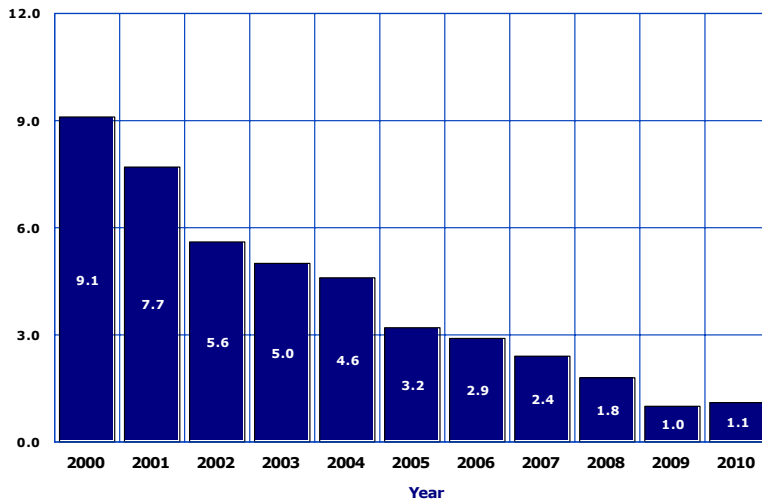
One Arizona resident who had *salmonellosis* died from it in 2010 (Table 3A-2).



*Excluding *S. Typhi* and *S. Paratyphi*.

3A. NON-SEXUALLY TRANSMITTED DISEASES

Figure 3A-5
Trends in the Incidence Rates of Hepatitis A by Year,
Arizona, 2000-2010



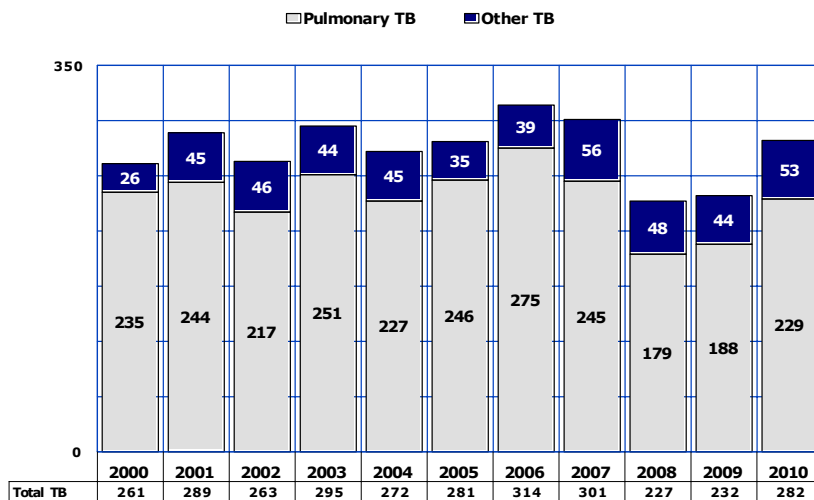
ber of reported cases per 100,000 population.

Hepatitis A is a liver disease caused by the *hepatitis A* virus. During 1995-1996, highly effective *hepatitis A* vaccines became available in the United States. Routine childhood vaccination for *hepatitis A* was recommended in 1999. The expansion of recommendations for routine *hepatitis A* vaccination to include all children in the United States aged 12-23 months is likely to reduce hepatitis rates further.

In Arizona, the incidence rate of *hepatitis A* decreased by 87.9 percent from a recent high of 9.1/100,000 in 2000 to 1.1/100,000 in 2010 (**Figure 3A-5**).

In 2010, the incidence rate of 2.3 cases of hepatitis A per 100,000 residents of Cochise County substantially exceeded the state rate (**Table 5F-2**).

Figure 3A-6
Trends in the Incidence of Pulmonary Tuberculosis and Total Tuberculosis by Year,
Arizona, 2000-2010



Number of reported cases by year.

Tuberculosis (TB) is an infectious disease that usually attacks the lungs, but can attack almost any part of the body. Tuberculosis is spread from person to person through the air.

The number of reported cases of *pulmonary tuberculosis* increased for the second consecutive year from 179 in 2008 to 188 in 2009 and 229 in 2010. The number of reported cases of tuberculosis other than pulmonary increased from 44 reported in 2009 to 53 in 2010 (**Figure 3A-6, Table 3A-1**). The incidence rate of *total* tuberculosis increased from 3.5 cases per 100,000 population both in 2008 and 2009 to 4.4/100,000 in 2010 (**Table 5F-2**). The risk of the disease was 3.8 times higher in Apache County (15.4 cases per 100,000 population).

Pulmonary tuberculosis accounted for 81.2 percent of all tuberculosis infections in 2010 (**Table 3A-1**). Fifteen Arizonans who had *tuberculosis* died from it in 2010 (**Table 3A-2**).

