

CHAPTER 4

HOSPITAL INPATIENT DISCHARGES AND EMERGENCY ROOM VISITS: 2016 STATUS

- 4A. INPATIENT DISCHARGES FROM SHORT-STAY HOSPITALS BY FIRST-LISTED DIAGNOSIS AND PATIENT CHARACTERISTICS**
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4A.

INPATIENT DISCHARGES FROM SHORT STAY HOSPITALS BY FIRST-LISTED DIAGNOSIS AND PATIENT CHARACTERISTICS

An inpatient discharge occurs when a person who was admitted to a hospital leaves that hospital. A person who has been hospitalized more than once in a given calendar year will be counted multiple times as a discharge; thus, the numbers in this report are for discharges, not persons. Federal, military, and Department of Veteran Affairs' hospitals are excluded. Beginning in 2010, the psychiatric hospitals also are required to report to the Arizona Department of Health Services. All discharges are for residents of Arizona. Discharges of out-of-state residents are not included in this report. Discharges of inpatients in this report exclude newborn infants.

Beginning in 2016, diagnostic groupings and code numbers are based solely on the International Classification of Diseases and Related Problems, 10th Revision, Clinical Modification (ICD-10-CM). ICD-10-CM incorporates greater details about medical diagnosis and represents a substantial increase in number of diagnostic codes, with more than 69,000 codes compared with about 14,000 under ICD-9-CM. Due to fundamental changes in the coding systems, caution should be exercised in comparing 2016 inpatient data to previous years. Please refer to "The Implementation of the International Classification of Disease, Tenth Revision," Introduction page ix, for further explanation of this new coding system.

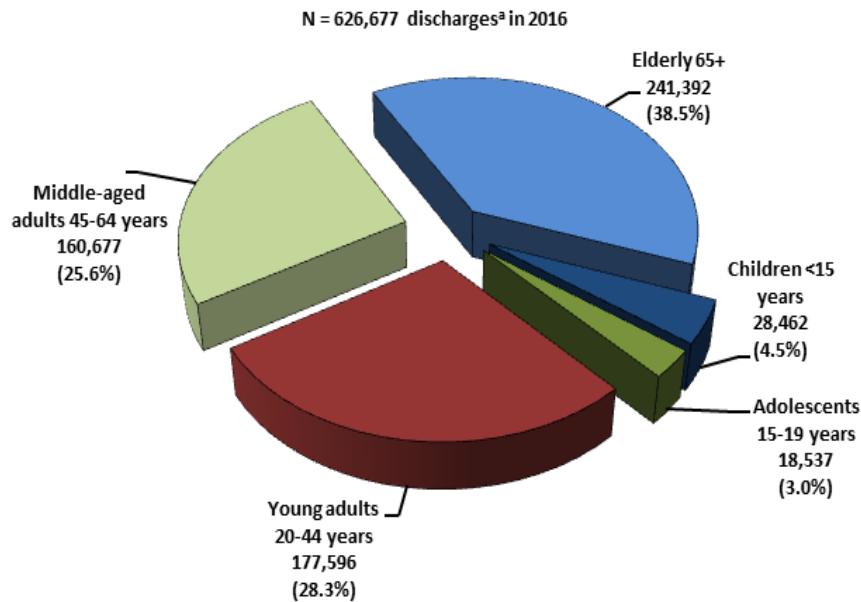
The change in the Arizona reporting requirements increased the number of diagnoses that are coded for each discharge from nine to twenty five. In this section, discharges are presented by principal diagnosis, which is the first one listed on the discharge summary of the medical record. The number of first-listed diagnoses is the same as the number of discharges. For comparability with the national data*, the discharge rates are presented per 10,000 population. The groupings of ICD-9-CM and ICD-10-CM codes used to identify specific diagnostic categories can be accessed at:

<http://pub.azdhs.gov/health-stats/hip/cat/icd9-10primary.xlsx>.

*Findings of the National Hospital Discharge Survey are available in bound reports of the National Center for Health Statistics and online at <http://www.cdc.gov/nchs/nhds.htm>

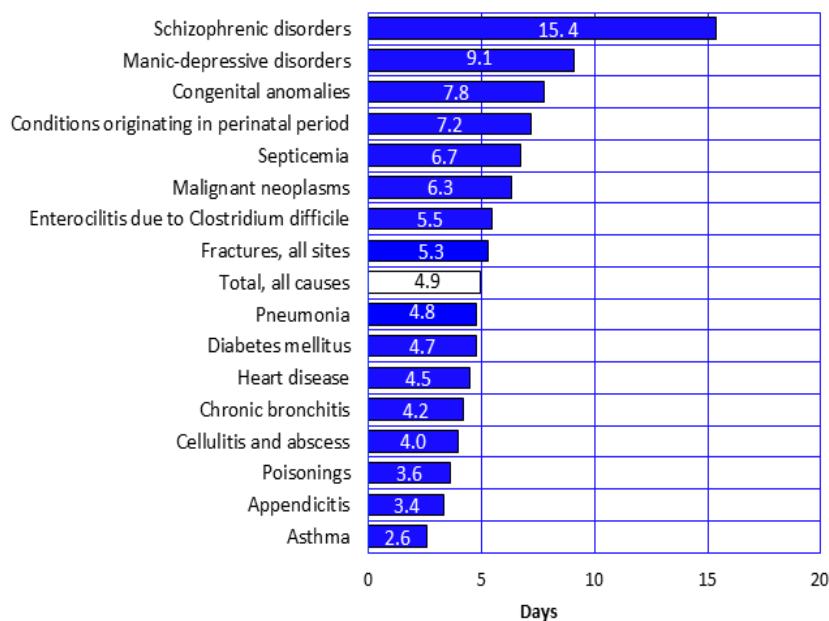
4A. INPATIENT DISCHARGES FROM SHORT-STAY HOSPITALS BY FIRST-LISTED DIAGNOSIS AND PATIENT CHARACTERISTICS

Figure 4A-1
Hospital Inpatient Discharges^a by Age Group, Arizona Residents, 2016



Note: ^a Excluding newborn infants.

Figure 4A-2
Average Length of Hospital Stay for Discharges with Selected First-listed Diagnosis, Arizona Residents, 2016



In 2016, there were 626,677 inpatients discharged, excluding newborn infants, from non-Federal short stay hospitals in Arizona (Table 4A-1). Patients who were elderly (65 years or older) accounted for 38.5 percent of hospital discharges (Figure 4A-1), followed by young adults (20-44 years old) who comprised 28.3 percent of discharges, and middle-aged adults 45-64 year olds (25.6 percent of all inpatient discharges).

Diseases of the circulatory system were the most common diagnoses (13.4 percent of all discharges), followed by diseases of the digestive system (9.7 percent), and *injury and poisoning* diagnoses (9.6 percent; percentages based on data in Table 4A-1).

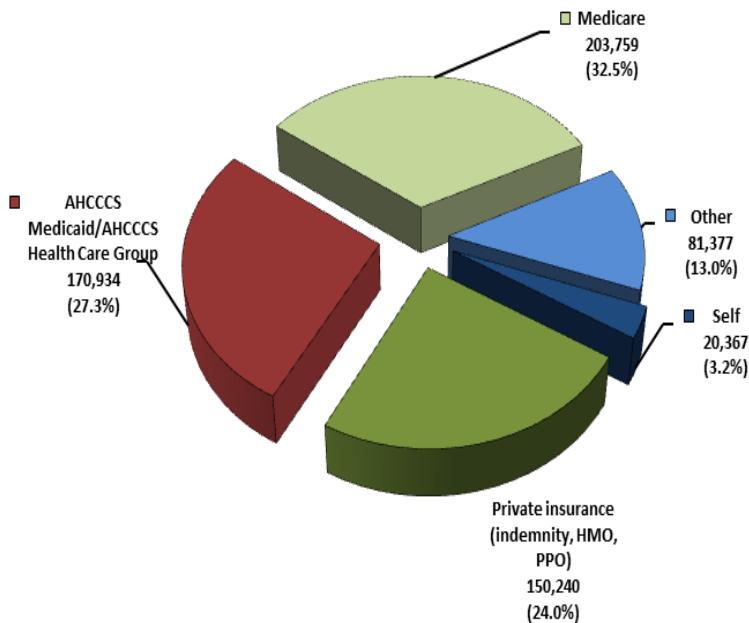
Based on the data from the National Hospital Discharge Survey, the longest continuously running nationally representative survey of hospital utilization, the length of stay for inpatients has changed dramatically from 1970 through 2010. In 1970, the average length of stay was 7.8 days, with one-third of patients hospitalized for 8 days or more. In 2010, the average length of stay nationally was 4.8 days.

In 2016, the average length of hospital stay for Arizona inpatients was 4.9 days (Figure 4A-2, Table 4A-5). The percent of patients hospitalized for three days or less was 56.24 percent, with 16.46 percent of inpatients staying eight days or more.

The average length of stay was 4.5 days for heart disease, 4.7 days for diabetes, 6.3 days for cancer, and 15.4 days for schizophrenic disorders.

4A. INPATIENT DISCHARGES FROM SHORT-STAY HOSPITALS BY FIRST-LISTED DIAGNOSIS AND PATIENT CHARACTERISTICS

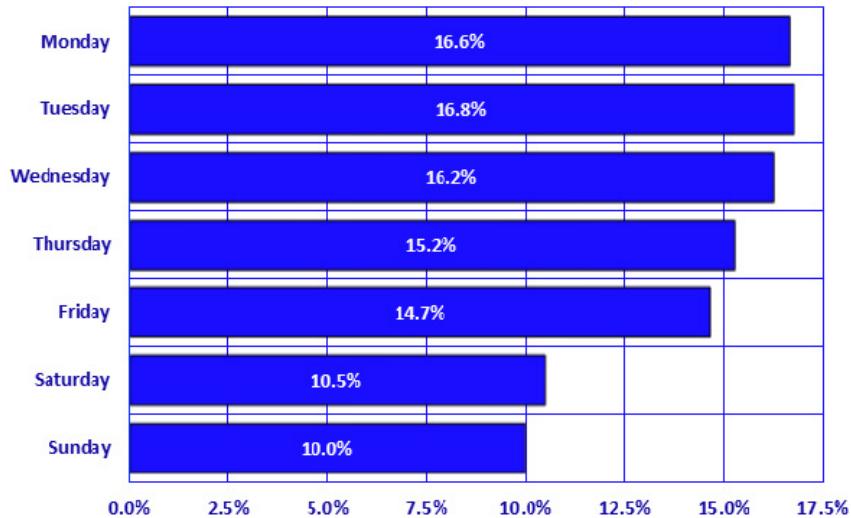
Figure 4A-3
Hospital Inpatient Discharges by Payer, Arizona Residents, 2016



Medicare paid for 32.5 percent of all discharges (**Figure 4A-3**) and 70.2 percent of inpatient discharges of persons aged 65 years or older (**Table 4A-4**). The Arizona Health Care Cost Containment System (AHCCCS; the State's Medicaid Program) was the second most frequently recorded expected source of payment, accounting for 27.3 percent of inpatient discharges. Private insurance accounted for 24.0 percent of hospital inpatient discharges.

Note: The Arizona Health Care Cost Containment System is the State's Medicaid Program.

