

CHAPTER 3

REPORTABLE DISEASES, ARIZONA, 2011-2021

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

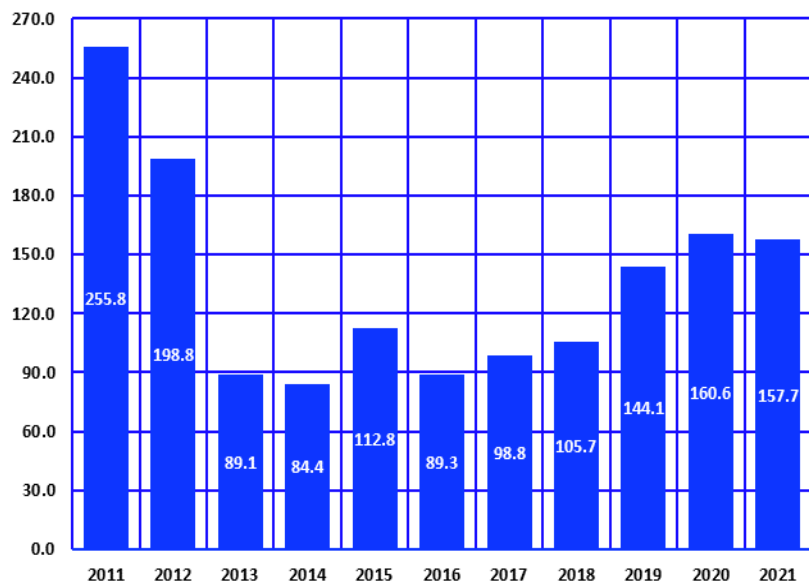
The infectious diseases designated as notifiable vary slightly by state. A notifiable disease is one for which regular, frequent, and timely information regarding individual cases is considered necessary for the prevention and control of the disease. All states generally report the internationally quarantinable 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 Infectious Disease and 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 for Infectious Disease Services at: <http://azdhs.gov/phs/oids/index.htm>.

3A. NON-SEXUALLY TRANSMITTED DISEASES

Figure 3A-1
Trends in the Incidence Rates^a of Valley Fever (Coccidioidomycosis) by Year, Arizona, 2011-2021

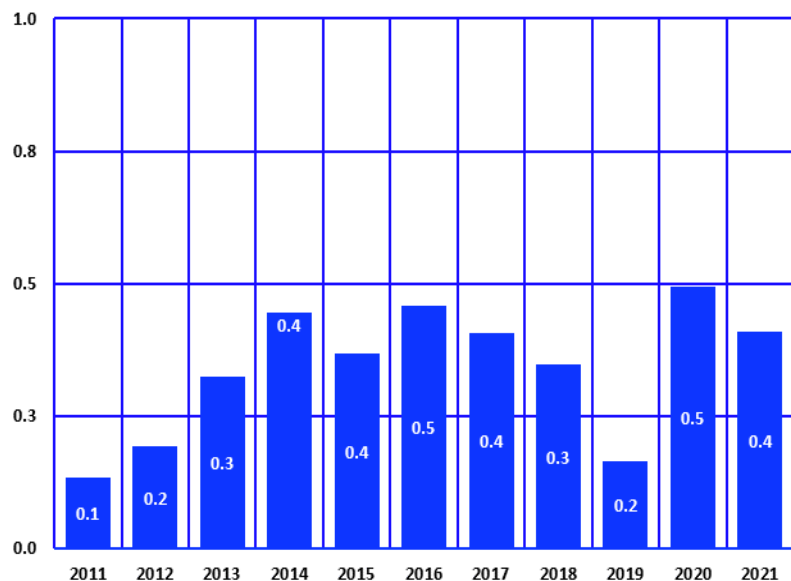


Note: ^a Number of cases per 100,000 population.

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 2021. The reported incidence of Valley Fever decreased 0.3 percent from 2020 (n=11,523) to (n=11,489) in 2021. The 2021 incidence rate of 157.7/100,000 (**Figure 3A-1, Table 5F-2**) was 1.8 percent lower than the incidence rate of 160.6/100,000 in 2020, but was 38.4 percent lower than the unprecedented incidence rate of 255.8/100,000 in 2011.

Figure 3A-2
Trends in Case Fatality Rates^a for Valley Fever (Coccidioidomycosis) by Year, Arizona, 2011-2021



Note: ^a Number of deaths per 100 reported cases.

Forty-seven of the 11,489 Arizonans who had *Valley Fever* in 2021 died from it (**Table 3A-2**) for a case fatality rate of 0.4 deaths per 100 cases (**Figure 3A-2**). The 2021 case fatality rate for *Coccidioidomycosis* was 206.3 percent higher than in 2011.

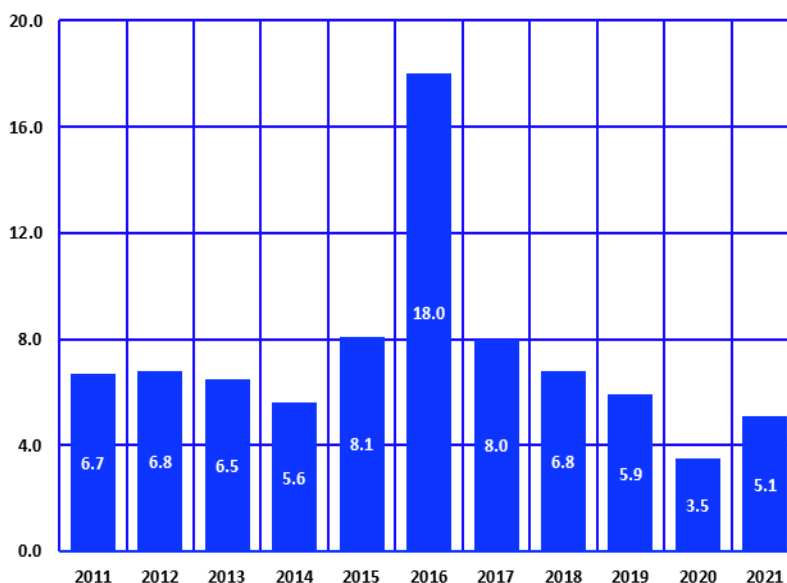
3A. NON-SEXUALLY TRANSMITTED DISEASES

Figure 3A-3
Trends in the Incidence Rates^a of Shigellosis by Year, Arizona, 2011-2021

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 2011–2021, *shigellosis* was the third most common enteric disease to afflict Arizonans after *campylobacteriosis* and *salmonellosis* (Table 3A-1).