**TABLE 3A-1
NUMBER OF REPORTED CASES OF SELECTED NOTIFIABLE DISEASES BY CATEGORY, ARIZONA, 2000-2010**

Disease	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Vaccine Preventable											
Measles	0	1	0	1	0	1	0	1	18	0	1
Mumps	6	2	1	1	2	1	40	10	5	10	5
Pertussis	143	690	717	211	278	1,108	508	210	218	277	406
Pertussis confirmed cases	(108)	(382)	(280)	(128)	(149)	(486)	(36)	(15)	(23)	(79)	76
Rubella	1	0	0	0	0	0	0	0	1	0	1
Congenital Rubella Syndrome	0	0	0	0	0	0	0	0	0	0	0
Haemophilus influenzae type b (invasive, age < 5 years)	3	5	5	8	1	1	3	3	3	1	2
Chickenpox	1,522	951	606	1,620	920	1,537	974	930	778	534	512
Central Nervous System											
Aseptic Meningitis	163	206	271	1,516	734	832	720	632	688	516	578
Meningococcal Disease	33	21	32	34	15	36	16	13	9	15	14
Viral Encephalitis	3	17	14	28	32	26	18	14	8	2	6
Enteritides											
Amebiasis	38	29	28	43	14	20	16	13	11	7	13
Campylobacteriosis	619	635	733	850	795	867	803	962	1,006	877	937
Cholera	0	0	0	1	0	0	0	1	0	0	0
Cryptosporidiosis	10	11	19	6	17	11	29	53	89	34	37
E. coli O157:H7	56	30	40	41	28	35	105	106	69	68	97
Giardiasis	313	267	268	256	176	183	163	192	142	198	151
Salmonellosis (exl. S. Typhi & S. Paratyphi)	787	733	807	782	694	739	949	997	1,143	1,079	913
Salmonella Paratyphi A	4	2	3	3	3	1	2	1	1	1	6
Salmonella Paratyphi B	7	3	11	4	4	6	7	2	10	6	5
Salmonella Paratyphi C	0	0	4	0	0	0	0	1	0	0	0
Shigellosis	577	483	668	566	409	547	729	557	650	806	435
Typhoid Fever	4	2	0	2	2	4	7	7	3	2	6
Mycosis											
Coccidioidomycosis (Valley Fever)	1,917	2,301	3,118	2,695	3,665	3,515	5,535	4,832	4,768	10,233	11,246
Hepatitides											
Hepatitis A	467	409	305	280	267	195	179	152	118	68	68
Hepatitis B (acute)	215	164	253	283	289	375	373	180	163	193	150
Hepatitis C (acute)	21	9	6	7	1	0	0	0	0	0	0
Hepatitis D	19	5	0	0	0	2	1	3	0	0	1
Hepatitis E	0	0	0	0	0	0	1	1	0	0	1
Hepatitis non-A non-B	1	0	0	0	0	NA	NA	NA	NA	NA	NA
Tuberculosis											
Pulmonary TB	235	244	217	251	227	246	275	245	179	188	229
Total TB	261	289	263	295	272	281	314	301	227	232	282

TABLE 3A-1 (continued)
 NUMBER OF REPORTED CASES OF SELECTED NOTIFIABLE DISEASES BY CATEGORY, ARIZONA, 2000-2010

Disease	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Zoonoses/Vector-borne											
Brucellosis	1	6	6	1	1	5	4	4	3	3	8
Colorado Tick Fever	0	0	0	0	0	0	0	0	0	0	1
Dengue	3	1	2	0	0	0	9	8	6	5	7
Ehrlichiosis	1	1	0	0	0	1	0	0	2	1	0
Hantavirus Pulmonary Syndrome	4	1	3	0	2	5	13	6	1	1	0
Human Rabies	0	0	0	0	0	0	0	0	0	0	0
Lyme Disease	2	3	4	4	13	10	12	3	8	7	3
Malaria	11	19	17	17	16	21	23	12	17	10	27
Plague	1	0	0	0	0	0	0	2	1	0	0
Relapsing Fever, Tick-borne	0	3	0	0	0	0	0	0	0	2	0
Rocky Mountain Spotted Fever	0	0	0	0	4	25	11	10	17	23	2
St. Louis Encephalitis	NA	NA	NA	5	4	1	2	0	0	0	0
Tularemia	1	1	0	1	0	2	1	3	0	0	1
West Nile Virus	NA	NA	NA	12	391	111	148	98	114	21	165
Other											
Legionellosis	11	21	15	21	23	26	38	40	26	49	61
Listeriosis	20	10	18	12	10	13	7	12	8	8	10
Methicillin Resistant S. aureus (invasive)	NA	NA	NA	NA	NA	1,432	1,336	1,305	1,417	1,171	1,125
Streptococcal-Group A (invasive)	235	187	314	260	247	303	351	208	204	161	178
Streptococcal-Group B (invasive, age <90 d)	42	55	27	42	47	44	54	59	57	52	45
Streptococcus pneumoniae (invasive)	823	784	789	718	670	726	971	923	1,077	907	759
Reyes Syndrome	0	1	0	0	0	0	0	0	0	0	0
Toxic Shock Syndrome	0	0	0	9	2	1	2	5	1	1	3
Botulism	1	3	3	0	1	2	5	1	2	3	0
Vibrio spp. (except toxogenic V.cholerae)	3	6	9	19	8	16	25	11	14	19	19
Vancomycin resist. Enterococcus spp.(VRE)	1,084	877	1,031	1,013	1,404	1,956	2,683	2,494	NA	NA	NA
Yersiniosis (except Y. pestis)	4	5	6	7	6	5	11	8	4	7	3

Note: Non-resident cases have been excluded. Only incident cases are reported. Cases are counted by date reported to public health. Case counts include both probable and confirmed cases unless otherwise indicated. E. coli has included both E. coli O157:H7 and Shiga-toxin positive E.colis since October 2004. E. coli O157:H7, Streptococcus-Group B (invasive disease in infants <90 days old), Streptococcus pneumoniae, Vibrio spp., VRE and Yersiniosis became reportable in 1997. Streptococcus pneumoniae was only reportable by laboratories until October 2004. Haemophilus influenzae b includes all invasive H. influenzae b, not just meningitis, as of 1995. Meningococcal includes all invasive disease caused by Neisseria meningitidis, not just meningitis. Salmonella paratyphi A, Salmonella paratyphi B, and Salmonella paratyphi C have been reported separately from other Salmonella spp. beginning in 1997. Animal Rabies cases are not included. Hepatitis D has been reported separately from Hepatitis non-A non-B since 1997. Hepatitis E has been reported separately from Hepatitis non-A non-B beginning in 1998. VRE ceased being reportable beginning in April 2008. West Nile Virus cases are counted by patient onset date.

