

CHAPTER 3

REPORTABLE DISEASES, ARIZONA, 2001-2011

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

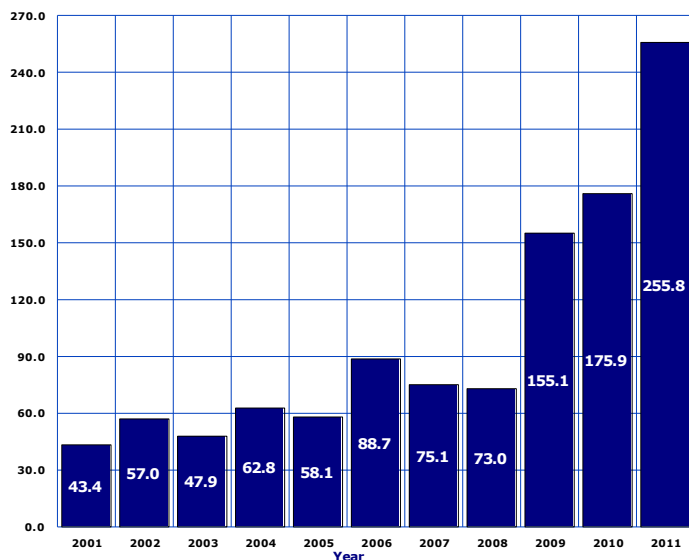
The infectious diseases designated as notifiable vary slightly by state. A notifiable disease is one for which regular, frequent, and timely information regarding individual cases is considered necessary for the prevention and control of the disease. All states generally report the internationally quarantinable 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, 2001-2011

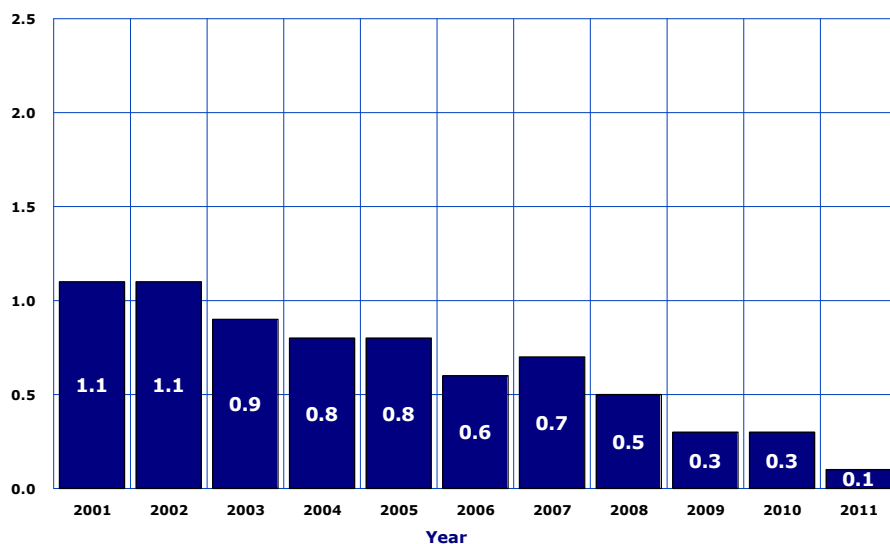


Number of cases per 100,000 population.

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.

Valley Fever imposed the greatest burden on morbidity among all non-sexually transmitted, notifiable diseases in Arizona in 2011. The reported incidence of Valley Fever more than tripled from 4,768 cases in 2008 to 16,472 cases in 2011, primarily because certain laboratories in the State adopted a less stringent case definition. The 2011 incidence rate of 255.8/100,000 (**Figure 3A-1, Table 5F-2**) was 5.9 times greater than the incidence rate of 43.4/100,000 in 2001.

Figure 3A-2
Trends in Case Fatality Rates for Valley Fever (*Coccidioidomycosis*)
by Year, Arizona, 2001-2011



Number of deaths per 100 reported cases.

Despite the increase in the incidence rate of *Coccidioidomycosis*, the annual mortality rates steadily declined. Twenty-two of the 16,472 Arizonans who had *Valley Fever* in 2011 died from it (**Table 3A-2**) for a case fatality rate of 0.1 deaths per 100 cases, lower than the case fatality rate in 2010 (**Figure 3A-2**).

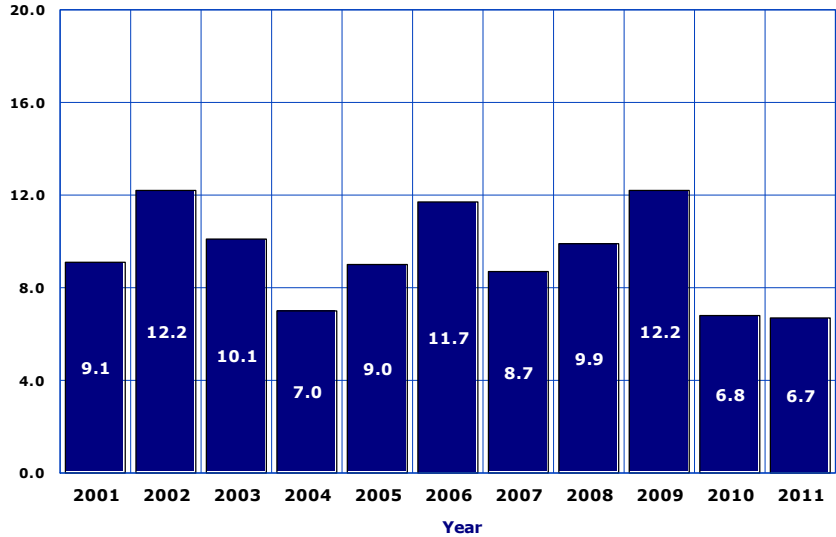
3A. NON-SEXUALLY TRANSMITTED DISEASES

Figure 3A-3
Trends in the Incidence Rates of Shigellosis by Year,
Arizona, 2001-2011

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

From 2001 - 2011, *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 434 in 2011. The incidence rate of *shigellosis* in 2011, 6.7 cases per 100,000, was the lowest incidence rate in the last decade (Figure 3A-3).