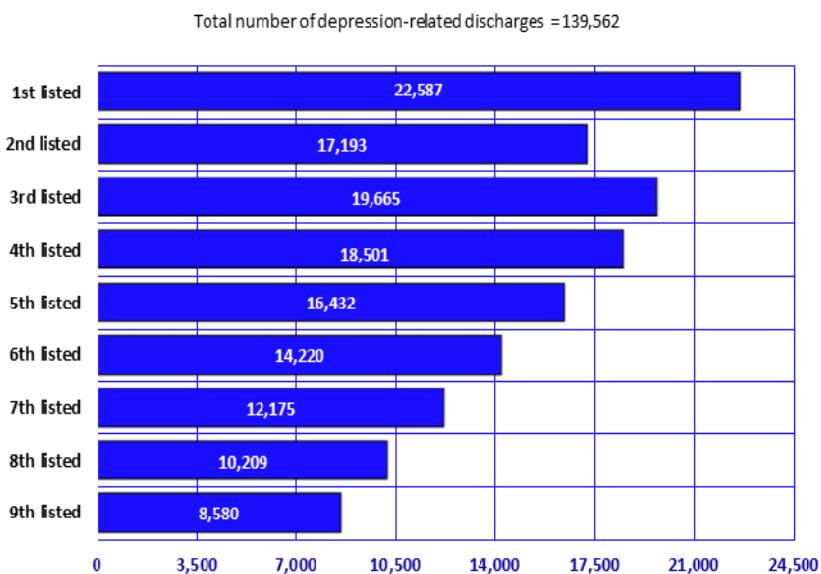
Figure 4A-4
**Percent of Hospital Inpatient Admissions by Day of the Week,
Arizona Residents, 2016**



The rhythm of hospital births by day of the week (see **Figure 1B-14**) reveals that the daily average of resident live births in 2016 was substantially lower on weekends than on weekdays. The same pattern applies to hospital inpatient admissions excluding newborn infants (**Figure 4A-4**).

4A. INPATIENT DISCHARGES FROM SHORT-STAY HOSPITALS BY FIRST-LISTED DIAGNOSIS AND PATIENT CHARACTERISTICS

Figure 4A-5
Number of Depression-Related Inpatient Discharges and Emergency Room Visits of Arizona Residents, 2016



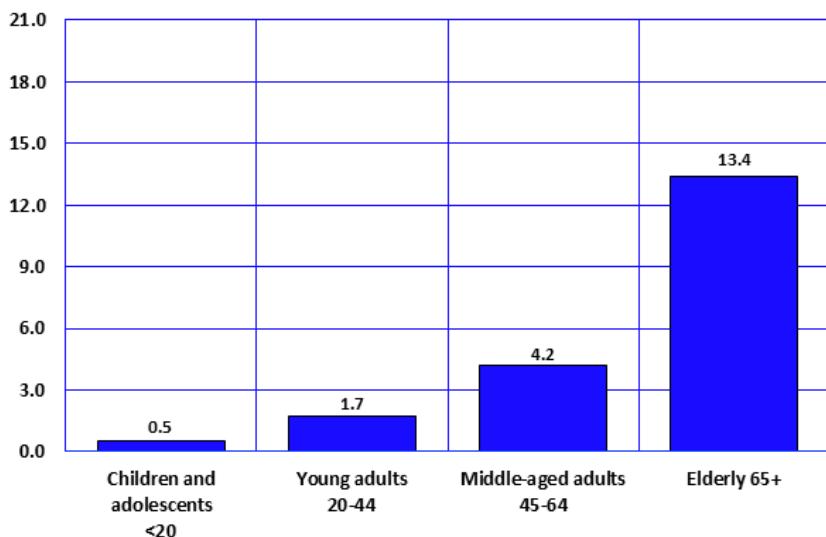
In 2016, depression accounted for 14,884 inpatient discharges and 7,703 emergency room visits as the first-listed diagnosis (for a total of 22,587 hospital encounters; **Figure 4A-5, Table 4A-1, Table 7C-1**).

The extent to which the first-listed diagnosis is the principal reason for hospitalization ought not to be overestimated. More often than not, the first-listed diagnosis is the immediate, but not necessarily the underlying cause of hospitalization.

However, when we count all entries of this code within the nine diagnostic fields, depression was mentioned on 139,562 inpatient discharges and emergency room records. In fact, the depression diagnosis was substantially more frequently present as 2nd – 7th listed on the medical record than it was first-listed (**Figure 4A-5**).

When hospital data is used to estimate the prevalence of depression, it makes sense to include all mentions of this disorder in all diagnostic fields, not just the first one.

Figure 4A-6
Inpatient Hospitalization Rates for Enterocolitis due to *Clostridium difficile* By Age Group, Arizona Residents, 2016



In 2016, 2,672 Arizonans were hospitalized with the diagnosis of enterocolitis due to *Clostridium difficile*, a bacterial inflammation of the intestines (**Table 4A-1**). The disease is of growing public health concern because it is often acquired in hospitals and other health care institutions with long-term patients as residents.

The inpatient hospitalization rates associated with enterocolitis due to *Clostridium difficile* tend to increase with age. The rate for the elderly 65 years or older (13.4/10,000) was 3.2 times greater than the rate of middle-aged adults (**Figure 4A-6**).

In 2016, 164 Arizonans died from enterocolitis due to *Clostridium difficile*. Elderly 65 years or older accounted for 85.4 percent of these deaths (**Table 2C-27**).

**TABLE 4A-1 (CORRECTION)
NUMBER OF DISCHARGES^a BY FIRST-LISTED DIAGNOSIS AND AGE GROUP, ARIZONA, 2016**

Category of first-listed diagnosis	Total	Children <15 years	Adolescents- 15-19 years	Age group		
				Young adults 20-44 years	Middle- aged adults 45-64 years	Elderly 65+ years
All categories	626,677	28,462	18,537	177,596	160,677	241,392
Infectious and parasitic diseases	50,683	1,371	519	9,215	15,503	24,075
Septicemia	41,953	331	320	7,306	13,136	20,860
Enterocolitis due to <i>Clostridium difficile</i>	2,672	67	20	380	704	1,501
Neoplasms	22,213	375	163	2,601	8,239	10,835
Malignant neoplasms	17,914	292	106	1,473	6,482	9,561
Large intestine	2,258	0	0	149	800	1,309
Prostate	1,400†	*	0	7	679	716
Trachea bronchus and lung	2,130†	*	7	65	619	1,431
Breast	900†	0	*	174	448	271
Benign neoplasms	3,464	52	40	1,015	1,511	846
Endocrine nutritional metabolic and immunity diseases	24,002	1,015	577	6,304	8,632	7,474
Diabetes mellitus	9,591	374	378	2,727	3,627	2,485
Volume depletion	1,462	279	25	140	287	731
Morbid obesity	2,848	0	10	1,380	1,213	245
Diseases of the blood and blood forming organs	5,679	710	196	1,139	1,413	2,221
Mental disorders	49,402	2,968	5,547	22,609	13,909	4,367
Psychoses	31,286	1,447	3,068	14,783	9,102	2,884
Alcoholic psychoses	3,205	0	8	1,239	1,631	327
Drug psychoses	590†	*	45	384	142	17
Schizophrenic disorders	5,817	16	176	3,480	1,918	227
Manic-depressive disorders	27,543	2,172	4,396	11,928	7,053	1,994
Neurotic disorders	12,378	909	1,088	5,206	4,166	1,008
Anxiety states	576	29	75	227	158	87
Depression	14,884	1,112	2,529	5,993	3,951	1,299
Drug dependence	2,220†	*	110	1,572	447	87
Nondependent abuse of drugs	180†	*	24	97	55	6
Alcohol dependence	5,180†	*	10	2,050	2,606	513
Diseases of the nervous system	16,824	1,365	536	3,334	4,580	7,008
Diseases of the eye and adnexa	522	72	20	138	154	138
Diseases of the ear and mastoid process	607	142	10	86	119	250
Diseases of the circulatory system	83,719	313	214	5,307	23,787	54,097
Heart disease	54,356	173	110	3,198	15,363	35,511
Acute myocardial infarction	11,920†	*	*	556	4,252	7,110
Coronary arteriosclerosis	5,210	0	0	123	1,822	3,265

TABLE 4A-1 (continued)
NUMBER OF DISCHARGES^a BY FIRST-LISTED DIAGNOSIS AND AGE GROUP, ARIZONA, 2016

Category of first-listed diagnosis	Total	Children <15 years	Adoles- cents 15-19 years	Young adults 20-44 years	Age group		
					Middle- aged adults 45-64 years	Elderly 65+ years	Unknown
Other ischemic heart disease	450†	0	*	35	193	224	0
Cardiac dysrhythmias	11,634	54	34	582	2,781	8,182	*
Cardiac arrest	260†	*	*	29	91	131	*
Congestive heart failure	11,746	57	10	649	2,850	8,180	0
Cerebrovascular disease	19,200	44	39	816	5,057	13,244	0
Diseases of the respiratory system	51,903	7,247	657	4,793	12,889	26,316	*
Acute bronchitis and bronchiolitis	3,111	2,357	8	115	211	420	0
Pneumonia	14,668	1,299	141	1,251	3,439	8,537	*
Chronic bronchitis	7,940†	7	*	178	2,623	5,131	0
Asthma	3,420	1,561	135	778	632	314	0
Diseases of the digestive system	60,699	2,142	958	12,800	20,319	24,479	*
Appendicitis	3,181	788	275	926	733	459	0
Noninfectious enteritis and colitis	5,235	205	152	1,335	1,517	2,026	0
Diverticula of intestine	4,960†	*	*	620	1,650	2,685	0
Cholelithiasis	3,806	22	67	1,185	1,183	1,349	0
Diseases of the genitourinary system	26,335	1,085	362	4,735	7,425	12,728	0
Calculus of kidney and ureter	620†	*	10	175	242	186	0
Diseases of the skin and subcutaneous tissue	14,583	917	207	4,104	4,964	4,391	0
Cellulitis and abscess	9,454	415	97	2,409	3,261	3,272	0
Diseases of the musculoskeletal system	48,438	709	382	3,761	16,901	26,685	0
Osteoarthritis and allied disorders	24,900†	*	*	428	8,545	15,926	0
Invertebral disc disorders	3,710†	*	9	766	1,608	1,327	0
Congenital anomalies	2,250	1,362	143	295	247	203	0
Conditions originating in perinatal period	2,180†	2,176	0	*	0	0	0
Symptoms signs and ill-defined conditions	13,212	1,358	310	2,029	3,641	5,874	0
Injury and poisoning	60,192	2,286	1,759	12,006	16,295	27,839	7
Fractures, all sites	19,234	581	443	2,950	3,832	11,428	0
Fracture of neck of femur	6,719	14	18	126	756	5,805	0
Poisonings	5,670	268	469	2,150	1,848	934	*

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; ^a Excluding newborn infants.

TABLE 4A-2 (CORRECTION)
NUMBER OF DISCHARGES^a BY FIRST-LISTED DIAGNOSIS AND GENDER, ARIZONA, 2016

Category of first-listed diagnosis	Total	Patient's gender		
		Male	Female	Unknown
All categories	626,677	270,159	356,503	15
Infectious and parasitic diseases	50,683	25,189	25,492	*
Septicemia	41,953	21,213	20,739	*
Enterocolitis due to <i>Clostridium difficile</i>	2,672	929	1,743	0
Neoplasms	22,213	10,950	11,263	0
Malignant neoplasms	17,914	9,768	8,146	0
Large intestine	2,258	1,215	1,043	0
Prostate	1,403	1,403	0	0
Trachea bronchus and lung	2,127	1,094	1,033	0
Breast	896	37	859	0
Benign neoplasms	3,464	793	2,671	0
Endocrine nutritional metabolic and immunity diseases	24,002	11,259	12,743	0
Diabetes mellitus	9,591	5,555	4,036	0
Volume depletion	1,462	651	811	0
Morbid obesity	2,848	601	2,247	0
Diseases of the blood and blood forming organs	5,679	2,609	3,070	0
Mental disorders	49,402	25,734	23,668	0
Psychoses	31,286	17,071	14,215	0
Alcoholic psychoses	3,205	2,351	854	0
Drug psychoses	592	432	160	0
Schizophrenic disorders	5,817	3,518	2,299	0
Manic-depressive disorders	27,543	12,286	15,257	0
Neurotic disorders	12,378	7,230	5,148	0
Anxiety states	576	245	331	0
Depression	14,884	6,412	8,472	0
Drug dependence	2,217	1,365	852	0
Nondependent abuse of drugs	184	114	70	0
Alcohol dependence	5,180	3,762	1,418	0
Diseases of the nervous system	16,824	8,042	8,781	*
Diseases of the eye and adnexa	522	244	278	0
Diseases of the ear and mastoid process	607	252	355	0
Diseases of the circulatory system	83,719	47,351	36,366	*
Heart disease	54,356	31,689	22,666	*
Acute myocardial infarction	11,922	7,568	4,354	0
Coronary arteriosclerosis	5,210	3,740	1,470	0