The number of reported cases of *shigellosis* has increased by 122 cases from 253 in 2020 to 375 in 2021. Compared to 2020, the incidence rate of *shigellosis* was 46.0 percent higher at approximately 4 reported cases/100,000 population in 2021 (Figure 3A-3).

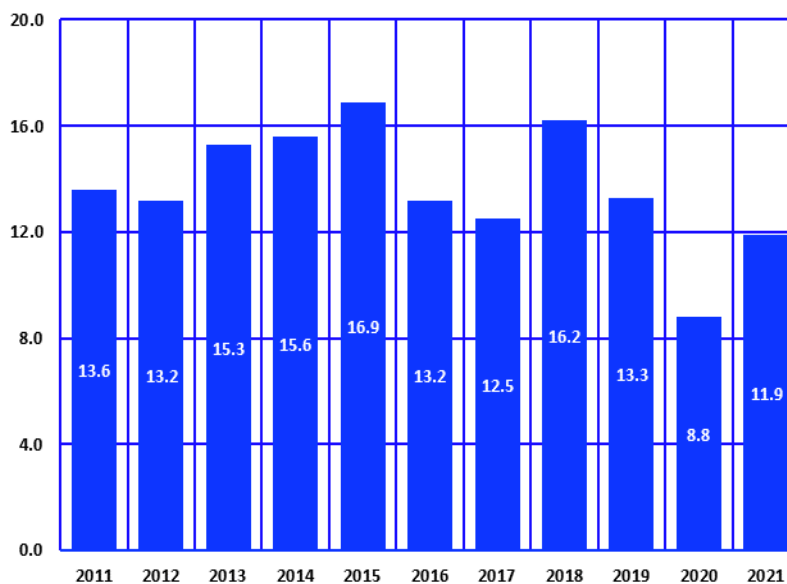


Note: ^a Number of reported cases per 100,000 population.

Figure 3A-4
Trends in the Incidence Rates^a of Salmonellosis^b by Year, Arizona, 2011-2021

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

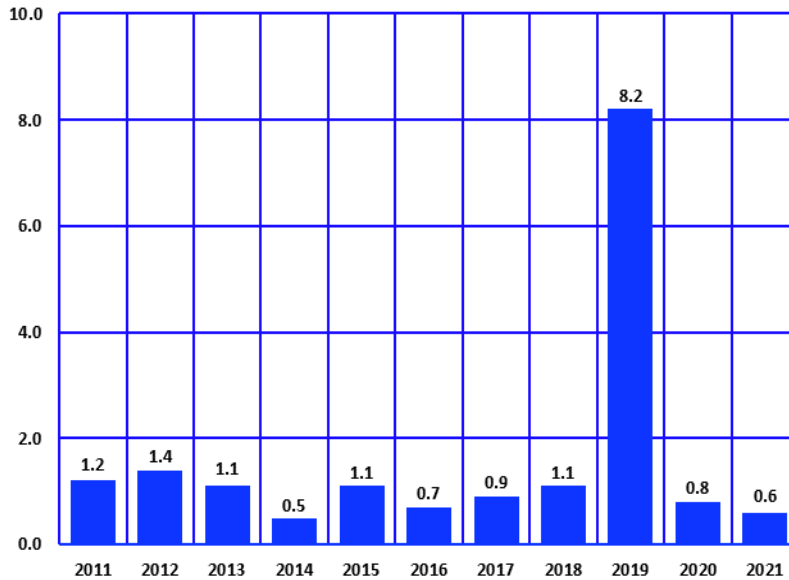
The incidence rate of *salmonellosis* increased 35.2 percent from 8.8/100,000 in 2020 to 11.9/100,000 in 2021 (Figure 3A-4). The risk of *salmonellosis* was substantially higher in Navajo (43.6/100,000), Greenlee (31.3/100,000), Graham (30.7/100,000), Santa Cruz (24.8/100,000), Apache (24.1/100,000), and Pima (21.0/100,000), than the remaining counties (Table 5F-2).



Notes: ^a Number of reported cases per 100,000 population; ^b Excluding *S. Typhi* and *S. Paratyphi*.

3A. NON-SEXUALLY TRANSMITTED DISEASES

Figure 3A-5
Trends in the Incidence Rates^a of Hepatitis A by Year,
Arizona, 2011-2021

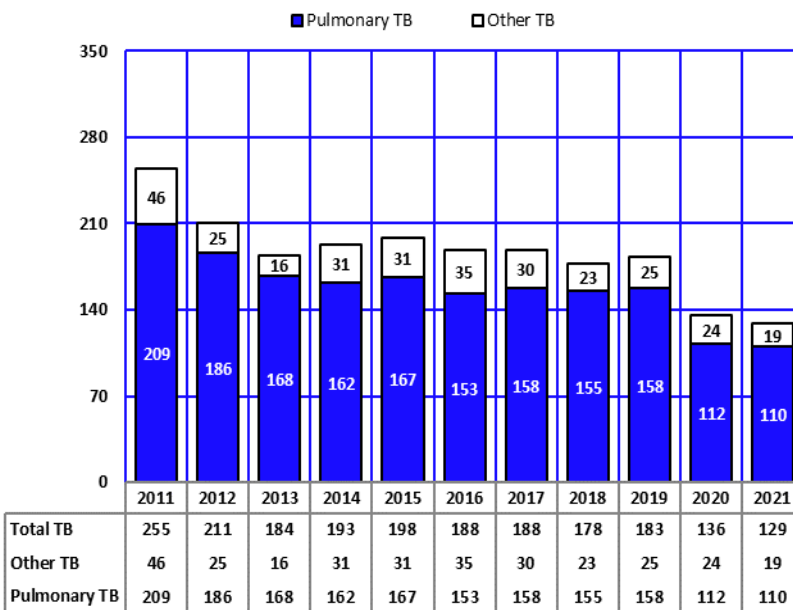


Note: ^a Number of reported cases per 100,000 population.