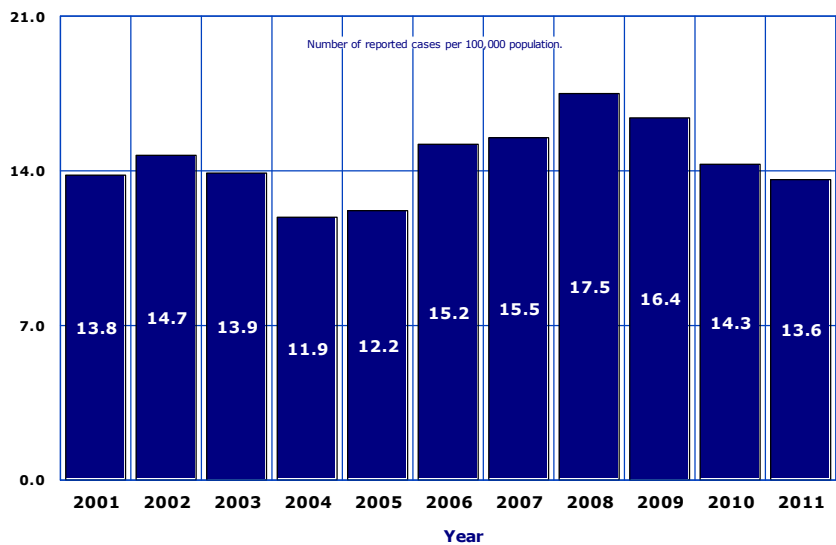
Number of reported cases per 100,000 population.

Figure 3A-4
Trends in the Incidence Rates of Salmonellosis* by Year,
Arizona, 2001-2011

Salmonellosis is a bacterial infection. Most of those who are infected with *Salmonella* develop diarrhea, fever, and abdominal cramps.

The incidence rate of *salmonellosis* decreased from 17.5 cases per 100,000 population in 2008 to 13.6/100,000 in 2011 (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).

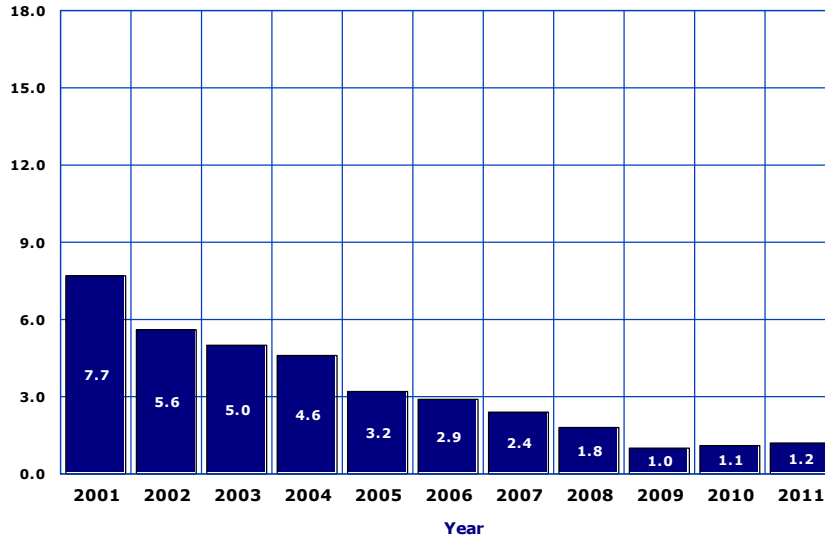
One Arizona resident who had *salmonellosis* died from it in 2011 (Table 3A-2).



*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, 2001-2011

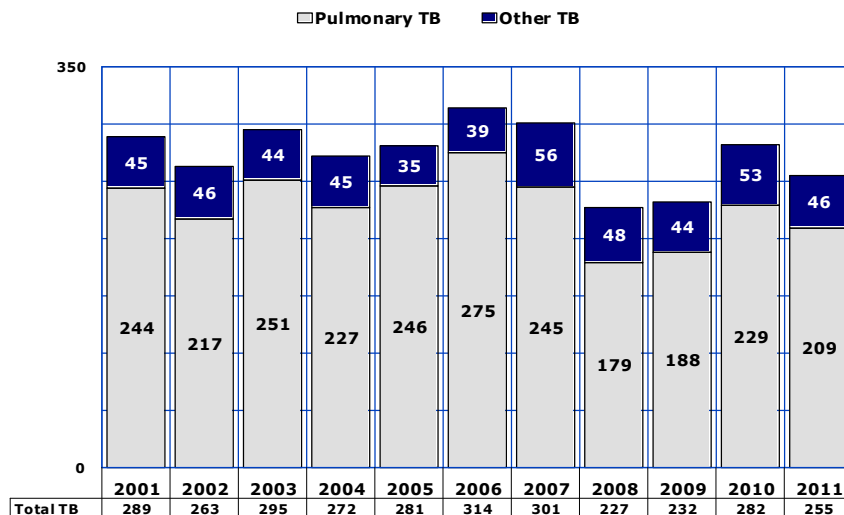


Number of reported cases per 100,000 population.