TABLE 4A-2 (continued)
NUMBER OF DISCHARGES^a BY FIRST-LISTED DIAGNOSIS AND GENDER, ARIZONA, 2016

Category of first-listed diagnosis	Total	Patient's gender		
		Male	Female	Unknown
Other ischemic heart disease	453	244	209	0
Cardiac dysrhythmias	11,634	6,158	5,476	0
Cardiac arrest	256	148	108	0
Congestive heart failure	11,746	6,608	5,138	0
Cerebrovascular disease	19,200	9,858	9,341	*
Diseases of the respiratory system	51,903	25,270	26,632	*
Acute bronchitis and bronchiolitis	3,111	1,637	1,474	0
Pneumonia	14,668	6,995	7,672	*
Chronic bronchitis	7,940	3,477	4,463	0
Asthma	3,420	1,526	1,894	0
Diseases of the digestive system	60,699	28,515	32,184	0
Appendicitis	3,181	1,743	1,438	0
Noninfectious enteritis and colitis	5,235	1,954	3,281	0
Diverticula of intestine	4,957	2,226	2,731	0
Cholelithiasis	3,806	1,507	2,299	0
Diseases of the genitourinary system	26,335	11,601	14,734	0
Calculus of kidney and ureter	616	303	313	0
Diseases of the skin and subcutaneous tissue	14,583	7,971	6,612	0
Cellulitis and abscess	9,454	5,188	4,266	0
Diseases of the musculoskeletal system	48,438	22,587	25,851	0
Osteoarthritis and allied disorders	24,901	10,619	14,282	0
Invertebral disc disorders	3,712	1,909	1,803	0
Congenital anomalies	2,250	1,221	1,029	0
Conditions originating in perinatal period	2,177	1,204	973	0
Symptoms signs and ill-defined conditions	13,212	6,394	6,818	0
Injury and poisoning	60,192	30,748	29,441	*
Fractures, all sites	19,234	8,514	10,718	*
Fracture of neck of femur	6,719	2,285	4,434	0
Poisonings	5,670	2,559	3,111	0

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; ^a Excluding newborn infants.

**TABLE 4A-3 (CORRECTION)
NUMBER OF DISCHARGES^a BY FIRST-LISTED DIAGNOSIS AND RACE/ETHNICITY, ARIZONA, 2016**

Category of first-listed diagnosis	Total	Race/ethnicity				Refused /Unknown	
		White non-Hispanic	Hispanic or Latino	Black or African American	American Indian or Alaska Native		
Total	626,677	424,091	126,550	32,253	26,725	11,894	5,164
Infectious and parasitic diseases	50,683	33,961	10,248	2,406	2,749	957	362
Septicemia	41,953	28,260	8,393	1,878	2,354	773	295
Enterocolitis due to <i>Clostridium difficile</i>	2,672	2,072	383	89	82	38	8
Neoplasms	22,213	16,386	3,580	995	535	505	212
Malignant neoplasms	17,914	13,655	2,657	650	408	383	161
Large intestine	2,258	1,793	284	68	48	49	16
Prostate	1,403	1,095	178	80	17	19	14
Trachea bronchus and lung	2,127	1,782	189	82	17	46	11
Breast	896	669	133	48	20	19	7
Benign neoplasms	3,464	2,107	785	319	104	108	41
Endocrine nutritional metabolic and immunity diseases	24,002	14,513	5,644	1,654	1,636	397	158
Diabetes mellitus	9,591	5,255	2,589	668	889	134	56
Volume depletion	1,462	1,036	262	82	47	27	8
Morbid obesity	2,848	1,846	692	236	37	21	16
Diseases of the blood and blood forming organs	5,679	3,210	1,175	911	219	108	56
Mental disorders	49,402	35,065	7,907	3,364	2,196	527	343
Psychoses	31,286	22,319	4,934	2,097	1,425	313	198
Alcoholic psychoses	3,205	2,377	385	91	321	12	19
Drug psychoses	592	362	126	58	35	6	*
Schizophrenic disorders	5,817	3,733	952	755	246	85	46
Manic-depressive disorders	27,543	20,022	4,333	1,712	1,008	311	157
Neurotic disorders	12,378	8,768	1,938	562	885	123	102
Anxiety states	576	432	99	17	14	6	8
Depression	14,884	10,589	2,500	796	717	181	101
Drug dependence	2,217	1,650	445	73	33	9	7
Nondependent abuse of drugs	180†	102	47	19	15	*	0
Alcohol dependence	5,180	3,870	591	151	513	25	30
Diseases of the nervous system	16,824	11,857	2,886	946	689	257	189
Diseases of the eye and adnexa	522	324	130	28	24	8	8
Diseases of the ear and mastoid process	607	394	132	26	37	9	9
Diseases of the circulatory system	83,719	63,128	12,067	4,198	2,332	1,320	674
Heart disease	54,356	41,706	7,539	2,523	1,407	796	385
Acute myocardial infarction	11,922	8,946	1,869	497	309	179	122
Coronary arteriosclerosis	5,210	4,035	764	156	125	89	41

TABLE 4A-3 (continued)
NUMBER OF DISCHARGES^a BY FIRST-LISTED DIAGNOSIS AND RACE/ETHNICITY, ARIZONA, 2016

Category of first-listed diagnosis	Total	Race/ethnicity				Refused /Unknown
		White non-Hispanic	Hispanic or Latino	Black or African American	American Indian or Alaska Native	
Other ischemic heart disease	450†	329	74	26	16	*
Cardiac dysrhythmias	11,634	9,561	1,261	358	242	144
Cardiac arrest	256	166	42	22	14	6
Congestive heart failure	11,746	8,528	1,861	748	384	177
Cerebrovascular disease	19,200	14,368	2,867	884	485	363
Diseases of the respiratory system	51,903	36,985	8,760	2,705	2,207	887
Acute bronchitis and bronchiolitis	3,111	1,500	1,069	195	239	68
Pneumonia	14,668	10,600	2,393	602	729	272
Chronic bronchitis	7,940	6,737	667	330	92	85
Asthma	3,420	1,554	1,060	515	179	79
Diseases of the digestive system	60,699	41,400	12,353	2,516	3,047	983
Appendicitis	3,181	1,801	1,069	94	126	71
Noninfectious enteritis and colitis	5,235	3,957	779	265	121	77
Diverticula of intestine	4,957	3,837	741	174	123	55
Cholelithiasis	3,806	2,257	1,124	121	220	56
Diseases of the genitourinary system	26,335	17,769	5,545	1,324	1,135	418
Calculus of kidney and ureter	616	450	111	18	19	15
Diseases of the skin and subcutaneous tissue	14,583	10,061	2,662	612	1,014	156
Cellulitis and abscess	9,454	6,894	1,515	298	607	92
Diseases of the musculoskeletal system	48,438	39,064	5,374	1,599	1,203	768
Osteoarthritis and allied disorders	24,901	21,077	2,278	620	329	430
Invertebral disc disorders	3,712	2,990	414	137	80	36
Congenital anomalies	2,250	1,242	713	95	126	49
Conditions originating in perinatal period	2,177	959	799	95	192	75
Symptoms signs and ill-defined conditions	13,212	9,176	2,350	795	547	222
Injury and poisoning	60,192	43,426	9,944	2,446	2,991	803
Fractures, all sites	19,234	14,859	2,775	507	733	186
Fracture of neck of femur	6,719	5,790	628	71	116	73
Poisonings	5,670	3,961	1,032	324	230	56

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; ^a Excluding newborn infants.

TABLE 4A-4
**NUMBER OF DISCHARGES^a BY PRIMARY PAYER, GENDER, AGE GROUP, RACE/ETHNICITY,
AND MARITAL STATUS, ARIZONA, 2016**

Selected characteristics		Total	Self-pay	Private insurance (indemnity, HMO, PPO)	AHCCCS/Medicaid	Medicare	Other
Total		626,677	20,367	150,240	170,934	203,759	81,377
Gender	Male	270,159	9,952	56,571	65,491	99,145	39,000
	Female	356,503	10,410	93,664	105,440	104,612	42,377
	Unknown	20†	*	*	*	*	0
Age group	Children <15 years	28,462	940	9,186	17,042	28	1,266
	Adolescents 15-19 years	18,537	1,858	5,739	10,224	63	653
	Young adults 20-44 years	177,596	10,099	63,496	88,276	7,418	8,307
	Middle-aged adults 45-64 years	160,677	6,457	58,120	51,735	26,890	17,475
	Elderly 65+ years	241,392	1,005	13,698	3,654	169,360	53,675
	Unknown	10†	8	*	*	0	*
Race/ethnicity	White non-Hispanic	424,091	12,071	108,590	76,340	165,393	61,697
	Hispanic or Latino	126,550	5,643	25,853	61,674	20,537	12,843
	Black or African American	32,253	1,331	6,431	13,674	7,261	3,556
	American Indian or Alaska Native	26,725	676	3,326	14,623	6,624	1,476
	Asian or Pacific Islander	11,894	429	4,465	3,035	2,738	1,227
	Refused/Unknown	5,164	217	1,575	1,588	1,206	578
Patient's marital status	Single	234,267	11,659	51,403	114,188	37,401	19,616
	Married	263,301	5,946	85,270	35,485	99,706	36,894
	Separated	5,330	166	826	2,417	1,310	611
	Divorced	53,152	1,778	8,444	13,546	19,980	9,404
	Widowed	66,126	509	3,575	3,493	44,118	14,431
	Not Applicable	130†	*	6	118	*	*
	Unknown	4,374	308	716	1,687	1,243	420

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;^a
Excluding newborn infants.

**TABLE 4A-5 (CORRECTION)
AVERAGE LENGTH OF STAY FOR DISCHARGES^a BY FIRST-LISTED DIAGNOSIS AND AGE GROUP, ARIZONA, 2016**

Category of first-listed diagnosis	All ages	Patient's age group				
		Children <15 years	Adolescents 15-19 years	Young adults 20-44 years	Middle- aged adults 45-64 years	Elderly 65+ years
All conditions	4.9	5.2	5.3	4.1	5.3	5.2
Infectious and parasitic diseases	6.5	5.2	4.3	5.9	7.0	6.5
Septicemia	6.7	9.8	4.6	6.1	7.2	6.7
Enterocolitis due to <i>Clostridium difficile</i>	5.5	4.9	4.5	4.7	5.2	5.8
Neoplasms	5.9	13.2	9.5	5.4	5.6	5.9
Malignant neoplasms	6.3	15.4	12.4	7.1	6.1	6.0
Large intestine	6.6	0.0	0.0	6.4	6.3	6.8
Prostate	1.9	11.0	0.0	2.7	1.8	2.1
Trachea bronchus and lung	5.9	9.4	4.6	5.2	5.7	6.0
Breast	3.8	0.0	3.0	3.9	3.9	3.5
Benign neoplasms	3.5	3.2	4.5	2.9	3.3	4.8
Endocrine nutritional metabolic and immunity diseases	3.9	4.3	3.7	3.2	4.1	4.4
Diabetes mellitus	4.7	2.6	2.5	3.6	5.4	5.8
Volume depletion	2.9	2.4	3.4	2.3	2.8	3.2
Morbid obesity	1.7	0.0	1.7	1.7	1.7	2.0
Diseases of the blood and blood forming organs	4.2	5.1	4.3	4.0	4.1	4.0
Mental disorders	9.3	9.4	9.4	8.7	9.4	11.6
Psychoses	9.3	10.0	10.3	8.7	9.0	11.6
Alcoholic psychoses	5.3	0.0	5.5	4.5	5.6	6.8
Drug psychoses	5.6	6.5	10.5	5.1	5.5	4.3
Schizophrenic disorders	15.3	24.3	16.1	14.9	15.6	18.2
Manic-depressive disorders	9.1	9.6	9.0	8.3	9.5	12.1
Neurotic disorders	6.1	8.2	8.5	5.5	5.7	7.0
Anxiety states	5.3	5.6	5.4	4.9	5.3	6.2
Depression	8.2	8.6	7.3	7.3	8.8	11.1
Drug dependence	5.7	3.0	15.3	5.0	5.8	6.0
Nondependent abuse of drugs	11.5	68.5	58.0	4.0	3.4	2.5
Alcohol dependence	5.3	120.0	5.4	4.6	5.5	6.8
Diseases of the nervous system	5.8	4.1	4.2	4.6	5.5	7.1
Diseases of the eye and adnexa	3.4	3.0	3.0	3.8	3.2	3.5
Diseases of the ear and mastoid process	2.7	2.1	2.3	2.6	2.8	3.2
Diseases of the circulatory system	4.9	10.0	5.8	4.7	4.9	4.8
Heart disease	4.5	13.3	4.8	4.3	4.4	4.5
Acute myocardial infarction	4.1	32.0	1.7	3.0	3.9	4.4
Coronary arteriosclerosis	4.6	0.0	0.0	4.1	4.2	4.8