Note: In mid-2009, a large laboratory changed its reporting practices for coccidioidomycosis. Reported coccidioidomycosis has been elevated since then.

Source: Arizona Department of Health Services, Bureau of Epidemiology and Disease Control Services, Office of Infectious Disease Services,

**TABLE 3A-2
NUMBER OF DEATHS FROM SELECTED NOTIFIABLE DISEASES BY CATEGORY AND YEAR,
ARIZONA, 2000-2010**

ICD-9/ICD-10 codes	Disease	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
VACCINE PREVENTABLE												
055/B05	Measles	0	0	0	0	0	0	0	0	0	0	0
072/B26	Mumps	0	0	0	0	0	0	0	0	0	0	0
033/A37	Whooping cough (pertussis)	1	2	1	1	0	1	0	0	1	2	0
056/B06	Rubella	0	0	0	0	0	0	0	0	0	0	0
052/B01	Chickenpox	1	0	0	1	2	0	0	0	0	2	2
CENTRAL NERVOUS SYSTEM												
047.9/G03.0	Aseptic meningitis	0	1	0	0	0	1	0	0	1	1	0
036/A39	Meningococcal infections	1	1	4	2	0	1	2	0	0	0	2
049.9/A86	Viral encephalitis	0	5	3	0	1	1	4	3	2	5	3
ENTERITIDES (FOODBORNE)												
006/A06	Amebiasis	0	0	0	0	0	0	0	0	0	0	0
007.1/A07.1	Giardiasis	0	0	0	0	0	0	0	0	0	0	0
003/A02	Salmonellosis (except typhoid)	1	0	0	2	2	0	1	1	2	0	1
004/A03	Shigellosis	0	0	0	0	0	1	0	0	0	1	1
002/A01	Typhoid	0	0	0	0	0	0	0	0	1	0	0
MYCOSIS												
114/B38	Coccidioidomycosis (Valley Fever)	30	25	34	24	28	28	33	36	24	35	39
HEPATITIDES												
070.0-070.1/B15	Hepatitis A	2	1	3	3	2	0	2	1	1	1	1
070.2-070.3/B16	Hepatitis B	18	9	14	12	10	12	21	13	6	4	10
070.4-070.5/B17-	Other viral hepatitis	68	96	90	137	125	151	189	131	176	233	207
070.6-070.9/B19	Unspecified	2	2	2	3	3	2	2	3	2	1	1
TUBERCULOSIS												
010-011/A15-A16	Respiratory TB	12	9	18	9	8	13	13	10	10	8	12
010-018/A15-A19	Total TB	14	11	22	12	11	17	20	12	13	8	15
ZOOSES/VECTOR-BORNE												
023.9/A23	Brucellosis	1	0	0	0	0	0	0	0	0	0	0
061/A90	Dengue	0	0	0	0	0	0	1	0	0	0	0
071/A82	Human Rabies	0	0	0	0	0	0	0	0	0	0	0
084/B50-B54	Malaria	0	1	0	0	0	0	2	0	0	0	0
020/A20	Plague	0	0	0	0	0	0	0	1	0	0	0
082/A77.0	Rocky Mountain Spotted Fever	0	0	0	1	0	1	0	0	1	1	1
021/A21	Tularemia	0	0	0	0	0	0	0	0	0	0	0
OTHER												
482.8/A48.1	Legionellosis	1	1	0	2	0	0	3	1	0	3	0
027.0/A32	Listeriosis	0	1	0	0	0	0	0	0	0	0	0
331.8/G93.7	Reyes Syndrome	0	0	1	0	0	0	0	0	0	0	0
995.0/A48.3	Toxic Shock Syndrome	0	0	1	2	2	3	2	0	0	0	0



3B.

SEXUALLY TRANSMITTED DISEASES

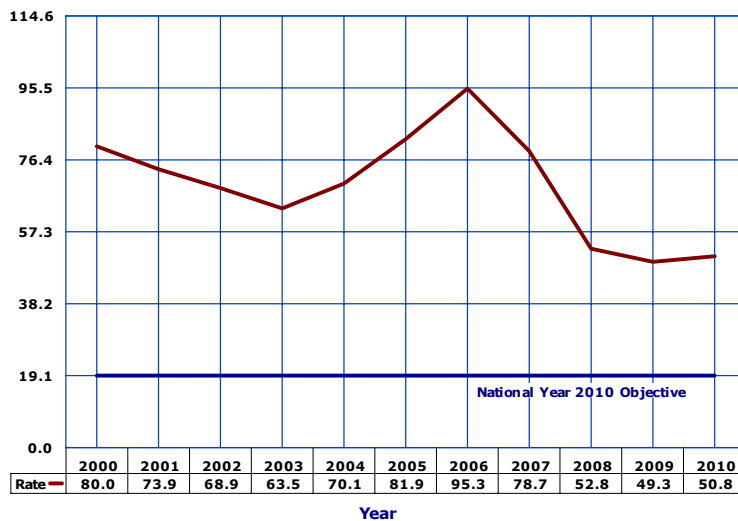
Every state requires physicians to report cases of, and/or laboratories to report test results indicative of specific diseases. The legal authority for deciding which conditions (and which accompanying case data) are reportable in a given jurisdiction can vary by state, but is usually the state and/or local health department. All states require that certain sexually transmitted diseases (STDs) be reported by physicians and other health care providers when they suspect that a case has occurred or they have laboratory confirmation.