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 84.4 percent from 7.7/100,000 in 2001 to 1.2/100,000 in 2011 (**Figure 3A-5**).

Figure 3A-6
Trends in the Incidence of Pulmonary Tuberculosis and Total Tuberculosis by Year,
Arizona, 2001-2011



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* decreased from 229 reported cases in 2010 to 209 reported cases in 2011. The number of reported cases of tuberculosis other than pulmonary decreased from 53 reported in 2010 to 46 in 2011 (**Figure 3A-6, Table 3A-1**). The incidence rate of *total tuberculosis* decreased from 4.4/100,000 in 2010 to 4.0/100,000 in 2011 (**Table 5F-2**).

Pulmonary tuberculosis accounted for 81.2 percent of all tuberculosis infections in 2011 (**Table 3A-1**). Twelve Arizonans who had *tuberculosis* died from it in 2011 (**Table 3A-2**).

**TABLE 3A-1
NUMBER OF REPORTED CASES OF SELECTED NOTIFIABLE DISEASES BY CATEGORY, ARIZONA, 2001-2011**

Disease	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Vaccine Preventable											
Measles	1	0	1	0	1	0	1	18	0	1	2
Mumps	2	1	1	2	1	40	10	5	10	5	0
Pertussis	690	717	211	278	1,108	508	210	218	277	406	867
Pertussis confirmed cases	(382)	(280)	(128)	(149)	(486)	(36)	(15)	(23)	(79)	(76)	(160)
Rubella	0	0	0	0	0	0	0	1	0	1	0
Congenital Rubella Syndrome	0	0	0	0	0	0	0	0	0	0	0
<i>Haemophilus influenzae</i> type b (invasive, age < 5 years)	5	5	8	1	1	3	3	3	1	2	1
Chickenpox	951	606	1,620	920	1,537	974	930	778	534	512	660
Central Nervous System											
Aseptic Meningitis	206	271	1,516	734	832	720	632	688	516	578	400
Meningococcal Disease	21	32	34	15	36	16	13	9	15	14	16
Viral Encephalitis	17	14	28	32	26	18	14	8	2	6	6
Enteritides											
Amebiasis	29	28	43	14	20	16	13	11	7	13	21
Campylobacteriosis	635	733	850	795	867	803	962	1,006	877	937	939
Cholera	0	0	1	0	0	0	1	0	0	0	0
Cryptosporidiosis	11	19	6	17	11	29	53	89	34	37	46
<i>E. coli</i> O157:H7	30	40	41	28	35	105	106	69	68	97	126
Giardiasis	267	268	256	176	183	163	192	142	198	151	133
Salmonellosis (exl. <i>S. Typhi</i> & <i>S. Paratyphi</i>)	733	807	782	694	739	949	997	1,143	1,079	913	877
<i>Salmonella</i> Paratyphi A	2	3	3	3	1	2	1	1	1	6	2
<i>Salmonella</i> Paratyphi B	3	11	4	4	6	7	2	10	6	5	7
<i>Salmonella</i> Paratyphi C	0	4	0	0	0	0	1	0	0	0	0
Shigellosis	483	668	566	409	547	729	557	650	806	435	434
Typhoid Fever	2	0	2	2	4	7	7	3	2	6	3
Mycosis											
Coccidioidomycosis (Valley Fever)	2,301	3,118	2,695	3,665	3,515	5,535	4,832	4,768	10,233	11,246	16,472
Hepatitides											
Hepatitis A	409	305	280	267	195	179	152	118	68	68	77
Hepatitis B (acute)	164	253	283	289	375	373	180	163	193	150	185
Hepatitis C (acute)	9	6	7	1	0	0	0	0	0	0	NA
Hepatitis D	5	0	0	0	2	1	3	0	0	1	0
Hepatitis E	0	0	0	0	0	1	1	0	0	1	0
Hepatitis non-A non-B	0	0	0	0	NA	NA	NA	NA	NA	NA	NA
Tuberculosis											
Pulmonary TB	244	217	251	227	246	275	245	179	188	229	209
Total TB	289	263	295	272	281	314	301	227	232	282	255