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* was 0.6/100,000 in 2021. The highest rate recorded during the 2011-2021 period was 8.2 in 2019. The 2021 incidence rate was approximately 13 times lower than the 2019 rate (8.2/100,000; **Figure 3A-5**).

Figure 3A-6
Trends in the Incidence of Pulmonary Tuberculosis and Total Tuberculosis^a
by Year, Arizona, 2011-2021



Note: ^a 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 112 cases in 2020 to 110 reported cases in 2021. The number of reported cases of tuberculosis other than pulmonary decreased from 24 in 2020 to 19 in 2021 cases (**Figure 3A-6, Table 3A-1**). The incidence rate of *total* tuberculosis decreased slightly from 2020 1.9/100,000 to 1.8/100,000 in 2021 (**Table 5F-2**).

Pulmonary tuberculosis accounted for 85.3 percent of all tuberculosis infections in 2021 (**Table 3A-1**). Sixteen Arizonans who had *tuberculosis* died from it in 2021, a slight increase from 15 in 2020 (**Table 3A-2**).

**TABLE 3A-1
NUMBER OF REPORTED CASES OF SELECTED NOTIFIABLE DISEASES BY CATEGORY, ARIZONA, 2011-2021**

Disease	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Vaccine Preventable											
Measles	*	*	*	*	7	31	0	0	*	0	0
Mumps	0	*	*	12	*	7	34	15	103	10	*
Pertussis	867	1,130	1,440	517	580	287	420	239	379	331	188
Pertussis confirmed cases	(160)	(575)	(1,068)	(287)	(341)	(154)	(262)	(135)	(207)	(189)	(82)
Rubella	0	0	0	0	0	0	*	0	0	*	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)	*	*	*	0	*	*	*	*	*	0	*
Tetanus	*	0	0	0	*	*	0	0	*	0	*
Varicella (chickenpox)	660	535	354	300	270	279	189	245	307	72	98
Central Nervous System											
Aseptic Meningitis	400	453	343	288	189	146	81	N/A	N/A	N/A	N/A
Meningococcal Disease	16	6	12	9	*	*	*	*	*	*	*
Viral Encephalitis	6	*	*	*	*	*	*	*	16	*	34
Enteritides											
Amebiasis	21	17	21	24	*	6	16	21	20	12	19
Campylobacteriosis	939	940	846	939	1,379	1,241	1,372	1,269	1,615	1,050	1,634
Cholera	0	0	0	0	0	0	0	*	0	0	0
Cryptosporidiosis	46	47	42	46	62	549	112	203	143	80	110
<i>E. coli</i> O157:H7	126	141	246	98	128	148	166	296	297	186	280
Giardiasis	133	113	115	119	143	125	145	149	143	84	91
Salmonellosis (excl. <i>S. Typhi</i> & <i>S. Paratyphi</i>)	877	857	1,007	1,040	1,143	899	874	1,149	954	631	868
<i>Salmonella</i> Paratyphi A	*	0	*	*	*	*	*	*	*	*	0
<i>Salmonella</i> Paratyphi B	7	*	*	*	16	0	0	0	0	0	0
<i>Salmonella</i> Paratyphi C	0	0	0	0	0	0	0	0	0	0	0
Shigellosis	434	444	428	376	549	1,231	555	478	426	253	375
Typhoid Fever	*	7	12	*	*	9	*	9	7	*	7
Mycosis											
Coccidioidomycosis (Valley Fever)	16,472	12,920	5,861	5,624	7,622	6,101	6,885	7,478	10,358	11,523	11,489
Hepatitides											
Hepatitis A	77	93	73	35	72	46	61	80	590	59	45
Hepatitis B (acute)	185	104	50	38	43	16	41	30	49	33	25
Hepatitis D	0	0	0	*	0	0	0	*	0	0	*
Hepatitis E	0	0	0	*	0	0	*	0	*	*	*
Tuberculosis											
Pulmonary TB	209	186	168	162	167	153	158	155	158	112	110
Total TB	255	211	184	193	198	188	188	178	183	136	129