TABLE 4A-5 (continued)
AVERAGE LENGTH OF STAY FOR DISCHARGES^a BY FIRST-LISTED DIAGNOSIS AND AGE GROUP, ARIZONA, 2016

Category of first-listed diagnosis	All ages	Patient's age group				
		Children <15 years	Adolescents 15-19 years	Young adults 20-44 years	Middle-aged adults 45-64 years	Elderly 65+ years
Other ischemic heart disease	2.5	0.0	1.0	1.7	2.2	2.9
Cardiac dysrhythmias	3.3	4.3	2.2	2.7	3.3	3.4
Cardiac arrest	3.1	6.0	0.5	3.0	3.4	2.8
Congestive heart failure	5.1	21.4	15.3	5.8	5.2	4.8
Cerebrovascular disease	6.1	8.1	8.2	6.8	6.7	5.9
Diseases of the respiratory system	5.3	3.5	4.0	4.8	5.7	5.7
Acute bronchitis and bronchiolitis	3.4	3.5	4.4	2.6	3.0	3.1
Pneumonia	4.8	3.4	4.5	4.4	5.1	5.0
Chronic bronchitis	4.2	4.1	2.0	3.5	4.0	4.3
Asthma	2.6	2.1	2.3	2.8	3.3	3.7
Diseases of the digestive system	4.4	4.3	4.0	3.8	4.5	4.8
Appendicitis	3.4	3.8	3.2	2.7	3.3	4.2
Noninfectious enteritis and colitis	4.3	4.7	5.8	3.9	4.4	4.5
Diverticula of intestine	4.6	1.0	10.0	4.3	4.5	4.7
Cholelithiasis	3.2	2.9	2.0	2.5	3.0	4.0
Diseases of the genitourinary system	3.9	3.1	2.9	3.0	3.8	4.3
Calculus of kidney and ureter	2.5	2.3	2.5	2.2	2.2	3.3
Diseases of the skin and subcutaneous tissue	4.4	2.3	3.3	3.8	4.7	5.2
Cellulitis and abscess	4.0	2.1	2.7	3.3	4.2	4.5
Diseases of the musculoskeletal system	3.2	4.5	4.7	3.8	3.0	3.1
Osteoarthritis and allied disorders	2.1	2.0	2.0	1.9	2.0	2.1
Invertebral disc disorders	3.1	0.5	2.1	2.7	2.8	3.8
Congenital anomalies	7.8	9.8	3.6	4.4	5.3	4.9
Conditions originating in perinatal period	7.2	7.2	0.0	2.0	0.0	0.0
Symptoms signs and ill-defined conditions	3.4	3.2	3.5	3.2	3.2	3.6
Injury and poisoning	5.6	4.4	4.4	5.2	5.8	5.9
Fractures, all sites	5.3	2.6	4.0	4.4	5.3	5.7
Fracture of neck of femur	4.9	1.4	4.8	5.3	5.1	4.9
Poisonings	3.6	2.1	2.4	3.3	4.1	4.5

Note: ^a Excluding newborn infants.



4B.

INPATIENT DISCHARGES FROM SHORT-STAY HOSPITALS BY ALL-LISTED PROCEDURES AND PATIENT CHARACTERISTICS

The data on the number of procedures in this section are for inpatients only. Procedures include surgical and non-surgical operations, diagnostic procedures, and special treatments reported on the medical record. Up to six procedures were included for each discharge. These all-listed procedures include all occurrences of the procedure regardless of the order on the medical record. For comparability with the national data*, the rates of all-listed procedures are presented per 10,000 population.

Beginning in 2008, Arizona hospitals may report up to 12 surgical and non-surgical procedures per record, doubling the previously required number. However, not all hospitals have been able to meet the revised requirements. This is one reason why, in our 2008-2015 reports, we only analyzed the top six procedures. Another reason is comparability with the previously published data for 2000-2007.

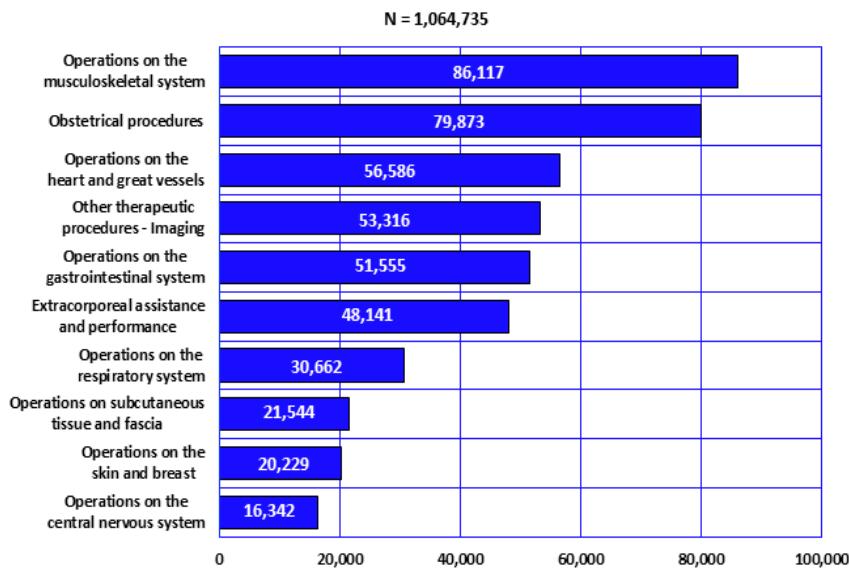
During 2015, all Arizona Hospitals transitioned to the International Classification of Diseases, 10th Revision, and Procedure Coding System (ICD-10-PCS) for coding inpatient procedures. ICD-10-PCS was implemented on October 1, 2015 in replacement of the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM).

In the current report, procedure groupings and codes are based on ICD-10-PCS and for the first time all the 12 listed procedures are included in the analysis. ICD-10-PCS is structurally different and far more detailed with about 72,000 procedure codes than ICD-9-CM, which includes only 3,824 procedure codes. Due to the fundamental differences in coding systems, caution should be exercised in comparing 2016 hospital discharge data with data from previous years. Please refer to "The Implementation of the International Classification of Disease, Tenth Revision," Introduction page ix, for further explanation of ICD-10-CM transition.

*Findings of the National Hospital Discharge Survey, including estimates of the number of specific procedure categories, are available in bound reports of the National Center for Health Statistics and online at <http://www.cdc.gov/nchs/nhds.htm>. The survey collects the data on up to four surgical and non-surgical procedures.

4B. INPATIENT DISCHARGES FROM SHORT-STAY HOSPITALS BY ALL-LISTED PROCEDURES AND PATIENT CHARACTERISTICS

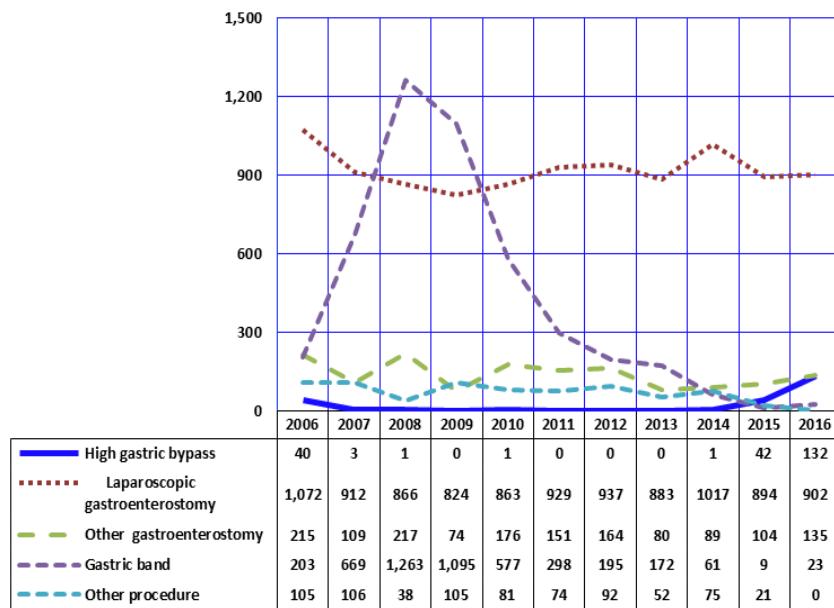
Figure 4B-1
**Ten Leading Categories of All-listed Inpatient Procedures,
Arizona Residents, 2016**



During 2016, 1,064,735 procedures were performed among the 626,677 total inpatient discharges to Arizona residents. The rate of procedures was 1,557.7 per 10,000 population. For Arizona males, this rate was 1397.4/10,000, and for Arizona females it was 1715.8/10,000.

No specific procedure was recorded for approximately 38.5 percent of all inpatient discharges. Only 1.81 percent of inpatients had six procedures reported while 0.75 of inpatients had 12 procedures recorded. Among the inpatient discharges which had one or more specific procedures recorded, the most frequent were operations on the musculoskeletal system, followed by obstetrical procedures, and operations on the heart and great vessels (**Figure 4B-1, Table 4B1**).

Figure 4B-2
Trends in Types of Inpatient Procedures Performed in Treatment of Morbid Obesity, Arizona Residents, 2006-2016



Bariatrics is a branch of medicine that deals with the surgical treatment of obesity. Bariatric surgery has seen a rather dramatic increase in its popularity. A typical candidate for gastrointestinal surgery has a body mass index (BMI) of 40 or more – about 100 pounds overweight for men and 80 pounds for women. Bariatric surgery may also be considered for someone whose BMI is between 35 and 39.9 and who has a serious obesity-related health problem (such as type 2-diabetes, heart disease, or severe sleep apnea).

In 2016, *morbid obesity* was the principal diagnosis for 2,848 inpatient hospitalizations (**Table 4A-1**). The number of *gastric bypass* surgeries, once the most common bariatric procedure, declined from a recent high of 2,123 in 2003 to fewer than 10 *gastric bypass* surgeries being completed collectively between 2007-2014. However, the number of *gastric bypass* procedures has increased in 2015 at 42 to 132 in 2016 (**Figure 4B-2**). As in any years since 2010, *laparoscopic gastroenterostomy* remained the most popular procedure, with 902 surgeries performed in 2016.

Note: The frequency counts in Figure 4B-2 are based on the principal procedure. The tabulated data use all twelve listed procedures.