**TABLE 3A-1 (continued)
NUMBER OF REPORTED CASES OF SELECTED NOTIFIABLE DISEASES BY CATEGORY, ARIZONA, 2001-2011**

Disease	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Zoonoses/Vector-borne											
Brucellosis	6	6	1	1	5	4	4	3	3	8	3
Colorado Tick Fever	0	0	0	0	0	0	0	0	0	1	0
Dengue	1	2	0	0	0	9	8	6	5	7	3
Ehrlichiosis	1	0	0	0	1	0	0	2	1	0	4
Hantavirus Pulmonary Syndrome	1	3	0	2	5	13	6	1	1	0	3
Human Rabies	0	0	0	0	0	0	0	0	0	0	0
Lyme Disease	3	4	4	13	10	12	3	8	7	3	15
Malaria	19	17	17	16	21	23	12	17	10	27	21
Plague	0	0	0	0	0	0	2	1	0	0	0
Relapsing Fever, Tick-borne	3	0	0	0	0	0	0	0	2	0	2
Rocky Mountain Spotted Fever	0	0	0	4	25	11	10	17	23	2	77
St. Louis Encephalitis	NA	NA	5	4	1	2	0	0	0	0	0
Tularemia	1	0	1	0	2	1	3	0	0	1	0
West Nile Virus	NA	NA	12	391	111	148	98	114	21	165	69
Other											
Legionellosis	21	15	21	23	26	38	40	26	49	61	46
Listeriosis	10	18	12	10	13	7	12	8	8	10	8
Methicillin Resistant <i>S. aureus</i> (invasive)	NA	NA	NA	NA	1,432	1,336	1,305	1,417	1,171	1,125	1,196
Streptococcal-Group A (invasive)	187	314	260	247	303	351	208	204	161	178	206
Streptococcal-Group B (invasive, age <90 d)	55	27	42	47	44	54	59	57	52	45	39
<i>Streptococcus pneumoniae</i> (invasive)	784	789	718	670	726	971	923	1,077	907	759	767
Reyes Syndrome	1	0	0	0	0	0	0	0	0	0	0
Toxic Shock Syndrome	0	0	9	2	1	2	5	1	1	3	2
Botulism	3	3	0	1	2	5	1	2	3	0	5
<i>Vibrio</i> spp. (except toxogenic <i>V. cholerae</i>)	6	9	19	8	16	25	11	14	19	19	26
Vancomycin resist. <i>Enterococcus</i> spp.(VRE)	877	1,031	1,013	1,404	1,956	2,683	2,494	NA	NA	NA	NA
Yersiniosis (except <i>Y. pestis</i>)	5	6	7	6	5	11	8	4	7	3	6

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* O157:H7 and Shiga-toxin positive *E. coli*s since October 2004. *Streptococcus pneumoniae* was only reportable by laboratories until October 2004. *Haemophilus influenzae* type B includes all invasive *H. influenzae* B, not just meningitis, as of 1995. Meningococcal disease includes all invasive disease caused by *Neisseria meningitidis*, not just meningitis. 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. 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, 2001-2011**

ICD-9/ICD-10 codes	Disease	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
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)	2	1	1	0	1	0	0	1	2	0	0
056/B06	Rubella	0	0	0	0	0	0	0	0	0	0	0
052/B01	Chickenpox	0	0	1	2	0	0	0	0	2	2	1
CENTRAL NERVOUS SYSTEM												
047.9/G03.0	Aseptic meningitis	1	0	0	0	1	0	0	1	1	0	1
036/A39	Meningococcal infections	1	4	2	0	1	2	0	0	0	2	1
049.9/A86	Viral encephalitis	5	3	0	1	1	4	3	2	5	3	6
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)	0	0	2	2	0	1	1	2	0	1	1
004/A03	Shigellosis	0	0	0	0	1	0	0	0	1	1	0
002/A01	Typhoid	0	0	0	0	0	0	0	1	0	0	0
MYCOSIS												
114/B38	Coccidioidomycosis (Valley Fever)	25	34	24	28	28	33	36	24	35	39	22
HEPATITIDES												
070.0-070.1/B15	Hepatitis A	1	3	3	2	0	2	1	1	1	1	0
070.2-070.3/B16	Hepatitis B	9	14	12	10	12	21	13	6	4	10	9
070.4-070.5/B17-	Other viral hepatitis	96	90	137	125	151	189	131	176	233	207	209
070.6-070.9/B19	Unspecified	2	2	3	3	2	2	3	2	1	1	0
TUBERCULOSIS												
010-011/A15-A16	Respiratory TB	9	18	9	8	13	13	10	10	8	12	10
010-018/A15-A19	Total TB	11	22	12	11	17	20	12	13	8	15	12
ZOOSES/VECTOR-BORNE												
023.9/A23	Brucellosis	0	0	0	0	0	0	0	0	0	0	0
061/A90	Dengue	0	0	0	0	0	1	0	0	0	0	0
071/A82	Human Rabies	0	0	0	0	0	0	0	0	0	0	0
084/B50-B54	Malaria	1	0	0	0	0	2	0	0	0	0	0
020/A20	Plague	0	0	0	0	0	0	1	0	0	0	0
082/A77.0	Rocky Mountain Spotted Fever	0	0	1	0	1	0	0	1	1	1	2
021/A21	Tularemia	0	0	0	0	0	0	0	0	0	0	0
OTHER												
482.8/A48.1	Legionellosis	1	0	2	0	0	3	1	0	3	0	1
027.0/A32	Listeriosis	1	0	0	0	0	0	0	0	0	0	0
331.8/G93.7	Reyes Syndrome	0	1	0	0	0	0	0	0	0	0	0
995.0/A48.3	Toxic Shock Syndrome	0	1	2	2	3	2	0	0	0	0	0



3B.

SEXUALLY TRANSMITTED DISEASES

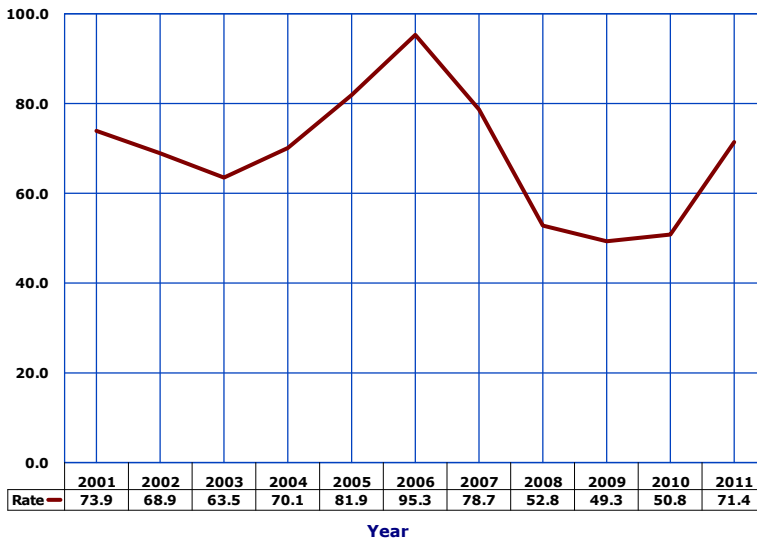
Every state requires physicians to report cases of, and/or laboratories to report test results indicative of, specific diseases. The legal authority for deciding which conditions (and which accompanying case data) are reportable in a given jurisdiction can vary by state, but is usually the state and/or 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, 2001-2011