**TABLE 3A-1 (continued)
NUMBER OF REPORTED CASES OF SELECTED NOTIFIABLE DISEASES BY CATEGORY, ARIZONA, 2011-2021**

Disease	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Zoonoses/Vector-borne											
Brucellosis	*	*	*	6	*	*	8	*	*	*	*
Colorado Tick Fever	0	0	0	*	*	0	0	0	0	0	0
Dengue	*	10	*	91	24	14	*	10	18	*	8
Ehrlichiosis	*	*	*	*	*	*	*	*	*	*	*
Hantavirus Pulmonary Syndrome	*	*	*	*	*	*	*	0	0	*	0
Human Rabies	0	0	0	0	0	0	0	0	0	0	0
Lyme Disease	15	13	32	21	12	13	28	7	10	*	*
Malaria	21	19	33	25	14	38	26	24	30	12	26
Plague	0	0	0	0	0	0	*	0	0	*	0
Relapsing Fever, Tick-borne	*	*	*	12	*	*	*	*	*	*	0
Rocky Mountain Spotted Fever	77	50	63	16	17	23	27	38	48	35	16
St. Louis Encephalitis	0	0	0	*	23	0	6	0	9	6	12
Tularemia	0	0	0	0	*	*	*	0	*	*	0
West Nile Virus	69	135	62	108	103	78	110	27	174	11	1,710
Other											
Botulism	*	12	*	*	*	*	*	12	*	*	*
Legionellosis	46	44	69	59	93	76	74	83	93	90	112
Listeriosis	8	14	*	14	*	6	8	6	13	7	9
Methicillin Resistant <i>S. aureus</i> (invasive)	1,196	1,089	1,066	1,178	1,155	1,265	1,355	1,529	1,467	1,681	1,498
Streptococcal-Group A (invasive)	206	199	231	250	351	555	614	758	790	805	966
Streptococcal-Group B (invasive, age <90 d)	39	57	35	41	61	60	63	40	44	37	28
<i>Streptococcus pneumoniae</i> (invasive)	767	661	786	724	678	716	707	862	740	668	798
Toxic Shock Syndrome	*	*	*	6	*	*	0	*	0	*	0
<i>Vibrio</i> spp. (except toxogenic <i>V.cholerae</i>)	26	29	19	36	33	19	25	54	52	34	51
Yersiniosis (except <i>Y. pestis</i>)	6	10	9	*	12	14	20	11	58	53	72

Notes: * Cell suppressed due to non-zero count less than 6; 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. coli* since 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. Reported cocciidomycosis cases were elevated from June 2009 through December 2012 and then declined in 2013 due to changes in reporting practices and laboratory testing from a major commercial laboratory. A change in the criteria for counting Lyme disease in 2013 may account for the increase in cases in that year. Aseptic meningitis and Reyes syndrome ceased being reportable in January 2018. For additional statistics on these diseases, please see: <https://azdhs.gov/preparedness/epidemiology-disease-control/index.php#data-stats>

Source: Arizona Department of Health Services, Bureau of Infectious Disease and Services.

**TABLE 3A-2
NUMBER OF DEATHS FROM SELECTED NOTIFIABLE DISEASES BY CATEGORY AND YEAR,
ARIZONA, 2011-2021**

ICD-9/ICD-10 codes	Disease	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
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
033/A37	Whooping cough (pertussis)	0	0	0	0	0	*	*	0	0	0	0
056/B06	Rubella	0	0	0	0	0	0	0	0	0	0	0
052/B01	Chickenpox	*	*	0	*	0	0	0	*	*	0	0
CENTRAL NERVOUS SYSTEM												
047.9/G03.0	Aseptic meningitis	*	*	0	0	*	0	*	*	0	*	*
036/A39	Meningococcal infections	*	*	*	*	0	0	0	0	*	0	0
049.9/A86	Viral encephalitis	6	*	*	*	*	*	*	*	*	*	6
ENTERITIDES (FOODBORNE)												
006/A06	Amebiasis	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	*	*	*	*	*	*	*	*
004/A03	Shigellosis	0	0	*	*	*	0	0	0	0	0	0
002/A01	Typhoid	0	0	0	0	0	0	0	0	0	0	0
MYCOSIS												
114/B38	Coccidioidomycosis (Valley Fever)	22	25	19	25	28	28	28	26	17	57	47
HEPATITIDES												
070.0-070.1/B15	Hepatitis A	0	*	*	*	0	0	0	0	6	0	*
070.2-070.3/B16	Hepatitis B	9	12	9	8	8	10	*	6	6	*	*
070.4-070.5/B17-B18	Other viral hepatitis	209	274	265	248	257	207	191	133	96	90	73
070.6-070.9/B19	Unspecified	0	0	*	*	*	0	*	*	*	*	*
TUBERCULOSIS												
010-011/A15-A16	Respiratory TB	10	*	11	6	9	6	7	*	*	11	8
010-018/A15-A19	Total TB	12	*	15	8	10	7	10	10	10	15	16
ZOONOSES/VECTOR-BORNE												
023.9/A23	Brucellosis	0	0	0	0	*	0	0	0	0	0	0
061/A90	Dengue	0	0	0	0	0	0	0	0	0	0	0
071/A82	Human Rabies	0	0	0	0	0	0	0	0	0	0	0
084/B50-B54	Malaria	0	0	*	0	0	0	0	0	0	0	0
020/A20	Plague	0	*	0	0	0	0	0	0	0	0	0
082/A77.0	Rocky Mountain Spotted Fever	*	0	*	0	0	*	*	0	0	0	*
021/A21	Tularemia	0	0	0	*	0	0	0	0	0	0	0
OTHER												
482.8/A48.1	Legionellosis	*	*	*	*	*	*	0	6	*	*	*
027.0/A32	Listeriosis	0	*	0	*	0	0	0	0	*	0	0
331.8/G93.7	Reyes Syndrome	0	0	0	0	0	0	0	0	0	0	0
995.0/A48.3	Toxic Shock Syndrome	0	0	0	0	0	*	0	0	*	0	*

Note: * Cell suppressed due to non-zero count less than 6.



3B.

SEXUALLY TRANSMITTED DISEASES

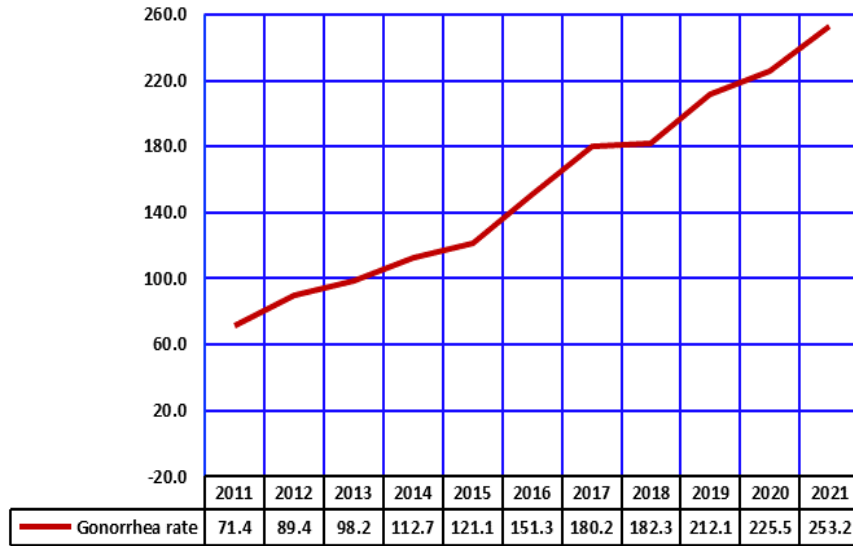
All states require that certain sexually transmitted diseases (STDs) be reported by physicians and other health care providers when they suspect that a case has occurred or they have laboratory confirmation.