TABLE 4B-1
NUMBER OF PROCEDURES BY CATEGORY AND AGE GROUP, ARIZONA, 2016

Procedures by category	Total	Age group					
		Children <15 years	Adoles- cents 15-19 years	Young adults 20-44 years	Middle- aged adults 45-64 years	Elderly 65+ years	
All procedures	1,064,735	63,342	24,383	300,502	288,537	387,930	41
Operations on the central nervous system	16,342	2,624	475	4,376	4,220	4,646	*
Spinal tap	7,324	2,193	206	1,531	1,779	1,614	*
Operations on the peripheral nervous system	3,944	44	54	765	1,343	1,738	0
Operations on the heart and great vessels	56,586	2,583	515	6,120	18,136	29,231	*
Heart transplant	70†	21	*	9	30	8	0
Coronary artery bypass graft	3,430†	*	0	82	1,153	2,195	0
Cardiac catheterization	19,510	121	21	1,125	7,266	10,977	0
Insertion, replacement, removal, of pacemaker leads	4,501	40	8	136	784	3,533	0
Operations on the upper arteries	8,745	310	100	1,024	2,614	4,697	0
Operations on the lower arteries	6,796	308	44	606	1,736	4,102	0
Operations on the upper veins	12,022	375	94	2,034	4,250	5,267	*
Operations on the lower veins	9,767	1,210	64	954	3,151	4,386	*
Operations on the lymphatic and hemic systems	8,654	350	116	1,010	3,158	4,020	0
Operations on the eye	522	74	24	169	141	114	0
Operations on the ear, nose, sinus	1,035	174	47	277	270	267	0
Operations on the respiratory system	30,662	2,268	370	4,756	10,018	13,244	6
Bronchoscopy with or without biopsy	8,471	317	83	1,190	2,970	3,910	*
Operations on the mouth and throat	3,309	804	126	789	832	757	*
Operations on the gastrointestinal system	51,555	2,276	894	10,364	16,338	21,682	*
Implantation of gastric band	26	0	0	11	7	8	0
Endoscopy of small intestine with or without biopsy	11,725	233	162	2,111	3,818	5,401	0
Endoscopy of large intestine with or without biopsy	8,553	161	126	1,228	2,520	4,518	0
Appendectomy, excluding incidental	4,107	865	310	1,174	1,045	713	0
Operations on the hepatobiliary system and pancreas	13,415	156	245	3,316	4,282	5,415	*
Cholecystectomy	8,014	55	196	2,496	2,501	2,766	0
Operations on the endocrine system	1,070	20	18	240	382	410	0
Operations on the skin and breast	20,229	505	1,114	11,367	4,024	3,216	*
Breast surgery	900†	0	*	174	448	271	0

TABLE 4B-1 (continued)
NUMBER OF PROCEDURES BY CATEGORY AND AGE GROUP, ARIZONA, 2016

Procedures by category	Total	Children <15 years	Adoles- cents 15-19 years	Young adults 20-44 years	Middle- aged adults 45-64 years	Age group	
						Elderly 65+ years	Un- known
Operations on the subcutaneous tissue and fascia	21,544	653	340	4,644	7,348	8,559	0
Operations on the musculoskeletal system	86,117	1,417	1,961	21,577	24,011	37,151	0
Open reduction of fracture with or without internal fixation	7,432	291	225	1,315	1,753	3,848	0
Total hip replacement	9,170†	*	7	294	3,240	5,628	0
Total knee replacement	16,060†	*	*	235	5,707	10,115	0
Operations on the urinary system	16,061	391	179	3,128	5,366	6,996	*
Kidney transplant	260†	0	*	68	131	54	0
Operations on the male reproductive system	8,141	5,646	16	178	966	1,335	0
Prostatectomy	1,944	0	0	12	763	1,169	0
Operations on the female reproductive system	16,270	88	782	12,339	2,156	905	0
Oophorectomy and salpingo-oophorectomy	3,746	11	18	1,540	1,598	579	0
Hysterectomy	3,610†	*	*	1,511	1,592	504	0
Obstetrical procedures	79,873	56	5,085	74,599	133	0	0
Episiotomy with or without forceps or vacuum extraction	3,100†	7	277	2,809	*	0	0
Artificial rupture of membranes	21,202	18	1,527	19,630	27	0	0
Cesarean section	22,448	6	805	21,570	67	0	0
Other therapeutic procedures - Imaging	53,316	1,643	387	6,546	17,953	26,786	*
Computerized tomography (CT Scan)	1,264	126	11	166	374	587	0
Magnetic resonance imaging (MRI)	1,075	689	53	43	134	156	0
Other therapeutic procedures - Nuclear medicine	303	77	10	31	88	97	0
Other therapeutic procedures - Radiation therapy	190†	7	*	32	77	71	0
Extracorporeal assistance and performance	48,141	3,294	460	6,084	15,542	22,755	6
Hemodialysis	11,454	26	31	1,506	4,649	5,242	0

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; Readers should be advised of the inclusion of additional procedures in Table 4b-1 - Table 4b-4.

TABLE 4B-2
NUMBER OF PROCEDURES BY CATEGORY AND GENDER, ARIZONA, 2016

Procedures by category		Total	Male	Female	Patient's gender
					Unknown
All procedures		1,064,735	474,526	590,197	12
Operations on the central nervous system		16,342	7,763	8,578	*
Spinal tap		7,324	3,780	3,543	*
Operations on the peripheral nervous system		3,944	2,261	1,683	0
Operations on the heart and great vessels		56,586	32,238	24,348	0
Heart transplant		70	49	21	0
Coronary artery bypass graft		3,431	2,635	796	0
Cardiac catheterization		19,510	12,317	7,193	0
Insertion, replacement, removal, of pacemaker leads		4,501	2,549	1,952	0
Operations on the upper arteries		8,745	4,844	3,901	0
Operations on the lower arteries		6,796	4,150	2,646	0
Operations on the upper veins		12,022	6,196	5,826	0
Operations on the lower veins		9,767	6,149	3,617	*
Operations on the lymphatic and hemic systems		8,654	4,568	4,086	0
Operations on the eye		522	336	186	0
Operations on the ear, nose, sinus		1,035	651	384	0
Operations on the respiratory system		30,662	16,872	13,790	0
Bronchoscopy with or without biopsy		8,471	4,663	3,808	0
Operations on the mouth and throat		3,309	2,011	1,298	0
Operations on the gastrointestinal system		51,555	23,816	27,739	0
Implantation of gastric band		30†	*	22	0
Endoscopy of small intestine with or without biopsy		11,725	5,682	6,043	0
Endoscopy of large intestine with or without biopsy		8,553	4,019	4,534	0
Appendectomy, excluding incidental		4,107	2,092	2,015	0
Operations on the hepatobiliary system and pancreas		13,415	5,988	7,427	0
Cholecystectomy		8,014	3,225	4,789	0
Operations on the endocrine system		1,070	465	605	0
Operations on the skin and breast		20,229	6,540	13,688	*
Breast surgery		896	37	859	0

TABLE 4B-2 (continued)
NUMBER OF PROCEDURES BY CATEGORY AND GENDER, ARIZONA, 2016

Procedures by category	Total	Male	Female	Patient's gender Unknown
Operations on the subcutaneous tissue and fascia	21,544	12,161	9,383	0
Operations on the musculoskeletal system	86,117	34,331	51,785	*
Open reduction of fracture with or without internal fixation	7,432	3,057	4,375	0
Total hip replacement	9,171	3,976	5,195	0
Total knee replacement	16,061	6,704	9,357	0
Operations on the urinary system	16,061	8,267	7,794	0
Kidney transplant	255	145	110	0
Operations on the male reproductive system	8,141	8,128	13	0
Prostatectomy	1,944	1,944	0	0
Operations on the female reproductive system	16,270†	*	16,269	0
Oophorectomy and salpingo-oophorectomy	3,746	0	3,746	0
Hysterectomy	3,612	0	3,612	0
Obstetrical procedures	79,870†	*	79,872	0
Episiotomy with or without forceps or vacuum extraction	3,098	0	3,098	0
Artificial rupture of membranes	21,202	0	21,202	0
Cesarean section	22,448	0	22,448	0
Other therapeutic procedures - Imaging	53,316	29,960	23,356	0
Computerized tomography (CT Scan)	1,264	667	597	0
Magnetic resonance imaging (MRI)	1,075	543	532	0
Other therapeutic procedures - Nuclear medicine	303	156	147	0
Other therapeutic procedures - Radiation therapy	191	101	90	0
Extracorporeal assistance and performance	48,141	27,835	20,306	0
Hemodialysis	11,454	6,491	4,963	0

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; Readers should be advised of the inclusion of additional procedures in Table 4b-1 - Table 4b-4.

TABLE 4B-3
NUMBER OF PROCEDURES BY CATEGORY AND RACE/ETHNICITY, ARIZONA, 2016

Procedures by category	Total	White non-Hispanic	Hispanic or Latino	Black or African American	Race/ethnicity		Refused /Unknown
					American Indian or Alaska Native	Asian or Pacific Islander	
All procedures	1,064,735	702,395	230,199	50,715	48,134	22,994	10,298
Operations on the central nervous system	16,342	10,384	3,712	818	766	387	275
Spinal tap	7,324	4,239	1,999	475	338	169	104
Operations on the peripheral nervous system	3,944	2,985	579	152	134	52	42
Operations on the heart and great vessels	56,586	41,178	8,941	2,601	2,406	989	471
Heart transplant	70†	39	15	9	*	*	*
Coronary artery bypass graft	3,431	2,674	510	68	87	61	31
Cardiac catheterization	19,510	14,471	3,061	909	564	320	185
Insertion, replacement, removal, of pacemaker leads	4,501	3,615	518	131	141	71	25
Operations on the upper arteries	8,745	6,136	1,479	409	472	151	98
Operations on the lower arteries	6,796	4,948	1,090	293	291	116	58
Operations on the upper veins	12,022	7,652	2,420	810	812	205	123
Operations on the lower veins	9,767	6,533	1,943	453	529	198	111
Operations on the lymphatic and hemic systems	8,654	6,467	1,356	379	214	161	77
Operations on the eye	522	305	130	28	39	7	13
Operations on the ear, nose, sinus	1,035	610	253	48	86	17	21
Operations on the respiratory system	30,662	20,995	5,507	1,674	1,518	597	371
Bronchoscopy with or without biopsy	8,471	5,904	1,477	474	335	183	98
Operations on the mouth and throat	3,309	2,061	752	205	180	57	54
Operations on the gastrointestinal system	51,555	35,695	9,923	2,469	2,052	1,018	398
Implantation of gastric band	30†	21	*	0	0	0	0
Endoscopy of small intestine with or without biopsy	11,725	8,097	2,148	587	592	212	89
Endoscopy of large intestine with or without biopsy	8,553	6,230	1,392	390	349	143	49
Appendectomy, excluding incidental	4,107	2,416	1,274	135	159	91	32
Operations on the hepatobiliary system and pancreas	13,415	8,394	3,477	463	723	254	104
Cholecystectomy	8,014	4,805	2,318	243	460	125	63
Operations on the endocrine system	1,070	677	228	69	53	26	17
Operations on the skin and breast	20,229	11,828	5,727	926	1,103	448	197
Breast surgery	896	669	133	48	20	19	7

TABLE 4B-3 (continued)
NUMBER OF PROCEDURES BY CATEGORY AND RACE/ETHNICITY, ARIZONA, 2016

Procedures by category	Total	Race/ethnicity				
		White non-Hispanic	Hispanic or Latino	Black or African American	American Indian or Alaska Native	Asian or Pacific Islander
Operations on the subcutaneous tissue and fascia	21,544	14,692	3,956	996	1,412	328
Operations on the musculoskeletal system	86,117	63,593	14,030	2,897	2,838	1,977
Open reduction of fracture with or without internal fixation	7,432	5,558	1,191	206	333	83
Total hip replacement	9,171	8,127	515	257	104	108
Total knee replacement	16,061	13,085	1,821	420	269	347
Operations on the urinary system	16,061	11,271	3,143	665	570	314
Kidney transplant	255	113	76	31	15	16
Operations on the male reproductive system	8,141	5,901	1,355	413	112	295
Prostatectomy	1,944	1,556	245	89	14	24
Operations on the female reproductive system	16,270	7,939	6,009	1,021	636	516
Oophorectomy and salpingo-oophorectomy	3,746	2,177	1,024	271	109	119
Hysterectomy	3,612	2,025	1,028	305	95	114
Obstetrical procedures	79,873	37,708	30,391	4,615	3,186	3,146
Episiotomy with or without forceps or vacuum extraction	3,098	1,526	1,086	139	89	199
Artificial rupture of membranes	21,202	10,303	7,915	1,068	964	746
Cesarean section	22,448	10,771	8,060	1,479	882	1,025
Other therapeutic procedures - Imaging	53,316	37,536	9,603	2,443	2,404	817
Computerized tomography (CT Scan)	1,264	818	271	66	72	19
Magnetic resonance imaging (MRI)	1,075	542	344	78	63	23
Other therapeutic procedures - Nuclear medicine	300†	168	90	15	21	*
Other therapeutic procedures - Radiation therapy	190†	132	37	9	8	*
Extracorporeal assistance and performance	48,141	31,291	9,284	2,843	3,354	849
Hemodialysis	11,454	5,310	3,241	1,122	1,479	237
						65

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; Readers should be advised of the inclusion of additional procedures in Table 4b-1 - Table 4b-4.