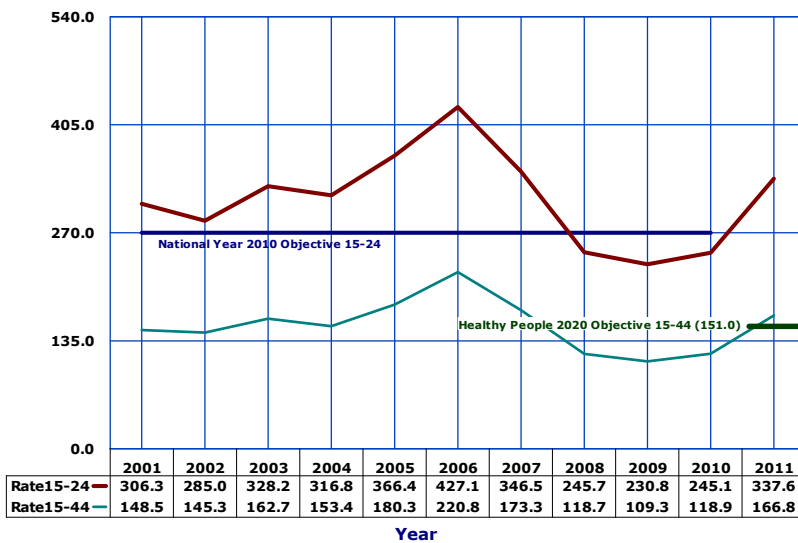


Neisseria gonorrhoeae infection is the second most commonly reported notifiable disease in the United States. (Figure 3B-1). The 44.8 percent increase in the incidence rate of gonorrhea from 49.3 cases per 100,000 population in 2009 to 71.4/100,000 in 2011 likely resulted from a combination of factors, such as changes in surveillance, increases in the number of tests performed, and actual increases in disease occurrence. (Figure 3B-1).

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 and was specific to ages 15-24. However, the *Healthy People 2020* target is for ages 15-44 and is set at 151.0/100,000.

Number of reported cases per 100,000 population.

Figure 3B-2
Trends in the Incidence Rates of Gonorrhea among Females 15-24 and 15-44 Years, Arizona, 2001-2011



The 2011 incidence rate for gonorrhea was 166.8 per 100,000 for Arizona females age 15-44 years, meaning Arizona's incidence rate was slightly higher than the *Health People 2020* objective. Generally, the trend in gonorrhea incidence rates are similar for women age 15-24 and age 15-44, although the overall incidence rate is consistently higher for women age 15-24.

Number of reported cases per 100,000 females.

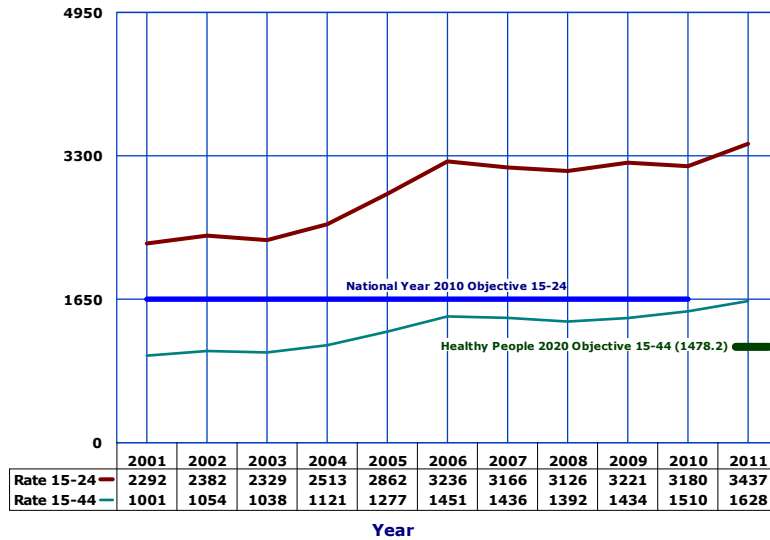
Note: There was a change in target rate and age range For *Healthy People 2020* objective. In National Year 2010 objective was for females ages 15-24. In *Healthy People 2020* objective is for females ages 15-44.

3B. SEXUALLY TRANSMITTED DISEASES

Figure 3B-3
Trends in the Incidence Rates of Chlamydia among Females 15-24 and 15-44 Years, Arizona, 2001-2011

Chlamydia trachomatis is the most prevalent bacterial sexually transmitted disease in the United States (1,412,791 cases in 2011), 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 incident rate of chlamydia was previously reported for females 15-24 years, however based on changes in *Healthy People 2020*, it would be reported for females 15-44 years. The *Healthy People 2020* goal for chlamydia is set at 1,478.2 per 100,000 females. The incidence rate for Arizona in 2011 was 1,628 per 100,000 for females age 15-44 years (Table 6A-2).