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.* In this section, STD rates were calculated using denominators from the CDC for years prior to 2018. In the current report, the Arizona Department of Health Services denominators were used to compute the STD rates.

*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

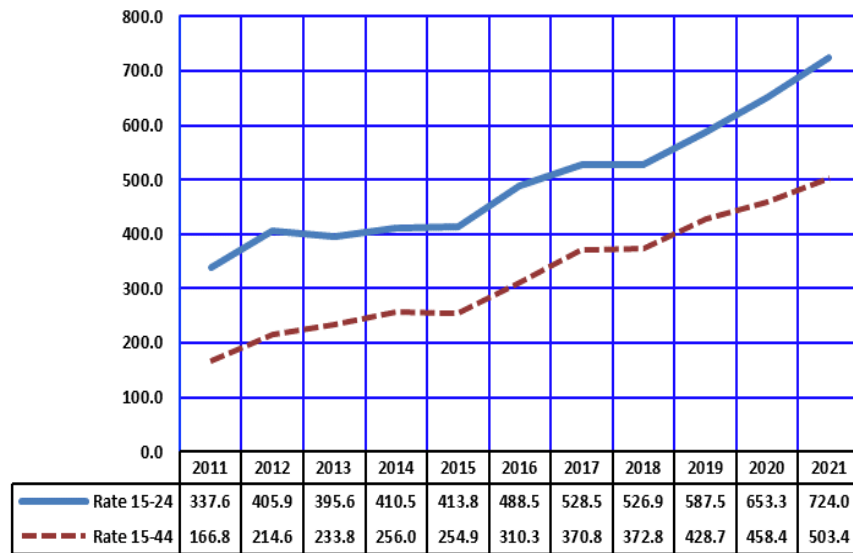
Figure 3B-1
Trends in the Incidence Rates^a of Gonorrhea by Year, Arizona, 2011-2021



Neisseria gonorrhoeae infection is the second most commonly reported notifiable disease in the United States. (Figure 3B-1). The consistent steady increase in the incidence rate of gonorrhea since 2010 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).

Note: ^a Number of reported cases per 100,000 population.

Figure 3B-2
Trends in the Incidence Rates^a of Gonorrhea among Females aged 15-24 and 15-44 Years, Arizona, 2011-2021



The 2021 incidence rate for gonorrhea was 503.4 per 100,000 for Arizona females aged 15-44 years. Additionally, in 2021 the gonorrhea incidence rate in Arizona females 15-44 years of age was less than incidence rate of females 15-24 years old, which was 724.0 per 100,000.

Notes: ^a Number of reported cases per 100,000 females

3B. SEXUALLY TRANSMITTED DISEASES

Figure 3B-3
Trends in the Incidence Rates^a of Chlamydia among Females 15-24 and 15-44 Years, Arizona, 2011-2021

Chlamydia trachomatis is the most prevalent bacterial sexually transmitted disease in the United States (1,644,416 cases in 2021*) 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 over the last decade (**Figure 3B-3**, **Table 3B-1**).

The incidence rate of chlamydia among females 15-44 has increased from 1,628 per 100,000 females to 1,830 per 100,000 females within the age group.



*Most recent publication
<https://www.cdc.gov/std/statistics/2021/overview.htm#Chlamydia>

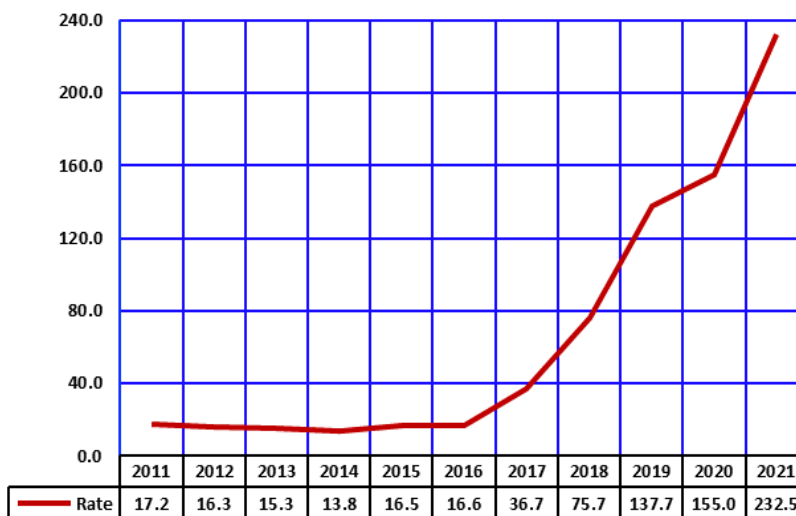
Notes: ^a Number of reported cases per 100,000 females

Congenital syphilis 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 Congenital syphilis 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 Arizona incidence rates of congenital syphilis were for the most part below 20 cases per 100,000 infants from 2010-2016. In 2017, a sharp increase in the incidence was recorded (36.7/100,000), in 2018, the rate more than doubled at 75.7/100,000 and in 2021, the rate was the highest recorded during the 11-year period at 232.5/100,000. (**Figure 3B-4**, **Table 6A-2**).