It is important to note, that disease reporting is likely incomplete, and completeness may vary depending on the disease. Moreover, changes in methods for public health surveillance, or implementation of new diagnostic tests can cause changes in disease reporting that are independent of the true incidence of disease.* The four sexually transmitted diseases for which reporting is required by administrative rule in Arizona are *gonorrhea*, *syphilis*, *chlamydia*, and *genital herpes*.

*Centers for Disease Control and Prevention. Summary of notifiable diseases – United States, 2008. Published June 25, 2010, for 2008; Vol. 57 (No. 54). Available online at <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5754a1.htm>

3B. SEXUALLY TRANSMITTED DISEASES

Figure 3B-1
Trends in the Incidence Rates of Gonorrhea by Year, Arizona, 2000-2010



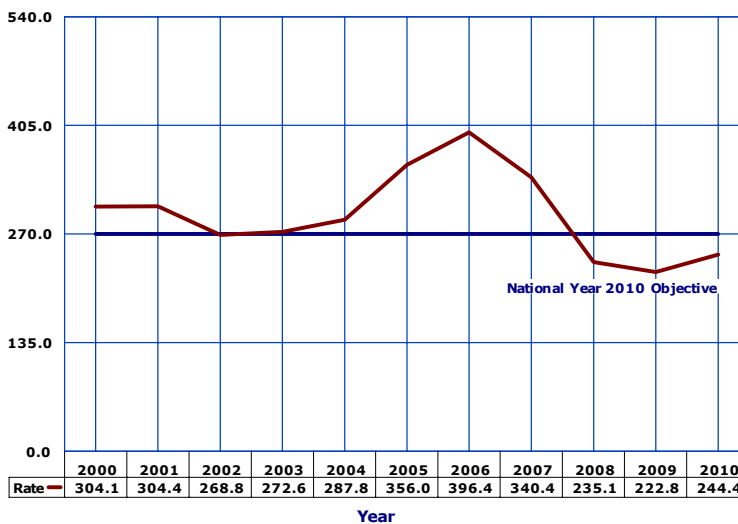
Number of reported cases per 100,000 population.

Neisseria gonorrhoeae infection is the second most commonly reported notifiable disease in the United States. In Arizona, the incidence rates of *gonorrhea* steadily declined each year from 2000 to 2003 (**Figure 3B-1**). The 50.1 percent increase in the incidence rate of gonorrhea from 63.5 cases per 100,000 population in 2003 to 95.3/100,000 in 2006 likely resulted from a combination of factors, such as changes in surveillance, increases in the number of tests performed, and actual increases in disease occurrence. (**Figure 3B-1**).

Compared to 2009, the number of reported cases of gonorrhea remained unchanged in 2010.

The *Healthy People 2010* objectives 25-2 defines the target rate for gonorrhea as equal to or lower than 19.1 cases per 100,000 population. The Arizona latest incidence rate of 50.8/100,000 was 2.7 greater than the target rate (**Table 6A-2**).

Figure 3B-2
Trends in the Incidence Rates of Gonorrhea among Females 15-24 Years, Arizona, 2000-2010



Number of reported cases per 100,000 females ages 15-24 years.

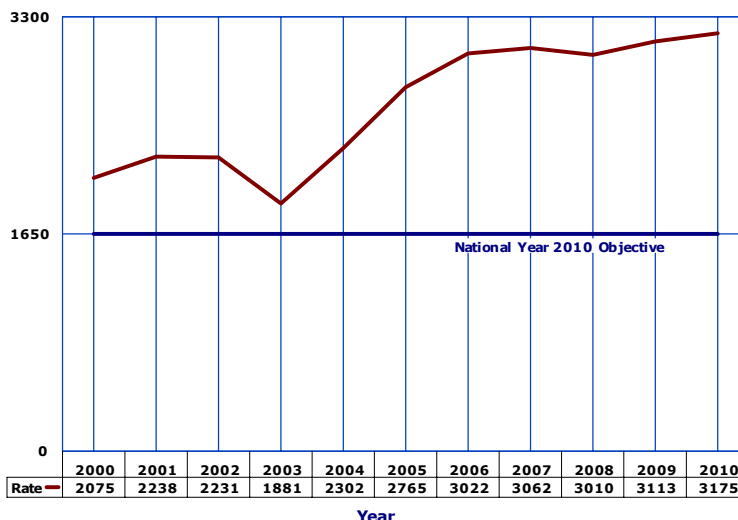
Another *Healthy People 2010* objective is focused on reducing gonorrhea infections to 270 cases per 100,000 females aged 15 to 24 years. In Arizona, following a 43.8 percent decrease in the incidence rate from 396.4 cases per 100,000 females 15-24 years old in 2006, the 2009 and 2010 rates were lower than the *Healthy People 2010* target rate (**Figure 3B-2, Table 6A-2**). Four years earlier, in 2006, the incidence rate of 396.4/100,000, exceeded the *Healthy People 2010* target rate by 46.8 percent.

3B. SEXUALLY TRANSMITTED DISEASES

Figure 3B-3
Trends in the Incidence Rates of Chlamydia among Females 15-24 Years, Arizona, 2000-2010

Chlamydia trachomatis is the most prevalent bacterial sexually transmitted disease in the United States (1,244,180 cases in 2009), with the highest rates reported among adolescents and young adults (**Table 3B-4**). Recent availability of sensitive tests for *chlamydia* using DNA amplification technology undoubtedly contributed to the increase in the number of reported cases in Arizona (**Figure 3B-3, Table 3B-1**).