TABLE 4B-4

NUMBER OF PROCEDURES BY CATEGORY AND EXPECTED SOURCE OF PAYMENT, ARIZONA, 2016

Procedures by category	Total	Self-pay	Private insurance (indemnity, HMO, PPO)	AHCCCS/ Medicaid	Medicare	Other
All procedures	1,064,735	22,901	288,565	291,830	321,862	139,577
Operations on the central nervous system	16,342	293	5,056	5,143	3,930	1,920
Spinal tap	7,324	140	2,036	2,975	1,488	685
Operations on the peripheral nervous system	3,944	70	1,042	750	1,376	706
Operations on the heart and great vessels	56,586	728	11,110	11,487	24,292	8,969
Heart transplant	70†	0	33	20	13	*
Coronary artery bypass graft	3,431	31	776	417	1,595	612
Cardiac catheterization	19,510	414	4,157	3,024	8,637	3,278
Insertion, replacement, removal, of pacemaker leads	4,501	29	561	344	2,638	929
Operations on the upper arteries	8,745	123	1,459	1,815	3,869	1,479
Operations on the lower arteries	6,796	66	1,150	1,146	3,147	1,287
Operations on the upper veins	12,022	166	2,010	3,129	4,768	1,949
Operations on the lower veins	9,767	142	2,171	2,436	3,556	1,462
Operations on the lymphatic and hemic systems	8,654	111	2,626	1,477	3,133	1,307
Operations on the eye	522	27	114	219	98	64
Operations on the ear, nose, sinus	1,035	28	314	333	239	121
Operations on the respiratory system	30,662	569	6,058	8,043	11,489	4,503
Bronchoscopy with or without biopsy	8,471	107	1,610	1,934	3,525	1,295
Operations on the mouth and throat	3,309	106	948	1,254	689	312
Operations on the gastrointestinal system	51,555	908	13,733	11,900	17,579	7,435
Implantation of gastric band	30†	0	8	*	10	*
Endoscopy of small intestine with or without biopsy	11,725	174	2,457	2,820	4,447	1,827
Endoscopy of large intestine with or without biopsy	8,553	115	1,846	1,640	3,555	1,397
Appendectomy, excluding incidental	4,107	187	1,643	1,388	562	327
Operations on the hepatobiliary system and pancreas	13,415	355	3,620	3,505	4,150	1,785
Cholecystectomy	8,014	247	2,285	2,377	2,113	992
Operations on the endocrine system	1,070	21	360	199	354	136
Operations on the skin and breast	20,229	678	6,428	8,285	3,146	1,692
Breast surgery	896	19	393	138	234	112

TABLE 4B-4 (continued)
NUMBER OF PROCEDURES BY CATEGORY AND EXPECTED SOURCE OF PAYMENT, ARIZONA, 2016

Procedures by category	Total	Self-pay	Private insurance (indemnity, HMO, PPO)	AHCCCS/ Medicaid	Medicare	Other
Operations on the subcutaneous tissue and fascia	21,544	429	4,455	5,985	7,627	3,048
Operations on the musculoskeletal system	86,117	1,367	25,781	16,521	29,229	13,219
Open reduction of fracture with or without internal fixation	7,432	137	1,531	1,488	2,935	1,341
Total hip replacement	9,171	58	2,622	616	4,229	1,646
Total knee replacement	16,061	73	4,381	1,175	7,338	3,094
Operations on the urinary system	16,061	360	4,124	3,389	6,142	2,046
Kidney transplant	255	0	101	10	138	6
Operations on the male reproductive system	8,141	157	4,840	1,480	982	682
Prostatectomy	1,944	12	682	109	820	321
Operations on the female reproductive system	16,270	466	6,738	7,524	857	685
Oophorectomy and salpingo-oophorectomy	3,746	147	1,731	1,155	466	247
Hysterectomy	3,612	141	1,707	1,119	413	232
Obstetrical procedures	79,873	2,291	34,259	40,530	324	2,469
Episiotomy with or without forceps or vacuum extraction	3,098	121	1,389	1,434	14	140
Artificial rupture of membranes	21,202	612	8,811	10,946	73	760
Cesarean section	22,448	578	10,313	10,783	121	653
Other therapeutic procedures - Imaging	53,316	1,011	11,039	11,019	21,460	8,787
Computerized tomography (CT Scan)	1,264	24	267	321	428	224
Magnetic resonance imaging (MRI)	1,075	12	296	557	112	98
Other therapeutic procedures - Nuclear medicine	303	7	87	94	77	38
Other therapeutic procedures - Radiation therapy	190†	*	64	39	66	21
Extracorporeal assistance and performance	48,141	738	8,139	11,187	20,516	7,561
Hemodialysis	11,454	64	1,322	2,043	6,078	1,947

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; Readers should be advised of the inclusion of additional procedures in Table 4b-1 - Table 4b-4.



4C.

CHARACTERISTICS OF EMERGENCY ROOM VISITS BY DISEASE CATEGORY, DIAGNOSIS GROUP, AND AGE GROUP

The data in this section are focused on ambulatory care visits to emergency rooms of non-Federal, short-stay hospitals. The emergency room (ER) and the inpatient hospitalization data are mutually exclusive. The ER data include only those who were not admitted as inpatients.

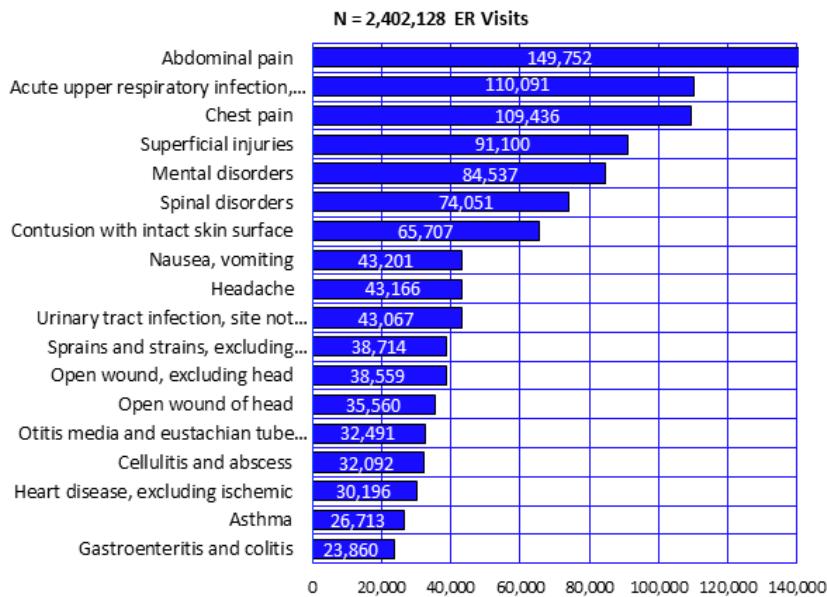
All emergency room visits are those of the residents of Arizona. Ambulatory care visits to hospital emergency rooms of out-of-state residents are not included in this report. In the current report, diagnostic groupings and code numbers are solely based on the International Classification of Diseases and Related Problems, 10th Revision, Clinical Modification ICD-10-CM. Prior to 2015, the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) was used to classify diseases and related health problems. On October 1, 2015, the US healthcare system transitioned from ICD-9-CM to ICD-10-CM, thus both ICD-9-CM and ICD-10-CM were used in the 2015 report of ER visits.

Please refer to "The Implementation of the International Classification of Disease, Tenth Revision," Introduction page ix, for further explanation of ICD-10-CM transition.

*Findings of the National Hospital Ambulatory Medical Care Survey, including data on trends in ER utilization, are available in bound reports of the National Center for Health Statistics and online at <http://www.cdc.gov/nchs/ahcd.htm>

4C. CHARACTERISTICS OF EMERGENCY ROOM VISITS BY DISEASE CATEGORY, DIAGNOSIS GROUP, AND AGE GROUP

Figure 4C-1
**Number of Emergency Room Visits by the Leading Diagnostic Groupings,
Arizona Residents, 2016**



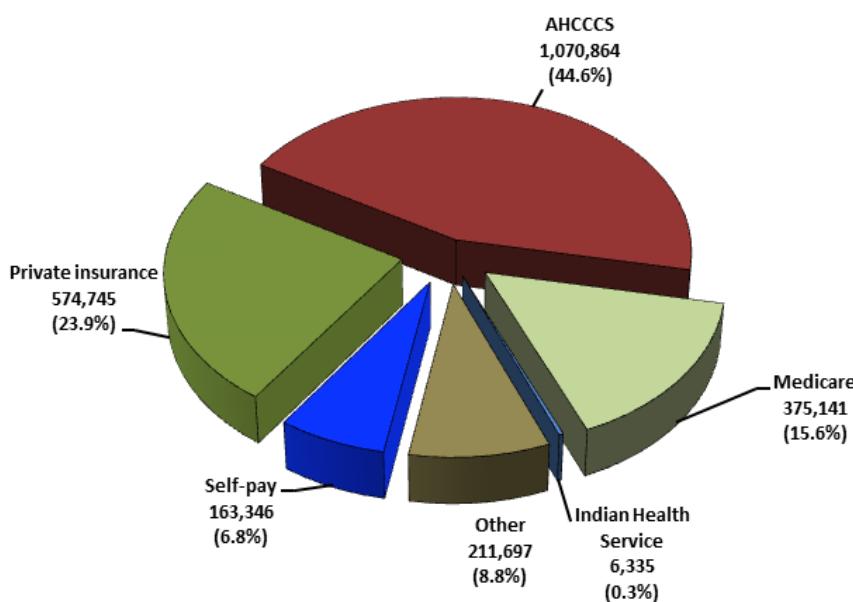
During 2016, more than 2.0 million visits were made by Arizona residents to hospital emergency rooms (ER), about 35.1 visits per 100 persons. The utilization rates vary by geographic region, with the Western United States having the lowest ER visit rate.

In 2016, *abdominal pain, acute upper respiratory infection, chest pain, superficial injuries, mental disorders, spinal disorders, and contusion with intact skin surface*, were the leading diagnostic categories, accounting for 28.4 percent of all visits (**Figure 4C-1, Table 4C-2**).

*www.cdc.gov/nchs/data/nhsr/nhsr007.pdf

Note: Based on first-listed diagnosis; See Table 4C-2.

Figure 4C-2
Emergency Room Visits by Payer, Arizona Residents, 2016



The Arizona Health Care Cost Containment System (AHCCCS, the State's Medicaid program) was the most frequently recorded expected source of payment, accounting for 44.6 percent of ER visits (**Figure 4C-3**). Private insurance was the second most frequent payer (23.9 percent of ER visits), followed by Medicare (15.6 percent), and self-pay patients (6.8 percent).

Notes: Number of visits per 100 persons; The actual number of ER visits for each group is provided below the bars.