Figure 3B-4
Trends in the Incidence Rates^a of Congenital Syphilis by Year, Arizona, 2011-2021



Notes: ^a Number of reported cases per 100,000 births.

**TABLE 3B-1
NUMBER OF REPORTED CASES OF SEXUALLY TRANSMITTED DISEASES BY CATEGORY AND YEAR, ARIZONA, 2011-2021**

Disease	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Gonorrhea	4,564	5,856	6,505	7,585	8,270	10,330	12,514	12,903	15,249	16,180	18,446
Gonococcal PID^a	0	0	0	0	0	0	*	17	18	27	14
Resistant Gonorrhea^b	0	0	0	*	0	0	0	0	0	0	0
Syphilis (P & S)^c	274	204	290	572	590	721	943	1,052	1,297	1,442	1,981
Syphilis-Total^d	907	795	966	1,434	1,482	1,903	2,424	3,258	4,044	4,428	6,329
Chlamydia	29,251	30,571	30,923	31,750	32,511	34,923	39,635	40,866	43,219	36,977	41,517

Notes: * Cell suppressed due to non-zero count less than 6; ^a PID is pelvic inflammatory disease; ^b Includes PPNG, penicillinase-producing Neisseria gonorrhoeae, a form of gonorrhea which is resistant to penicillin; ^c Primary and secondary syphilis only; ^d Early, late, congenital and other; 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 Infectious Disease and Services, Office of STI Control.

**TABLE 3B-2
NUMBER OF DEATHS ASSOCIATED WITH SPECIFIED SEXUALLY TRANSMITTED DISEASES BY CATEGORY AND YEAR,
ARIZONA, 2011-2021**

Disease	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Gonococcal infections	0	0	0	0	0	0	0	0	0	0	*
Syphilis-Total	*	*	*	*	0	*	*	*	0	0	*

attributed to Gonorrhea or Syphilis based on ICD code. Note this method differs from Nationally Notifiable Disease Surveillance System criteria, and information from these two systems is not comparable.

**TABLE 3B-3
FREQUENCY OF REPORTED CASES OF GONORRHEA, CHLAMYDIA, AND EARLY SYPHILIS
BY AGE AND GENDER, ARIZONA, 2021**

Age group	GONORRHEA				CHLAMYDIA				EARLY SYPHILIS			
	Males	Females	Unknown or Transgender	Total	Males	Females	Unknown or Transgender	Total	Males	Females	Unknown or Transgender	Total
0-4	*	*	0	10†	6	8	0	14	0	0	0	0
5-9	0	*	0	0†	0	*	*	0†	0	0	0	0
10-14	13	36	0	49	20	116	0	136	0	*	0	0†
15-19	926	1,282	*	2,210	2,111	6,386	13	8,510	70	53	0	123
20-24	2,365	2,134	*	4,504	4,739	10,078	19	14,836	289	157	0	446
25-29	2,322	1,510	6	3,838	3,331	4,937	7	8,275	468	211	0	679
30-34	1,938	1,106	*	3,047	2,012	2,406	0	4,418	482	196	0	678
35-39	1,196	634	0	1,830	1,140	1,190	*	2,333	352	131	0	483
40-44	803	387	0	1,190	689	640	*	1,330	257	92	0	349
45-49	531	191	*	724	386	290	*	677	182	46	0	228
50-54	351	118	*	470	319	176	0	495	172	28	0	200
55-59	247	64	0	311	186	81	0	267	134	18	0	152
60-64	130	27	0	157	95	31	0	126	67	*	0	70†
65-over	98	10	0	108	69	28	0	97	45	*	0	50†
Total	10,920†	7,500†	20†	18,450†	15,103	26,370†	50†	41,520†	2,518	940†	0	3,460†

Notes: * Cell suppressed due to non-zero count less than 6; † Sum rounded to nearest tens unit due to non-zero addend less than 6; 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 Infectious Disease and Services, Office of STI Control.

**TABLE 3B-4
RATES^a OF REPORTED CASES OF GONORRHEA, CHLAMYDIA, AND EARLY SYPHILIS
BY AGE AND GENDER, ARIZONA, 2021**

Age group	GONORRHEA			CHLAMYDIA			EARLY SYPHILIS		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
0-4	**	**	1.7	2.8	3.9	3.4	0.0	0.0	0.0
5-9	0.0	**	**	0.0	**	**	0.0	0.0	0.0
10-14	5.4	15.6	10.4	8.4	50.4	29.0	0.0	**	**
15-19	382.6	554.0	466.8	872.3	2759.8	1797.6	28.9	22.9	26.0
20-24	924.9	887.5	907.8	1853.3	4191.4	2990.2	113.0	65.3	89.9
25-29	858.2	604.6	737.7	1231.1	1976.9	1590.4	173.0	84.5	130.5
30-34	761.7	466.1	619.7	790.8	1014.0	898.5	189.4	82.6	137.9
35-39	505.5	279.1	394.6	481.8	523.9	503.1	148.8	57.7	104.2
40-44	368.2	180.0	274.8	315.9	297.6	307.1	117.8	42.8	80.6
45-49	251.4	89.3	170.3	182.7	135.6	159.3	86.2	21.5	53.6
50-54	169.7	55.6	112.2	154.2	83.0	118.2	83.2	13.2	47.7
55-59	115.7	28.1	70.5	87.1	35.6	60.6	62.7	7.9	34.5
60-64	62.8	11.7	35.8	45.9	13.4	28.8	32.4	**	15.8
65-over	15.8	1.4	8.0	11.1	3.8	7.2	7.3	**	3.5
Total	302.0	204.6	253.2	417.5	718.9	569.9	69.6	25.6	47.4

Notes: ** Cell suppressed due to rate/ratio/percent based on non-zero count less than 6; ^a Number of cases per 100,000 population; table includes all positive laboratory results for chlamydia and gonorrhea with or without communicable disease report in 2021; denominators for unknown or transgender category are not available; rates per 100,000 population.