The incidence rate of *chlamydia* among Arizona females aged 15 to 24 years increased by 5.5 percent from 3,010 cases per 100,000 in 2008 to 3113/100,000 in 2009 and 3175/100,000 in 2010. This latest annual incidence rate exceeded by 92.4 percent the *Healthy People 2010* target rate of 1,650 cases of *chlamydia* per 100,000 females 15-24 years old (**Table 6A-2**).



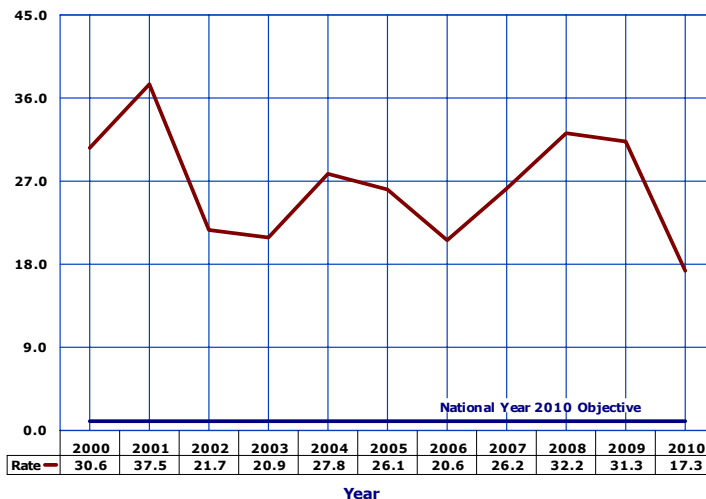
Number of reported cases per 100,000 females ages 15-24 years.

Figure 3B-4
Trends in the Incidence Rates of Congenital Syphilis by Year, Arizona, 2000-2010

Congenital syphilis (CS) is an infection caused by the spirochete *Treponema pallidum*, which can be passed from the mother to child during fetal development or birth. Not all infants born to infected women will be infected.

In 1988, CDC implemented a new CS case definition. It no longer relies on documentation of infection in the infant; rather, it presumes that an infant is infected if it cannot be proven that an infected mother was adequately treated for syphilis before or during pregnancy.

In Arizona, the incidence rate of CS decreased for a second consecutive year from 32.2/100,000 in 2008 to 31.3/100,000 in 2009 and 17.3/100,000 in 2010. (**Figure 3B-4, Table 6A-2**).



Number of reported cases per 100,000 births.

**TABLE 3B-1
NUMBER OF REPORTED CASES OF SEXUALLY TRANSMITTED DISEASES BY CATEGORY AND YEAR, ARIZONA, 2000-2010**

Disease	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Genital Herpes	1,119	1,173	1,148	910	1,196	1,189	1,740	2,003	1,855	775	1,853
Gonorrhea	4,105	3,922	3,772	3,576	4,088	4,951	5,949	5,062	3,449	3,250	3,249
Gonococcal PID¹	21	5	3	0	15	8	4	2	0	0	0
Resistant Gonorrhea²	0	0	1	2	1	1	0	0	0	0	0
Syphilis (P & S)³	189	180	200	186	160	175	203	296	317	231	230
Syphilis-Total⁴	847	1,153	1,077	1,094	998	789	931	1,242	1,396	1,085	904
Chlamydia	12,515	14,352	14,899	12,785	16,869	21,264	24,090	24,866	24,769	26,002	26,861

¹PID is pelvic inflammatory disease.

²Includes PPNG, penicillase producing Neisseria gonorrhea, a form of gonorrhea which is resistant to penicillin

³Primary and secondary syphilis only.

⁴Early, late, congenital and other.

Note: Since 2005, the table includes all positive laboratory results for chlamydia and gonorrhea with or without communicable disease

Source: Arizona Department of Health Services, Bureau of Epidemiology and Disease Control, Office of HIV / STD.

**TABLE 3B-2
NUMBER OF DEATHS ASSOCIATED WITH SPECIFIED SEXUALLY TRANSMITTED DISEASES BY CATEGORY AND YEAR, ARIZONA, 2000-2010**

Disease	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Genital Herpes	0	0	0	0	0	0	0	0	0	0	0
Gonococcal infections	0	0	0	0	0	0	0	0	0	0	0
Syphilis-Total	0	3	1	1	1	0	0	0	1	0	0

Note: Number of deaths associated with Syphilis are still birth (congenital syphilis).

**TABLE 3B-3
FREQUENCY OF REPORTED CASES OF GONORRHEA, CHLAMYDIA, EARLY SYPHILIS AND GENITAL HERPES
BY AGE AND GENDER, ARIZONA, 2010**