**TABLE 4C-1 (CORRECTION)
NUMBER OF EMERGENCY ROOM VISITS^a BY FIRST-LISTED DIAGNOSIS AND AGE GROUP, ARIZONA, 2016**

Category of first-listed diagnosis	All Ages	Age group				
		Children <15 years	Adoles- cents 15-19 years	Young adults 20-44 years	Middle-aged adults 45-64 years	Elderly 65+ years
Total, all causes	2,402,128	439,595	140,705	885,997	530,681	405,104
Infectious and parasitic diseases	56,325	26,085	3,275	15,438	6,946	4,581
Neoplasms	5,247	201	86	1,402	1,801	1,757
Endocrine nutritional metabolic and immunity diseases	60,528	2,974	2,134	21,975	19,817	13,627
Diabetes mellitus	14,619	525	428	4,506	5,901	3,259
Mental disorders	84,537	2,743	6,313	44,790	23,697	6,986
Psychoses	54,750	991	3,759	29,040	16,727	4,226
Alcoholic psychoses	3,284	13	41	1,860	1,201	169
Drug psychoses	960†	*	78	677	173	30
Schizophrenic disorders	890†	*	20	507	325	32
Manic-depressive disorders	10,050	673	1,465	4,538	2,627	747
Neurotic disorders	70,780	2,563	5,604	37,277	20,243	5,087
Anxiety states	21,050	503	1,504	11,924	5,025	2,094
Depression	7,703	539	1,248	3,345	1,964	607
Drug dependence	4,060†	*	127	2,582	1,079	274
Nondependent abuse of drugs	12,039	113	913	7,811	2,878	324
Alcohol dependence	7,186	0	22	3,508	3,277	379
Diseases of the nervous system	73,291	3,486	3,423	33,823	21,553	11,004
Diseases of the eye and adnexa^b	22,195	6,269	1,106	7,127	4,727	2,966
Diseases of the ear and mastoid process^b	50,713	29,677	2,135	10,252	5,246	3,403
Diseases of the circulatory system	71,913	1,390	731	11,207	23,435	35,141
Diseases of the respiratory system	257,458	103,662	14,887	71,273	39,453	28,182
Acute bronchitis and bronchiolitis	32,100	11,460	1,086	9,430	6,169	3,954
Pneumonia	22,094	6,527	733	5,010	4,903	4,921
Chronic bronchitis	12,133	17	7	515	5,194	6,400
Asthma	26,713	10,149	1,846	9,077	4,256	1,385
Diseases of the digestive system	167,626	24,145	7,823	69,303	39,134	27,220
Diseases of the genitourinary system	144,585	11,958	10,168	67,592	29,617	25,250
Diseases of the skin and subcutaneous tissue	87,044	16,213	5,215	35,282	19,703	10,631
Diseases of the musculoskeletal system	176,987	9,459	7,020	68,704	55,924	35,880
Symptoms signs and ill-defined conditions	574,546	84,882	30,331	203,907	141,333	114,085
Injury and poisoning	466,396	103,973	36,590	157,135	91,456	77,226
Fractures, all sites	67,674	15,511	4,511	18,599	14,669	14,383
Sprains	51,427	8,127	5,866	21,385	10,798	5,251
Intracranial	11,894	2,860	1,726	3,614	1,826	1,867
Open wounds	89,660	23,758	6,129	29,563	15,150	15,053
Superficial injuries	91,100	20,672	6,662	29,546	17,747	16,472
Contusions with intact skin surface	65,707	12,715	4,911	21,536	13,177	13,367
Foreign bodies	10,127	4,378	367	2,489	1,645	1,248
Burns and corrosions	7,188	1,905	590	2,828	1,383	482
Trauma complications and unspecified injuries	30,354	10,591	2,224	7,017	4,225	6,296
Poisonings	13,790	2,013	1,761	5,545	3,008	1,462
Surgical and medical complications	13,131	942	333	3,010	3,860	0

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.

**TABLE 4C-2 (CORRECTION)
NUMBER OF EMERGENCY ROOM VISITS FOR THE LEADING DIAGNOSIS GROUPS^a AND AGE GROUP, ARIZONA, 2016**

Primary diagnosis group	All Ages	Age group				
		Children <15 years	Adolescents 15-19 years	Young adults 20-44 years	Middle-aged adults 45-64 years	Elderly 65+ years
Total, all causes	2,402,128	439,595	140,705	885,997	530,681	405,104
Abdominal pain	149,752	19,093	10,401	70,643	32,972	16,643
Acute upper respiratory infection, excluding pharyngitis	110,091	58,259	4,904	27,209	12,615	7,103
Chest pain	109,436	2,540	3,500	35,954	40,769	26,673
Superficial injuries	91,100	20,672	6,662	29,546	17,747	16,472
Mental disorders	84,537	2,743	6,313	44,790	23,697	6,986
Spinal disorders	74,051	1,687	2,485	31,816	23,831	14,232
Contusion with intact skin surface	65,707	12,715	4,911	21,536	13,177	13,367
Nausea, vomiting	43,201	15,667	2,517	14,410	6,293	4,314
Headache	43,166	3,337	3,197	21,257	10,947	4,428
Urinary tract infection, site not specified	43,067	6,103	2,634	14,548	7,927	11,855
Sprains and strains, excluding ankle and back	38,714	5,550	3,795	15,877	8,923	4,568
Open wound, excluding head	38,559	4,483	3,108	16,953	8,087	5,924
Open wound of head	35,560	12,913	2,541	8,158	4,807	7,140
Otitis media and eustachian tube disorders	32,491	25,347	1,128	4,239	1,332	445
Cellulitis and abscess	32,092	3,832	1,237	12,440	8,863	5,720
Heart disease, excluding ischemic	30,196	271	219	3,619	9,271	16,807
Asthma	26,713	10,149	1,846	9,077	4,256	1,385
Gastroenteritis and colitis	23,860	6,490	1,320	8,362	4,550	3,138
Chronic and unspecified bronchitis	23,025	674	505	4,976	8,246	8,624
Rheumatism, excluding back	22,283	1,046	808	8,815	7,167	4,447
Pneumonia	22,094	6,527	733	5,010	4,903	4,921
Acute pharyngitis	21,704	7,522	2,786	8,728	1,892	776
Fever	20,176	15,807	559	1,821	1,008	981
Migraine	19,818	846	1,431	11,562	5,258	721
Sprains and strains of neck and back	4,563	233	417	2,375	1,104	434
Unspecified viral and chlamydial infection	280	81	39	115	27	18

Notes: * Cell suppressed due to non-zero count less than 6; ^a Based on first-listed diagnosis.



4D.

INJURY-RELATED INPATIENT DISCHARGES AND EMERGENCY ROOM VISITS BY INTENT AND MECHANISM OF INJURY

Prior to 2009, injury hospitalizations and injury-related emergency room visits were defined here through the range of ICD-9-CM codes 800-999 used as the first-listed diagnosis. In addition, the supplementary classification of external causes of injury and poisoning (ICD-9-CM codes E800-E999) is used to permit the classification of environmental events, circumstances, and conditions as the cause of injury, poisoning, and other adverse effects. The "E" code classification is used to describe both the *mechanism* of external cause of injury (e.g., motor vehicle traffic, fall, poisoning), but also the manner or *intent* of the injury (e.g., suicide, assault, accident).

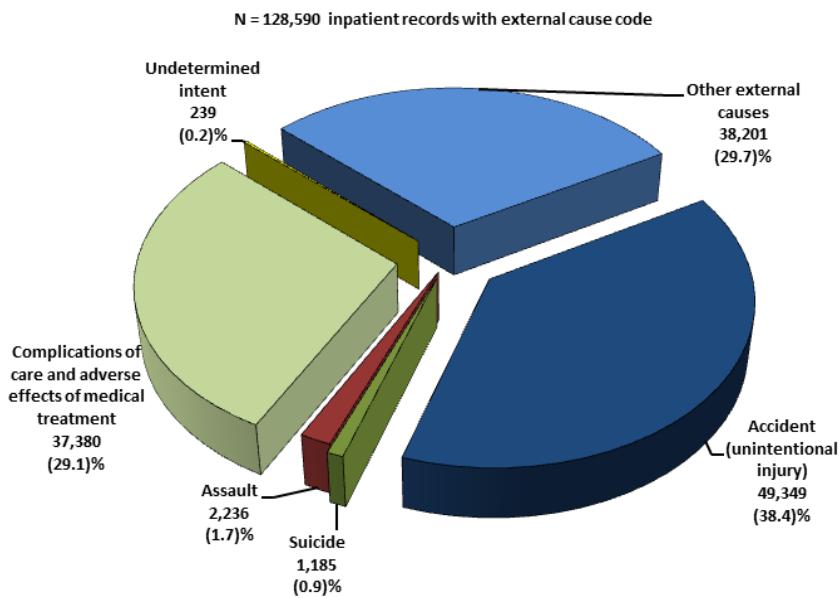
In 2009, the reporting requirements for hospitals were revised and the non-injury first-listed diagnoses may also have an external cause of injury code (E-code). Beginning with the 2009 edition of this report, the reader is advised that the number of suicides, accidents, etc. shown in **Table 4D-1** and **Table 4D-2** no longer reflect only those where the principal diagnosis was an injury. To continue to do so would only mean undercounting the external causes of injury. As an example, in 2009 forward, among the suicide attempt-related ER visits, *injury and poisoning, mental disorders, chronic disease, infectious disease, or ill-defined conditions* were identified as the first-listed diagnosis.

In 2015, injury hospitalizations and injury-related emergency room visits data were recorded and classified using ICD-9-CM in the first three quarters of the year and ICD-10-CM in the last quarter (Oct-Dec). Under ICD-10-CM, external causes of morbidity capture how and where the injury or health condition occurred, the intent or mechanism (accidental or intentional), the activity of the patient at the time of the event and the patient's status (for example civilian, student). For further explanation of ICD-10-CM transition, please refer to "The Implementation of the International Classification of Disease, Tenth Revision," Introduction page ix.

Beginning 2016, injury hospitalizations and injury-related emergency room visits are coded exclusively based on ICD-10-CM, external causes of morbidity. Readers are advised to avoid comparison of current year data to years prior 2015 due to a changeover in coding from ICD-9-CM and ICD-10-CM.

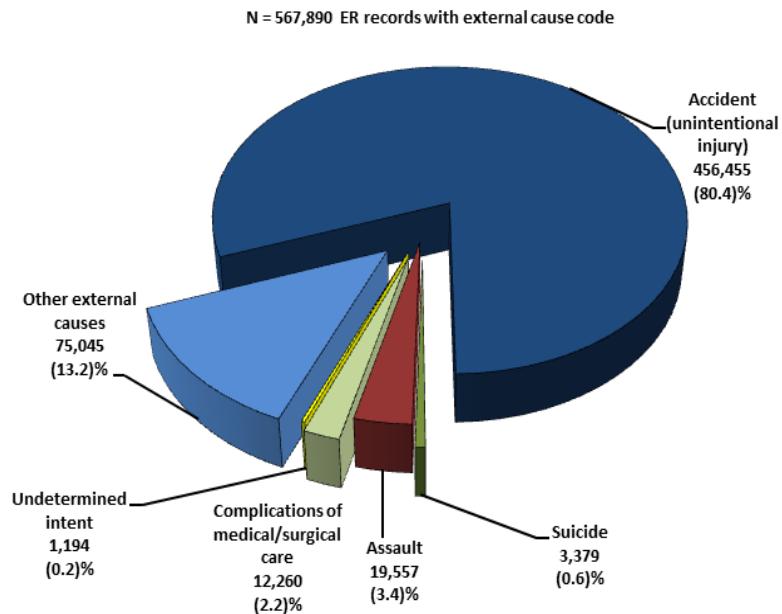
4D. INJURY-RELATED INPATIENT DISCHARGES AND EMERGENCY ROOM VISITS BY INTENT AND MECHANISM OF INJURY

Figure 4D-1
**Percent Distribution of Inpatient Discharges by Intent of Injury,
 Arizona Residents, 2016**



In 2016, injury was indicated as the principal diagnosis on 60,192 inpatient discharge records (**Table 4A-1**). However external causes of morbidity (ICD-10) were provided on a substantially greater number of inpatient discharges (128,590; **Figure 4D-1, Table 4D-1**). *Unintentional injuries or accidents* accounted for the absolute majority of inpatient hospitalizations by the intent of injury (38.4 percent) and *complications of medical care and adverse effects of medical treatment* accounted for 29.1 percent of all inpatient discharges by intent of injury. *Assault* accounted for 2,236 inpatient hospitalizations (1.7 percent of all hospital discharges with known intent of injury). *Self-inflicted injuries in suicide* resulted in 1,185 inpatient hospitalizations (0.9 percent).