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

**TABLE 3B-5
FREQUENCY OF REPORTED CASES, PERCENT DISTRIBUTION AND RATES OF EARLY AND LATE SYPHILIS,
GONORRHEA, AND CHLAMYDIA BY RACE/ETHNICITY, ARIZONA, 2021**

Race/ethnicity	SYPHILIS						GONORRHEA						CHLAMYDIA		
	Early			Late			Resistant			Total			Cases	%	Rate
	Cases	%	Rate	Cases	%	Rate	Cases	%	Rate	Cases	%	Rate			
White Non-Hispanic	942	27.3	23.5	576	21.4	14.4	0	0.0	0.0	3,792	20.6	94.7	6,607	15.9	165.0
Black or African American	463	13.4	123.1	311	11.6	82.7	0	0.0	0.0	2,899	15.7	771.0	3,775	9.1	1004.0
Hispanic or Latino	1,337	38.7	57.6	1,098	40.8	47.3	0	0.0	0.0	5,111	27.7	220.0	11,392	27.4	490.4
Asian or Pacific Islander	52	1.5	17.8	20	0.7	6.8	0	0.0	0.0	142	0.8	48.6	421	1.0	144.1
American Indian or Alaska Native	498	14.4	171.6	460	17.1	158.5	0	0.0	0.0	1,197	6.5	412.4	2,298	5.5	791.8
Multi-racial	85	2.5	N/A	69	2.6	N/A	0	0.0	0.0	467	2.5	N/A	554	1.3	N/A
Not Specified	79	2.3	N/A	157	5.8	N/A	0	0.0	N/A	4,838	26.2	N/A	16,470	39.7	N/A
Total	3,456	100.0	47.4	2,691	100.0	36.9	0	N/A	N/A	18,446	100.0	253.2	41,517	100.0	569.9

Notes: ^a Number of cases per 100,000 population; table includes all positive laboratory results for chlamydia and gonorrhea with or without communicable disease report in 2021; rates per 100,000 population.

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



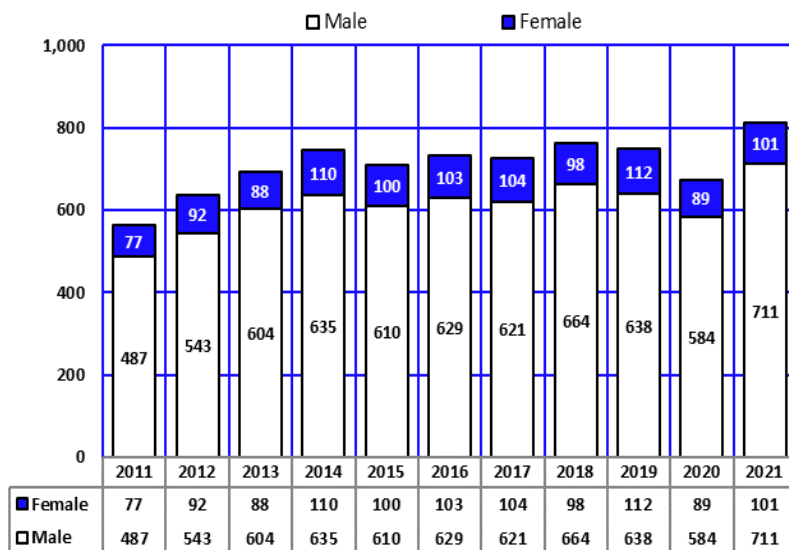
3C.

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 1981-2021, as provided by the Office of HIV, STD, and Hepatitis Services, are available in Tables 3C-1, 3C-2, 3C-3, 3C-4, and 5F-3 of this report. In the past, the cases of persons previously reported as HIV positive and subsequently diagnosed with 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.

3C. HIV DISEASE AND AIDS

Figure 3C-1
Reported Cases of HIV/AIDS by Gender and Year of Diagnosis, Arizona, 2011-2021

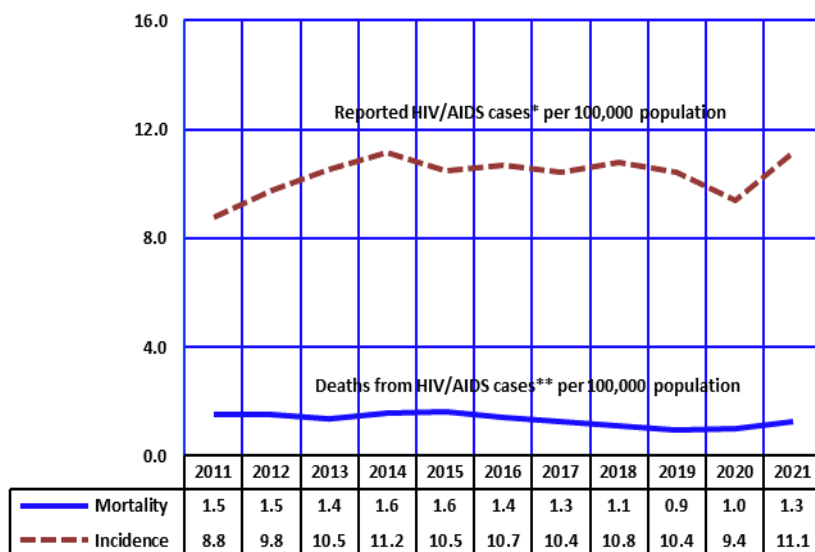


Since the first case of AIDS diagnosed in an Arizona resident in 1981, a total of 25,037 cases of HIV/AIDS had been diagnosed in the State by the end of 2021 and reported by July 25, 2023 (**Table 3C-1**).