Number of reported cases per 100,000 females.

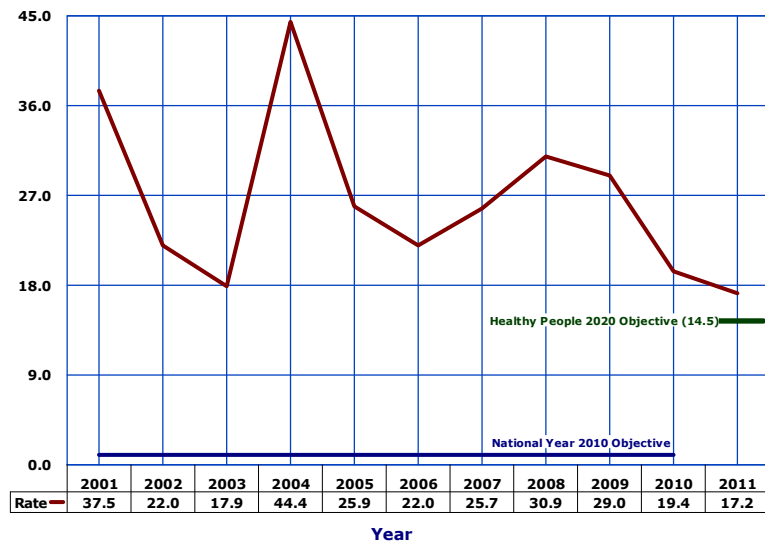
Note: There was a change in target rate and age range for Healthy People 2020 objective. In National Year 2010 objective was for females ages 15-24. In Healthy People 2020 objective is for females ages 15-44.

Figure 3B-4
Trends in the Incidence Rates of Congenital Syphilis by Year, Arizona, 2001-2011

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.

The *Health People 2020* goal for congenital syphilis is 14.5/100,000. In Arizona, the incidence rate of CS decreased for a third consecutive year from 30.9/100,000 in 2008 to 17.2/100,000 in 2011. (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, 2001-2011**

Disease	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Genital Herpes	1,173	1,148	910	1,196	1,189	1,740	2,003	1,855	775	1,853	2,155
Gonorrhea	3,922	3,772	3,576	4,088	4,951	5,949	5,062	3,449	3,250	3,249	4,564
Gonococcal PID¹	5	3	0	15	8	4	2	0	0	0	0
Resistant Gonorrhea²	0	1	2	1	1	0	0	0	0	0	0
Syphilis (P & S)³	180	200	186	160	175	203	296	317	231	230	274
Syphilis-Total⁴	1,153	1,077	1,094	998	789	931	1,242	1,396	1,085	904	907
Chlamydia	14,352	14,899	12,785	16,869	21,264	24,090	24,866	24,769	26,002	26,861	29,251

¹PID is pelvic inflammatory disease.

²Includes PPNG, penicillase producing Neisseria gonorrhoea, a form of gonorrhoea 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 gonorrhoea with or without communicable disease report.

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, 2001-2011**

Disease	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
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	3	1	1	1	0	0	0	1	0	0	1

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, 2011**

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	1	0	1	4	13	0	17	0	0	0	0	1	5	0	6
5-9	0	2	0	2	1	0	0	1	0	0	0	0	2	2	0	4
10-14	5	27	0	32	33	208	0	241	0	0	0	0	0	7	0	7
15-19	394	691	0	1,085	1,784	7,073	0	8,857	20	8	0	28	35	123	0	158
20-24	751	795	0	1,546	2,960	8,070	2	11,032	85	13	1	99	125	308	0	433
25-29	415	335	1	751	1,559	3,166	1	4,726	83	13	1	97	149	245	0	394
30-34	278	170	1	449	799	1,421	0	2,220	55	7	0	62	125	187	0	312
35-39	162	76	0	238	413	672	0	1,085	44	4	0	48	81	132	0	213
40-44	151	52	0	203	238	277	0	515	48	3	1	52	74	102	0	176
45-49	105	31	0	136	151	147	0	298	37	1	0	38	65	92	0	157
50-54	44	16	0	60	57	82	0	139	16	0	0	16	44	59	0	103
55-59	28	9	0	37	27	37	0	64	7	1	0	8	23	45	0	68
60-64	6	5	0	11	11	17	0	28	5	1	0	6	24	32	0	56
65-over	11	2	0	13	15	13	0	28	6	1	0	7	35	33	0	68
Total	2,350	2,212	2	4,564	8,052	21,196	3	29,251	406	52	3	461	783	1,372	0	2,155