Age group	GONORRHEA				CHLAMYDIA				EARLY SYPHILIS				GENITAL HERPES			
	Males	Females	Unknown or Transgender	Total	Males	Females	Unknown or Transgender	Total	Males	Females	Unknown or Transgender	Total	Males	Females	Unknown or Transgender	Total
0-4	0	2	0	2	14	20	0	34	0	0	0	0	3	5	0	8
5-9	0	1	0	1	2	2	0	4	0	0	0	0	3	3	0	6
10-14	5	22	0	27	32	223	0	255	0	0	0	0	1	7	0	8
15-19	257	529	0	786	1,640	6,666	0	8,306	20	10	0	30	31	155	0	186
20-24	540	540	0	1,080	2,711	7,217	0	9,928	57	15	0	72	118	262	0	380
25-29	357	220	0	577	1,410	3,021	1	4,432	58	7	0	65	116	212	1	329
30-34	204	113	0	317	733	1,263	0	1,996	42	7	0	49	76	145	0	221
35-39	133	55	0	188	378	605	0	983	36	6	0	42	74	123	0	197
40-44	85	39	0	124	200	267	0	467	42	6	0	48	47	89	0	136
45-49	54	17	0	71	107	114	0	221	39	3	0	42	49	76	0	125
50-54	39	12	0	51	54	75	0	129	24	1	0	25	36	58	0	94
55-59	12	2	0	14	30	31	0	61	12	1	0	13	31	42	0	73
60-64	5	1	0	6	10	12	0	22	5	1	0	6	18	21	0	39
65-over	5	0	0	5	9	14	0	23	4	0	0	4	28	23	0	51
Total	1,696	1,553	0	3,249	7,330	19,530	1	26,861	339	57	0	396	631	1,221	1	1,853

Note: Since 2005, the table includes all positive laboratory results for chlamydia and gonorrhea with or without communicable disease report.

Source: Arizona Department of Health Services, Bureau of Epidemiology and Disease Control Services, Office of HIV / STD.

TABLE 3B-4
RATES¹ OF REPORTED CASES OF GONORRHEA, CHLAMYDIA, EARLY SYPHILIS AND GENITAL HERPES
BY AGE AND GENDER, ARIZONA, 2010

Age group	GONORRHEA			CHLAMYDIA			EARLY SYPHILIS			GENITAL HERPES		
	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total
0-4	0.0	0.9	0.4	6.0	9.0	7.5	0.0	0.0	0.0	1.3	2.2	1.8
5-9	0.0	0.4	0.2	0.9	0.9	0.9	0.0	0.0	0.0	1.3	1.3	1.3
10-14	2.2	10.0	6.0	14.0	101.5	56.8	0.0	0.0	0.0	0.4	3.2	1.8
15-19	108.3	235.8	170.3	691.2	2971.9	1799.5	8.4	4.5	6.5	13.1	69.1	40.3
20-24	235.2	253.5	244.0	1180.9	3387.9	2243.2	24.8	7.0	16.3	51.4	123.0	85.9
25-29	158.2	102.6	131.1	625.0	1409.1	1007.3	25.7	3.3	14.8	51.4	98.9	74.8
30-34	96.1	55.3	76.1	345.4	617.7	479.0	19.8	3.4	11.8	35.8	70.9	53.0
35-39	63.3	26.8	45.2	179.8	294.4	236.5	17.1	2.9	10.1	35.2	59.9	47.4
40-44	41.3	19.4	30.5	97.1	132.9	114.8	20.4	3.0	11.8	22.8	44.3	33.4
45-49	25.4	7.9	16.6	50.4	53.1	51.8	18.4	1.4	9.8	23.1	35.4	29.3
50-54	19.3	5.6	12.3	26.7	35.2	31.0	11.9	0.5	6.0	17.8	27.2	22.6
55-59	6.7	1.0	3.7	16.8	15.8	16.3	6.7	0.5	3.5	17.4	21.4	19.5
60-64	3.0	0.5	1.7	6.0	6.5	6.3	3.0	0.5	1.7	10.8	11.4	11.1
65-over	1.2	0.0	0.6	2.2	2.9	2.6	1.0	0.0	0.5	7.0	4.8	5.8
Total	53.4	48.3	50.8	230.8	607.2	420.2	10.7	1.8	6.2	19.9	38.0	29.0

¹Number of cases per 100,000 population.

Note: Table includes all positive laboratory results for chlamydia and gonorrhea with or without communicable disease report in 2010.

Note: Denominators for unknown or transgender category are not available.

Rates per 100,000 population.

Source: Arizona Department of Health Services, Bureau of Epidemiology and Disease Control Services, Office of HIV / STD.

**TABLE 3B-5
FREQUENCY OF REPORTED CASES, PERCENT DISTRIBUTION AND RATES OF EARLY AND LATE SYPHILIS,
GONORRHEA, CHLAMYDIA AND HERPES BY ETHNICITY, ARIZONA, 2010**

Race/ethnicity	SYPHILIS						GONORRHEA						CHLAMYDIA			HERPES					
	Early			Late			Resistant			Total			Cases	%	Rate	Cases	%	Rate	Cases	%	Rate
	Cases	%	Rate	Cases	%	Rate	Cases	%	Rate	Cases	%	Rate									
White Non-Hispanic	142.0	35.9	3.8	118.0	23.9	3.2	0.0	0.0	0.0	795.0	24.5	21.5	6459.0	24.0	174.8	684.0	36.9	18.5			
Black or African American	36.0	9.1	15.1	58.0	11.8	24.3	0.0	0.0	0.0	731.0	22.5	305.7	2746.0	10.2	1148.5	173.0	9.3	72.4			
Hispanic or Latino	141.0	35.6	7.4	211.0	42.8	11.1	0.0	0.0	0.0	986.0	30.3	52.0	9366.0	34.9	494.2	430.0	23.2	22.7			
Asian or Pacific Islander	4.0	1.0	2.3	12.0	2.4	7.0	0.0	0.0	0.0	19.0	0.6	11.1	269.0	1.0	157.8	17.0	0.9	10.0			
American Indian or Alaska Native	32.0	8.1	12.4	31.0	6.3	12.0	0.0	0.0	0.0	219.0	6.7	85.1	2683.0	10.0	1042.2	196.0	10.6	76.1			
Not Specified	41.0	10.4	N/A	63.0	12.8	N/A	0.0	0.0	NA	499.0	15.4	N/A	5338.0	19.9	N/A	353.0	19.1	N/A			
Total	396.0	100.0	6.2	493.0	100.0	7.7	0.0	0.0	0.0	3249.0	100.0	50.8	26861.0	100.0	420.2	1853.0	100.0	29.0			

Note: Table includes all positive laboratory results for chlamydia and gonorrhea with or without communicable disease report in 2010.