In 2021, males accounted for 87.6 percent of all *HIV/AIDS* diagnoses. The male-to-female ratio of *HIV/AIDS* diagnoses in Arizona in 2021 was 7.0:1 (711/101; **Figure 3C-1, Table 3C-2**).

The proportion of risk behaviors attributed to emerging cases of *HIV/AIDS* in 2021 remained similar to previous years. Of the 812 *HIV/AIDS* cases diagnosed in 2021, 463 were among men who reported sexual contact with other men (**Table 3C-4**). Another 63 reported heterosexual contact. An additional 26 reported only injecting drugs. Adults without an indicated risk accounted for 202 of *HIV/AIDS* cases diagnosed in 2021.

Figure 3C-2
Trends in the Incidence Rates of HIV/AIDS and Mortality Rates for HIV Disease by Year, Arizona, 2011-2021



The incidence rate measures the relative risk for *HIV/AIDS* in a population. The incidence rate of *HIV/AIDS* has increased in Arizona by 26.1 percent from 8.8 cases per 100,000 population in 2011 to 11.1/100,000 in 2021 (**Figure 3C-2**; the incidence rates for 2011 – 2021 have been re-computed based on the latest volume of the *HIV/AIDS* data as of 7/25/2023).

The rate of deaths from *HIV disease* remained unchanged from 2014 to 2015, then decreased slightly at 1.4 deaths per 100,000 population in 2016 to 0.9 in 2019, then increased to 1.0 in 2020 and 1.3 in 2021 (**Figure 3C-2**).

Of the 812 *HIV/AIDS* cases diagnosed in 2021, 244 were White non-Hispanic, 358 were Hispanic, 125 were Black, 42 were American Indian, and 10 were Asian or Pacific Islander (**Table 3C-3**).

Notes: *By year of diagnosis; **By year of death.

**TABLE 3C-1
FREQUENCY DISTRIBUTION OF HIV/AIDS BY AGE AT DIAGNOSIS,
ARIZONA, 1981-2021**

Age Group (years)	HIV/AIDS cases
Under 5	123
5-12	47
13-19	661
20-29	7,905
30-39	9,258
40-49	4,304
50 or above	2,739
Missing	0
Total	25,037

**TABLE 3C-2
HIV/AIDS CASES AND DEATHS BY YEAR OF DIAGNOSIS AND GENDER,
ARIZONA, 1981-2010 and 2011-2021**

	1981-2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
# Males	15,071	487	543	604	635	610	629	621	664	638	584	711
# Females	2,166	77	92	88	110	100	103	104	98	112	89	101
# Total	17,237	564	635	692	745	710	732	725	762	750	673	812
# Presumed Living	9,617	472	538	610	667	630	656	662	722	717	630	772
# Known dead	7,618	92	97	82	78	80	76	63	40	33	43	39
% Mortality	44.2	16.3	15.3	11.8	10.5	11.3	10.4	8.7	5.2	4.4	6.4	4.8

Note: Due to reporting delays, all numbers are provisional (2021 volume as of 07/25/2023); missing 2 in overall vital status.

Source: Arizona Department of Health Services, Bureau of Infectious Disease and Services, Office of HIV Care and Surveillance.

**TABLE 3C-3
DISTRIBUTION OF REPORTED HIV/AIDS CASES BY YEAR OF DIAGNOSIS AND RACE/ETHNICITY,
ARIZONA, 1981-2010 AND 2011-2021**

Race/ethnicity	1981-2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
White non-Hispanic	10,152	227	247	273	265	244	243	246	245	241	235	244
Black or African American non-Hispanic	1,700	76	102	112	128	127	136	112	124	125	98	125
Hispanic or Latino all races	4,296	202	215	241	269	253	280	294	320	321	274	358
Asian or Pacific Islander non-Hispanic	142	15	16	9	17	23	15	22	20	15	18	10
American Indian or Alaska Native non-Hispanic	592	39	43	46	55	51	53	45	42	39	36	42
Two or more races/ other or unknown race	355	*	12	11	11	12	*	6	11	9	12	33
Total	17,237	560†	635	692	745	710	730†	725	762	750	673	812

Note: * Cell suppressed due to non-zero count less than 6; † Sum rounded to nearest tens unit due to non-zero addend less than 6; Due to reporting delays, all numbers are provisional (2021 volume as of 07/25/2023).

**TABLE 3C-4
DISTRIBUTION OF REPORTED HIV/AIDS CASES BY YEAR OF DIAGNOSIS AND TRANSMISSION CATEGORY,
ARIZONA, 1981-2010 AND 2011-2021**

Transmission	1981-2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
MSM	10,119	335	372	425	471	419	449	446	484	443	386	463
IV Drug User (IDU)	2,198	56	52	52	53	52	54	36	47	49	41	26
MSM/IDU	1,878	34	39	37	44	52	33	40	37	44	48	48
Hemophiliac (Adult)	71	0	0	0	0	0	0	0	0	0	0	0
Heterosexual Contact	1,573	80	98	71	74	79	64	63	51	66	41	63
Transfusion/transplant (Adult)	93	0	0	0	0	0	0	0	0	0	0	0
No indicated risk (Adult)	1,157	58	66	100	99	103	130	135	136	145	156	202
Pediatric Hemophiliac	17	0	0	0	0	0	0	0	0	0	0	0
Pediatric transfusion/transplant	*	0	0	0	0	0	0	0	0	0	0	0
Mother HIV+	120	*	8	6	*	*	*	*	7	*	*	10
Pediatric (no indicated risk)	9	0	0	*	*	*	0	*	0	0	0	0
Total	17,240†	560†	635	690†	750†	710†	730†	730†	762	750†	670†	812

Note: * Cell suppressed due to non-zero count less than 6; † Sum rounded to nearest tens unit due to non-zero addend less than 6; Due to reporting delays, all numbers are provisional (2021 volume as of 07/25/2023).

Source: Arizona Department of Health Services, Bureau of Infectious Disease and Services, Office of HIV Care and Surveillance.