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, 2011**

Age group	GONORRHEA			CHLAMYDIA			EARLY SYPHILIS			GENITAL HERPES		
	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total
0-4	0.0	0.4	0.2	1.7	5.8	3.7	0.0	0.0	0.0	0.4	2.2	1.3
5-9	0.0	0.9	0.4	0.4	0.0	0.2	0.0	0.0	0.0	0.9	0.9	0.9
10-14	2.2	12.3	7.1	14.4	94.7	53.7	0.0	0.0	0.0	0.0	3.2	1.6
15-19	166.0	308.1	235.1	751.9	3153.3	1918.8	8.4	3.6	6.1	14.8	54.8	34.2
20-24	327.1	373.2	349.3	1289.4	3788.3	2492.6	37.0	6.1	22.4	54.5	144.6	97.8
25-29	183.9	156.3	170.7	691.0	1476.7	1074.1	36.8	6.1	22.0	66.0	114.3	89.5
30-34	131.0	83.1	107.8	376.5	695.0	532.8	25.9	3.4	14.9	58.9	91.5	74.9
35-39	77.1	37.0	57.3	196.5	327.1	261.0	20.9	1.9	11.5	38.5	64.2	51.2
40-44	73.3	25.9	49.9	115.6	137.9	126.6	23.3	1.5	12.8	35.9	50.8	43.3
45-49	49.4	14.5	31.8	71.1	68.5	69.8	17.4	0.5	8.9	30.6	42.9	36.8
50-54	21.7	7.5	14.4	28.2	38.5	33.5	7.9	0.0	3.9	21.7	27.7	24.8
55-59	15.7	4.6	9.9	15.1	18.8	17.1	3.9	0.5	2.1	12.9	22.9	18.1
60-64	3.6	2.7	3.1	6.6	9.2	8.0	3.0	0.5	1.7	14.4	17.4	16.0
65-over	2.7	0.4	1.5	3.7	2.7	3.2	1.5	0.2	0.8	8.7	6.9	7.7
Total	74.0	68.8	71.4	253.5	659.0	457.6	12.8	1.6	7.2	24.7	42.7	33.7

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 2011.

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, 2011**

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	176	38.2	4.8	96	22.3	2.6	0	0.0	0.0	1,067	23.4	28.9	6,905	23.6	186.8	832	38.6	22.5			
Black or African American	57	12.4	23.8	60	13.9	25.1	0	0.0	0.0	994	21.8	415.7	2,741	9.4	1146.4	200	9.3	83.6			
Hispanic or Latino	195	42.3	10.3	220	51.0	11.6	0	0.0	0.0	1,271	27.8	67.1	10,102	34.5	533.0	569	26.4	30.0			
Asian or Pacific Islander	3	0.7	1.8	4	0.9	2.3	0	0.0	0.0	34	0.7	19.9	226	0.8	132.5	14	0.6	8.2			
American Indian or Alaska Native	27	5.9	10.5	37	8.6	14.4	0	0.0	0.0	419	9.2	162.8	2,908	9.9	1129.6	176	8.2	68.4			
Not Specified	3	0.7	N/A	14	3.2	N/A	0	0.0	NA	779	17.1	N/A	6,369	21.8	N/A	364	16.9	N/A			
Total	461	100.0	7.2	431	100.0	6.7	0	0.0	0.0	4,564	100.0	71.4	29,251	100.0	457.6	2,155	100.0	33.7			

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.



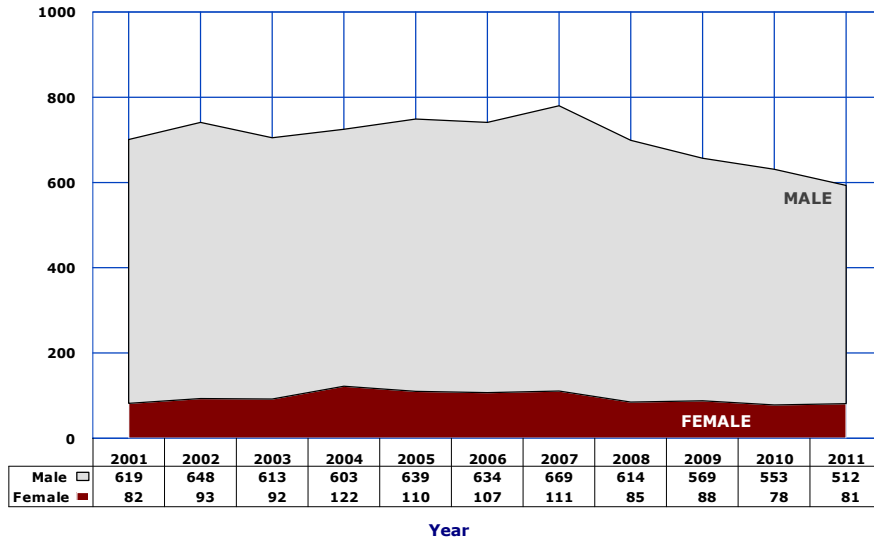
3C.

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 1981-2011, 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 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/2011report.htm>).

3C. HIV DISEASE AND AIDS

Figure 3C-1
Reported Cases of HIV/AIDS by Gender and Year of Diagnosis, Arizona, 2001-2011

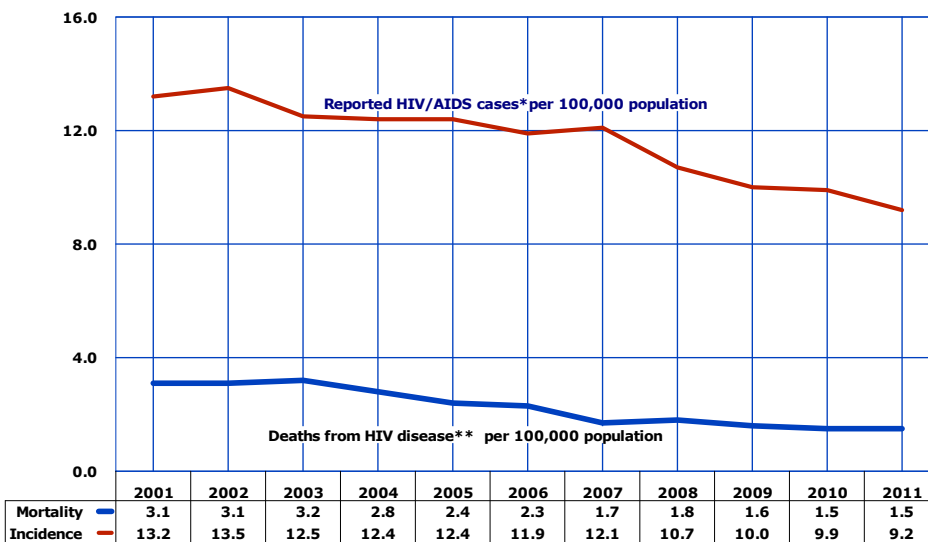


Since the first case of AIDS diagnosed in an Arizona resident in 1981, a total of 19,672 cases of HIV/AIDS had been diagnosed in the State by the end of 2011 and reported by June 30, 2012 (**Table 3C-1**).