Note: Rates per 100,000 population.

Source: Arizona Department of Health Services, Bureau of Epidemiology and Disease Control Services, Office of HIV / STD.



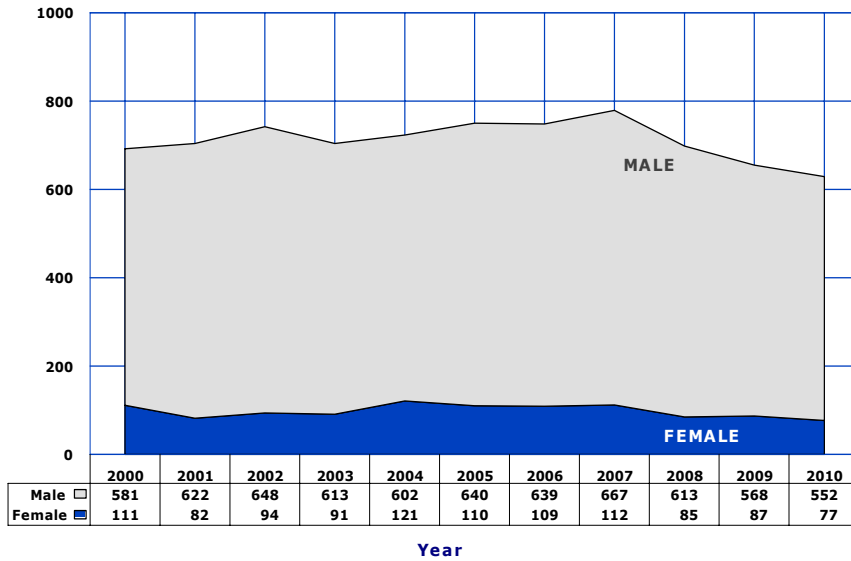
3C.

HUMAN IMMUNODEFICIENCY VIRUS (HIV) DISEASE AND ACQUIRED IMMUNODEFICIENCY SYNDROME (AIDS)

Statistics about the estimated incidence of Human Immunodeficiency Virus (HIV) disease and Acquired Immunodeficiency Syndrome (AIDS) for 1981-2010, as provided by the Office of HIV, STD, and Hepatitis Services, are available in Tables 3C-1, 3C-2, 3C-3, 3C-4, 3C-5 and 5F-3 of this report. In the past, the cases of persons previously reported as HIV positive and subsequently diagnosed as AIDS were not properly counted since these were not new cases, only a new diagnosis reflecting a progression of the disease. The data for 1981-2010 presented in this report are based on a revised approach adopted by the Office of HIV/AIDS Services. The estimated incidence of HIV/AIDS includes the sum of new HIV cases and new AIDS cases, which were not diagnosed as HIV positive in any prior calendar year. The cases of persons who were diagnosed with both HIV and AIDS in the same calendar year are counted only as AIDS to avoid double counting (see the Executive Summary of the HIV/AIDS annual report at <http://www.azdhs.gov/phs/hiv/reporting/2010annualreportpage.htm>)

3C. HIV DISEASE AND AIDS

Figure 3C-1
Reported Cases of HIV/AIDS by Gender and Year of Diagnosis,
Arizona, 2000-2010

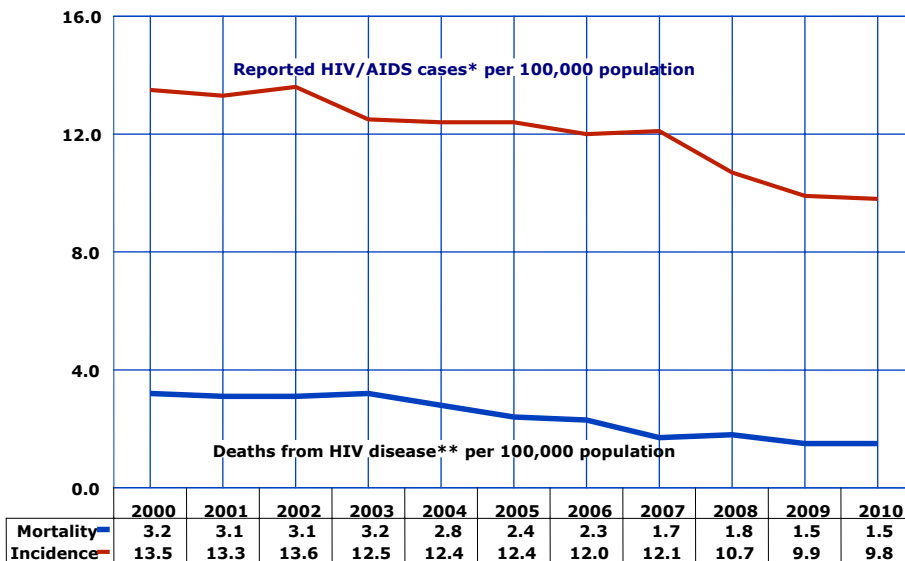


Since the first case of AIDS diagnosed in an Arizona resident in 1981, a total of 19,100 cases of HIV/AIDS had been diagnosed in the State by the end of 2010 and reported by June 30, 2011 (**Table 3C-1**).