Figure 4D-2
Percent Distribution of Emergency Room Visits by Intent of Injury, Arizona Residents, 2016



In 2016, there were 567,890 emergency room visits with known intent of injury among Arizona residents. *Unintentional injuries or accidents* accounted for nine out of ten (456,455 or 80.4 percent) of all injury-related emergency room visits (**Figure 4D-3, Table 4D-2**). The external cause of injury was classified as *assault* for 19,557 emergency room visits: these were the injuries purposely inflicted by another person. *Complications of medical/surgical care* accounted for a greater number of emergency room visits than *Injuries due to suicide* (2.2 percent vs. 0.6 percent, respectively; **Figure 4D-3, Table 4D-2**).

4D. INJURY-RELATED INPATIENT DISCHARGES AND EMERGENCY ROOM VISITS BY INTENT AND MECHANISM OF INJURY

Beginning in 2008, there was a substantial increase in the number of suicide-related inpatient discharges and emergency room visits (**Figure 4D-3** and **Table 4D-2**). It was only partly due to the change in the reporting requirements for hospitals. In 2015 *injury or poisoning* was the principal diagnosis on 3,264 inpatient discharge records, which also included the external cause codes for suicide. In 2016, there were 1,185 suicides-related inpatient discharges based on external causes of morbidity codes. *Mental disorders* were identified as the principal diagnosis on 662 suicide-related records. *Injury or poisoning* was the principal diagnosis on 445 inpatient discharge records where an external cause of suicide was reported. For the additional 78 inpatient discharges mentioning suicide attempt, the principal diagnosis was classified as *chronic disease*, *infectious disease*, or *ill-defined conditions*.

Figure 4D-3
Suicide-related Inpatient Discharges by Year,
Arizona Residents, 2006–2016

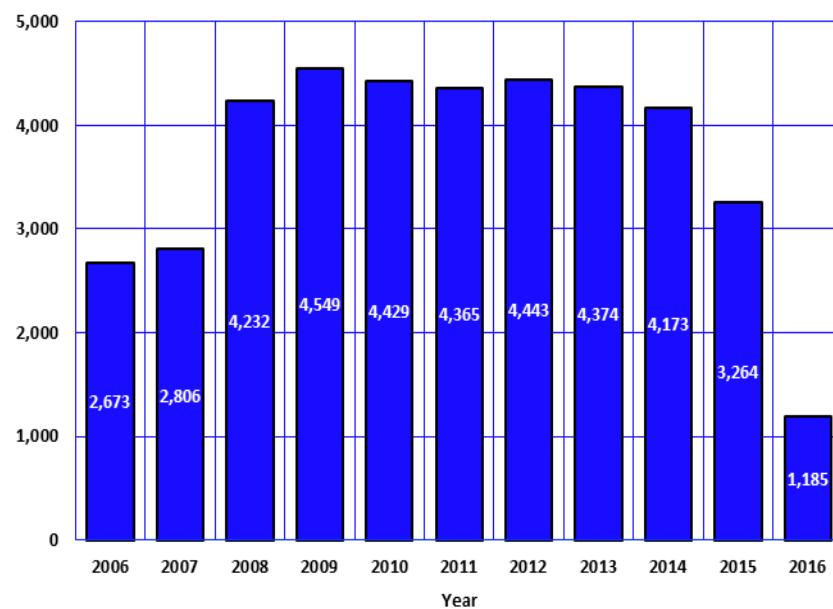


Figure 4D-4
Suicide-related Emergency Room Visits by Year,
Arizona Residents, 2006–2016

Injury or poisoning was the principal diagnosis on 2,351 ER discharge records, which also included the external cause codes for suicide. *Mental disorders* were identified as the principal diagnosis on 544 suicide-related records. For the additional 484 ER discharges mentioning suicide attempt, the principal diagnosis was classified as *chronic disease*, *infectious disease*, or *ill-defined conditions*.

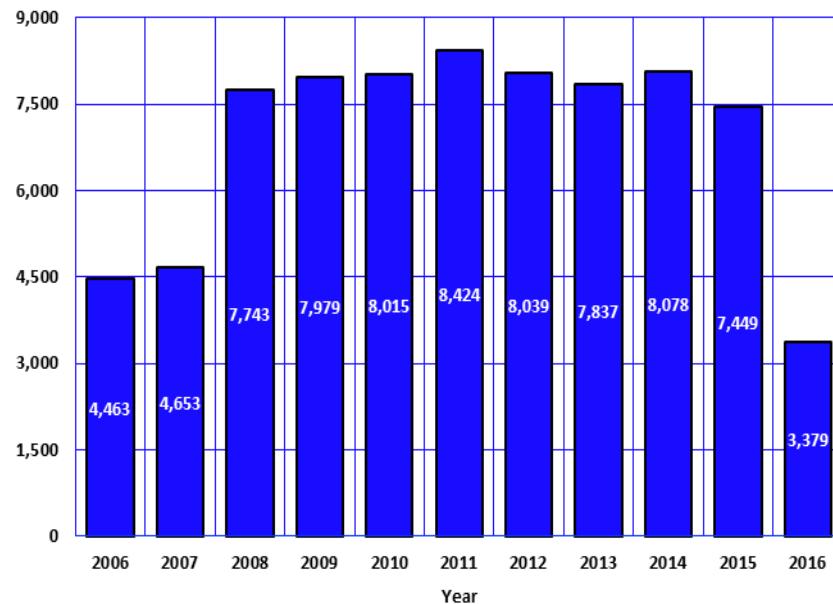


TABLE 4D-1
INPATIENT DISCHARGES BY INTENT AND MECHANISM FOR SELECTED EXTERNAL CAUSES BY GENDER, AGE GROUP, AND RACE/ETHNICITY, ARIZONA, 2016

		Gender		Age group		Race/ethnicity										
		Male	Female	Unknown	Unknown	White non-Hispanic	Hispanic or Latino	American Indian or Alaskan Native	Black or African American	Pacific Islander	Asian or Alaskan Native	Refused/Unknown				
UNINTENTIONAL INJURY OR ACCIDENT^a	Total ^f	24,357	24,989	*	1,579	7,725	11,319	27,650	*	37,280	7,323	1,511	2,147	586	502	
Fall	30,741	12,835	17,906	0	524	167	1,865	5,655	22,528	*	25,045	3,468	611	999	368	250
Transport accidents	8,445	5,464	2,979	*	356	590	3,182	2,582	1,734	*	5,474	1,820	388	526	98	139
Natural and environmental factors	5,181	2,907	2,273	*	237	109	1,017	1,571	2,247	0	3,685	870	223	282	63	58
Exposure to excessive natural heat	370†	291	79	0	*	9	110	144	105	0	226	77	34	22	*	6
Fire and flames	360	219	141	0	52	14	110	103	81	0	198	91	23	38	6	*
Machinery	220†	201	15	0	*	*	95	80	34	0	112	86	6	6	*	*
SUICIDE^b	1,185	654	531	0	60	180	648	229	68	0	751	236	69	99	10	20
ASSAULT^c	2,236	1,812	424	0	69	145	1,379	536	104	*	909	614	256	409	16	32
INJURIES OF UNDETERMINED INTENT^d	240†	155	84	0	43	11	97	61	27	0	124	66	25	17	*	*
COMPLICATIONS OF CARE AND ADVERSE EFFECTS OF MEDICAL TREATMENT^e	37,380	19,660	17,720	0	892	318	5,355	12,946	17,869	0	26,955	6,199	1,763	1,583	644	236
Misadventures to patients	470†	224	242	0	*	*	71	123	264	0	332	81	21	17	9	6
Surgical and medical procedures as the cause of adverse reaction	33,971	17,943	16,028	0	838	296	4,950	11,862	16,025	0	24,394	5,685	1,617	1,466	591	218

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.

^aFirst-listed external cause codes V00-X58.

^bFirst-listed external cause codes X71-X83.

^cFirst-listed external cause codes X92-Y08.

^dFirst-listed external cause codes Y21-Y33.

^eFirst-listed external cause codes Y62-Y84.

^fThe total may include records with unknown gender and/or age group.

TABLE 4D-2
EMERGENCY ROOM VISITS BY INTENT AND MECHANISM FOR SELECTED EXTERNAL CAUSES BY GENDER, AGE GROUP, AND RACE/ETHNICITY, ARIZONA, 2016

	Total ^f	Gender	Age group	Race/ethnicity							
				Male	Female	Unknown	White non-Hispanic or unknown	Hispanic or Latino	African or American Indian or Alaskan Native	Asian or Pacific Islander	Refused/Unknown
UNINTENTIONAL INJURY OR ACCIDENT^a	456,455	228,732	227,709	14	100,127	33,839	150,067	90,798	81,614	10	273,240
Fall	167,283	73,874	93,406	*	42,088	6,784	31,895	33,327	53,189	0	109,644
Transport accidents	76,096	38,299	37,791	6	9,360	8,849	36,296	15,676	5,911	*	41,815
Struck against or struck accidentally by objects or persons	60,145	34,497	25,647	*	19,251	6,761	19,234	8,897	6,001	*	34,154
Overexertion	6,903	3,467	3,436	0	965	762	2,987	1,522	667	0	4,021
Cutting or piercing instruments or objects	23,872	15,330	8,541	*	3,503	1,782	10,510	5,331	2,746	0	14,669
Natural and environmental factors	84,081	42,461	41,620	0	14,079	6,030	34,076	18,793	11,101	*	48,102
Exposure to excessive natural heat	1,752	1,178	574	0	92	123	829	456	251	*	1,037
Fire and flames	2,481	1,445	1,036	0	499	193	1,031	545	213	0	1,404
Machinery	2,312	1,958	353	*	97	119	1,001	752	343	0	1,426
Pedal cycle, nontraffic and other	6,976	5,098	1,876	*	2,082	585	2,182	1,627	500	0	4,626
Motor vehicle, nontraffic	1,347	893	454	0	245	166	547	282	107	0	894
Firearm missile	952	834	117	*	118	134	504	134	59	*	470
Drowning/submersion	1501	79	70	0	131	*	7	7	*	0	90
SUICIDE^b	3,379	1,579	1,798	*	414	770	1,733	377	85	0	2,158
ASSAULT^c	19,557	11,809	7,747	*	880	2,032	12,454	3,751	435	*	8,688
INJURIES OF UNDETERMINED INTENT^d	1,194	689	505	0	223	91	547	197	135	*	661
COMPLICATIONS OF CARE AND ADVERSE EFFECTS OF MEDICAL TREATMENT^e	12,260	6,455	5,805	0	711	264	2,972	3,658	4,655	0	8,175
Misadventures to patients	1501†	64	84	0	6	*	48	54	37	0	95
Surgical and medical procedures as the cause of adverse reaction	11,059	5,827	5,232	0	687	248	2,696	3,279	4,149	0	7,355

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.

^a First-listed external cause codes V00-X58.

^b First-listed external cause codes X71-X83.

^c First-listed external cause codes X92-Y08.

^d First-listed external cause codes Y21-Y33.

^e First-listed external cause codes Y62-Y84.

^f The total may include records with unknown gender and/or age group.