In 2011, males accounted for 86.3 percent of all *HIV/AIDS* diagnoses. The male-to-female ratio of *HIV/AIDS* diagnoses in Arizona in 2010 was 6.3:1 (512/81, **Figure 3C-1, Table 3C-2**).

The proportion of risk behaviors attributed to emerging cases of HIV/AIDS in 2011 remained similar to previous years. Of the 631 *HIV/AIDS* cases diagnosed in 2011, 342 (57.7 percent) were among men who reported sexual contact with other men (**Table 3C-4**). Another 88 (14.8 percent) reported heterosexual contact. An additional 55 (9.3 percent) reported only injecting drugs. Adults without an indicated risk accounted for 18.2 percent of HIV/AIDS cases diagnosed in 2011.

Figure 3C-2
Trends in the Incidence Rates of HIV/AIDS and Mortality Rates for HIV Disease by Year, Arizona, 2001-2011



The incidence rate measures the relative risk for HIV/AIDS in a population. The incidence rate of HIV/AIDS has fallen in Arizona by 31.9 percent from the recent peak of 13.5 cases per 100,000 population in 2001 to 9.2 /100,000 in 2011 (**Figure 3C-2**; the incidence rates for 2001 - 2011 have been re-computed based on the latest volume of the HIV/AIDS data as of 6/30/2012).

The rate of deaths from *HIV disease* remained unchanged at 1.5 deaths per 100,000 population in 2010 and 2011 (**Figure 3C-2**).

Of the 593 *HIV/AIDS* cases diagnosed in 2011, 241 (40.6 percent) were White non-Hispanic, 209 (35.2 percent) were Hispanic, 81 were Black (13.7 percent), 41 were American Indian (6.9 percent), and 16 were Asian or Pacific Islander (2.7 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, 1981-2011**

Age Group (years)	HIV/AIDS cases
Under 5	111
5-12	48
13-19	379
20-29	5,657
30-39	7,411
40-49	4,178
50 or above	1,868
Missing	20
Total	19,672

**TABLE 3C-2
HIV/AIDS CASES AND DEATHS BY YEAR OF DIAGNOSIS AND GENDER,
ARIZONA, 1981-2000 and 2001-2011**

	1981-2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
# Males	10,568	619	648	613	603	639	634	669	614	569	553	512
# Females	1,382	82	93	92	122	110	107	111	85	88	78	81
# Total	11,950	701	741	705	725	749	741	780	699	657	631	593
# Presumed Living	5,739	547	592	593	604	639	648	710	642	604	595	573
# Known dead	6,211	154	149	112	121	110	93	70	57	53	36	20
% Mortality	52.0	22.0	20.1	15.9	16.7	14.7	12.6	9.0	8.2	8.1	5.7	3.4

Note: Due to reporting delays, all numbers are provisional (2011 volume as of 7/01/2012).

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, 1981-2000 AND 2001-2011**

Race/ethnicity	1981-2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
White non-Hispanic	7,972	383	383	362	344	371	327	360	346	281	310	241
Black or African American non-Hispanic	1,066	81	73	84	93	80	109	79	71	69	58	81
Hispanic or Latino all races	2,298	189	236	217	246	242	258	283	227	242	202	209
Asian or Pacific Islander non-Hispanic	57	5	7	4	9	8	10	15	14	11	11	16
American Indian or Alaska Native non-Hispanic	310	34	39	31	30	41	29	28	32	39	38	41
Two or more races/ other or unknown race	247	9	3	7	3	7	8	15	9	15	12	5
Total	11,950	701	741	705	725	749	741	780	699	657	631	593

**TABLE 3C-4
DISTRIBUTION OF REPORTED HIV/AIDS CASES BY YEAR OF DIAGNOSIS AND TRANSMISSION CATEGORY,
ARIZONA, 1981-2000 AND 2001-2011**

Transmission	1981-2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
MSM	6,863	442	469	437	441	487	474	432	404	347	390	342
IV Drug User (IDU)	1,645	107	96	94	95	93	90	52	66	53	43	55
MSM/IDU	1,351	56	75	71	43	45	41	40	34	34	43	32
Hemophilic (Adult)	79	1	1	0	1	1	0	0	0	0	0	0
Heterosexual Contact	918	70	78	86	110	66	71	74	53	58	65	88
Transfusion/transplant (Adult)	122	1	3	0	0	2	1	0	0	0	0	0
No indicated risk (Adult)	870	15	13	12	30	43	58	176	139	162	88	75
Pediatric Hemophilic	17	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+	75	8	5	5	4	11	6	6	3	3	2	1
Pediatric (no indicated risk)	7	1	1	0	1	1	0	0	0	0	0	0
Total	11,950	701	741	705	725	749	741	780	699	657	631	593

Note: Due to reporting delays, all numbers are provisional (2011 volume as of 7/01/2012).

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