In 2010, males accounted for 87.8 percent of all *HIV/AIDS* diagnoses. The male-to-female ratio of *HIV/AIDS* diagnoses in Arizona in 2010 was 7.2:1 (552/77, **Figure 3C-1**, **Table 3C-2**).

The proportion of risk behaviors attributed to emerging cases of *HIV/AIDS* in 2010 remained similar to previous years. Of the 629 *HIV/AIDS* cases diagnosed in 2010, 385 (61.2 percent) were among men who reported sexual contact with other men (**Table 3C-4**). Another 61 (9.7 percent) reported heterosexual contact. An additional 42 (6.7 percent) reported only injecting drugs. Adults without an indicated risk accounted for 15.6 percent of *HIV/AIDS* cases diagnosed in 2010.

Figure 3C-2
Trends in the Incidence Rates of HIV/AIDS and Mortality Rates for HIV Disease
by Year, Arizona, 2000-2010



The incidence rate measures the relative risk for *HIV/AIDS* in a population. The incidence rate of *HIV/AIDS* has fallen in Arizona by 27.9 percent from the recent peak of 13.6 cases per 100,000 population in 2002 to 9.8 /100,000 in 2010 (**Figure 3C-2**; the incidence rates for 2000 – 2009 have been re-computed based on the latest volume of the *HIV/AIDS* data as of 6/30/2011).

The rate of deaths from *HIV disease* slightly remained unchanged at 1.5 deaths per 100,000 population in 2010 (**Figure 3C-2**).

Of the 629 *HIV/AIDS* cases diagnosed in 2010, 309 (49.1 percent) were White non-Hispanic, 200 (31.8 percent) were Hispanic, 56 were Black (8.9 percent), 38 were American Indian (6.0 percent), and 11 were Asian or Pacific Islander (1.7 percent; based on data in **Table 3C-3**).

*By year of diagnosis.
 **By year of death.

**TABLE 3C-1
FREQUENCY DISTRIBUTION OF HIV/AIDS BY AGE AT DIAGNOSIS,
ARIZONA, 1981-2010**

Age Group (years)	HIV/AIDS cases
Under 5	109
5-12	46
13-19	356
20-29	5,471
30-39	7,275
40-49	4,055
50 or above	1,768
Missing	20
Total	19,100

**TABLE 3C-2
HIV/AIDS CASES AND DEATHS BY YEAR OF DIAGNOSIS AND GENDER,
ARIZONA, 1981-1999 and 2000-2010**

	1981-1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
# Males	10,003	581	622	648	613	602	640	639	667	613	568	552
# Females	1,273	111	82	94	91	121	110	109	112	85	87	77
# Total	11,276	692	704	742	704	723	750	748	779	698	655	629
# Presumed Living	5,409	540	564	606	604	612	651	668	715	654	611	600
# Known dead	5,867	152	140	136	100	111	99	80	64	44	44	29
% Mortality	52.0	22.0	19.9	18.3	14.2	15.4	13.2	10.7	8.2	6.3	6.7	4.6

Note: Due to reporting delays, all numbers are provisional (2010 volume as of 6/30/2011).

Source: Arizona Department of Health Services, Bureau of Epidemiology and Disease Control, Office of HIV/AIDS Services.

**TABLE 3C-3
DISTRIBUTION OF REPORTED HIV/AIDS CASES BY YEAR OF DIAGNOSIS AND RACE/ETHNICITY,
ARIZONA, 1981-1999 AND 2000-2010**

Race/ethnicity	1981-1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
White non-Hispanic	7,611	375	384	386	362	344	371	332	358	346	281	309
Black or African American non-Hispanic	977	93	82	73	83	91	79	111	80	72	67	56
Hispanic or Latino all races	2,109	186	190	234	216	246	242	259	282	226	239	200
Asian or Pacific Islander non-Hispanic	51	7	5	7	5	9	8	10	15	12	10	11
American Indian or Alaska Native non-Hispanic	288	22	34	39	31	30	42	28	29	32	39	38
Two or more races/ other or unknown race	240	9	9	3	7	3	8	8	15	10	19	15
Total	11,276	692	704	742	704	723	750	748	779	698	655	629

**TABLE 3C-4
DISTRIBUTION OF REPORTED HIV/AIDS CASES BY YEAR OF DIAGNOSIS AND TRANSMISSION CATEGORY,
ARIZONA, 1981-1999 AND 2000-2010**

Transmission	1981-1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
MSM	6,492	381	443	471	437	440	488	478	428	403	345	385
IV Drug User (IDU)	1,551	100	108	95	93	95	92	92	52	69	52	42
MSM/IDU	1,285	63	57	74	70	43	45	40	39	32	33	42
Hemophilic (Adult)	77	2	1	1	0	1	1	0	0	0	0	0
Heterosexual Contact	814	106	70	79	86	109	67	71	74	52	55	61
Transfusion/transplant (Adult)	119	3	1	3	0	0	2	1	0	0	0	0
No indicated risk (Adult)	846	28	15	13	13	30	43	59	180	140	168	98
Pediatric Hemophilic	16	0	0	0	0	0	0	0	0	0	0	0
Pediatric transfusion/transplant	3	0	0	0	0	0	0	0	0	0	0	0
Mother HIV +	66	8	8	5	5	4	11	7	6	2	2	1
Pediatric (no indicated risk)	7	1	1	1	0	1	1	0	0	0	0	0
Total	11,276	692	704	742	704	723	750	748	779	698	655	629

Note: Due to reporting delays, all numbers are provisional (2010 volume as of 6/30/2011).

Source: Arizona Department of Health Services, Bureau of Epidemiology and Disease Control, Office of HIV/AIDS Services.