

CHAPTER 4

HOSPITAL INPATIENT DISCHARGES AND EMERGENCY ROOM VISITS: 2019 STATUS

- 4A. INPATIENT DISCHARGES FROM SHORT-STAY HOSPITALS BY FIRST-LISTED DIAGNOSIS AND PATIENT CHARACTERISTICS**
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- 4D. INJURY-RELATED INPATIENT DISCHARGES AND EMERGENCY ROOM VISITS BY INTENT AND MECHANISM OF INJURY**



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.

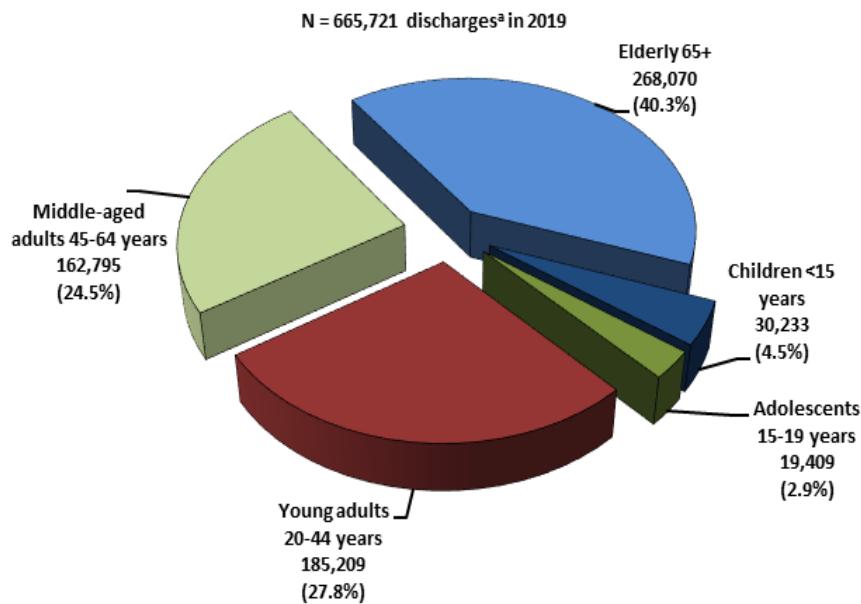
Beginning in 2016, diagnostic groupings and code numbers are based solely on the International Classification of Diseases and Related Problems, 10th Revision, Clinical Modification (ICD-10-CM). ICD-10-CM incorporates greater details about medical diagnosis and represents a substantial increase in number 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 system caution should be exercised in comparing current inpatient data to that of years prior 2016. For further explanation of this new coding system, please refer to "The Implementation of the International Classification of Disease, Tenth Revision," Introduction page ix.

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>

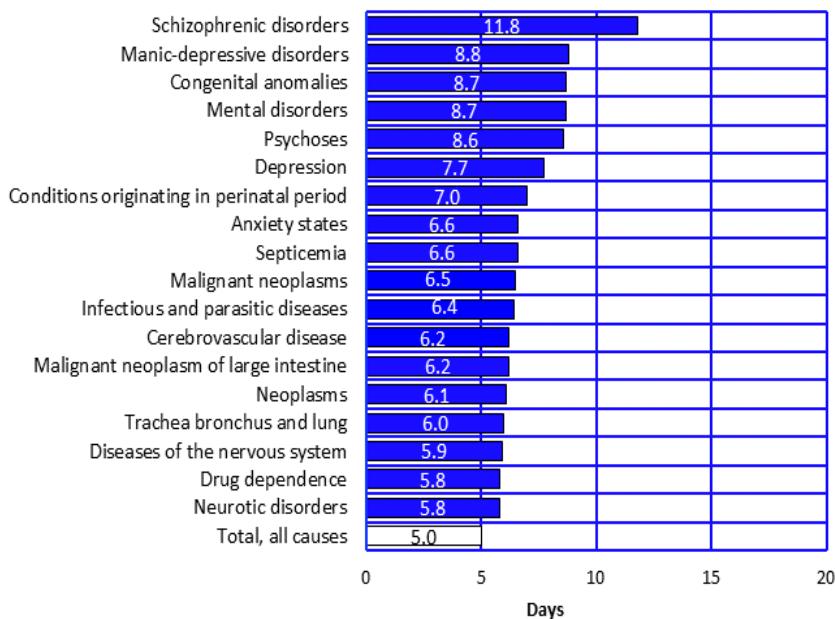
4A. INPATIENT DISCHARGES FROM SHORT-STAY HOSPITALS BY FIRST-LISTED DIAGNOSIS AND PATIENT CHARACTERISTICS

Figure 4A-1
Hospital Inpatient Discharges^a by Age Group, Arizona Residents, 2019



Note: ^a Excluding newborn infants.

Figure 4A-2
Average Length of Hospital Stay for Discharges with Selected First-listed Diagnosis, Arizona Residents, 2019



In 2019, there were 665,721 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 40.3 percent of hospital discharges (**Figure 4A-1**), followed by young adults (20-44 years old) who comprised 27.8 percent of discharges, and middle-aged adults (45-64 years old) with 24.5 percent of all inpatient discharges.

Diseases of the circulatory system were the most common diagnoses (14.4 percent of all discharges), followed by *mental disorders* (10.4 percent), and *injury and poisoning* diagnoses (10.0 percent; percentages based on data in **Table 4A-1**).

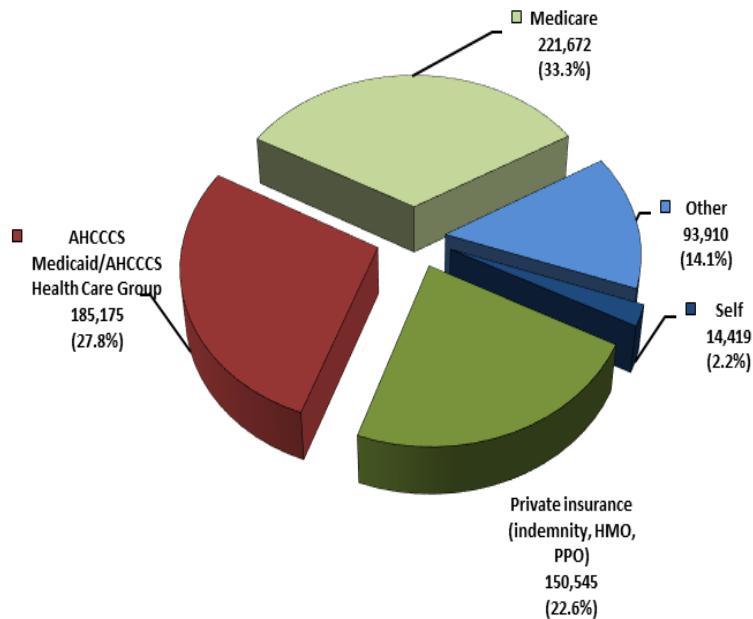
Based on the data from the National Hospital Discharge Survey, the longest continuously running nationally representative survey of hospital utilization, the length of stay for inpatients has changed dramatically from 1970 through 2010. In 1970, the average length of stay was 7.8 days, with one-third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

In 2019, the average length of hospital stay for Arizona inpatients was 5.0 days (**Figure 4A-2, Table 4A-5**). The percent of patients hospitalized for three days or less was 54.01 percent, with 17.2 percent of inpatients staying eight days or more.

The top five conditions with the longest length of inpatient stay was: *Schizophrenic disorders* (11.8 days), *psychoses* (8.6 days), *manic-depressive disorders* (8.8 days), *congenital anomalies* (8.7 days), and *depression* (7.7 days).

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

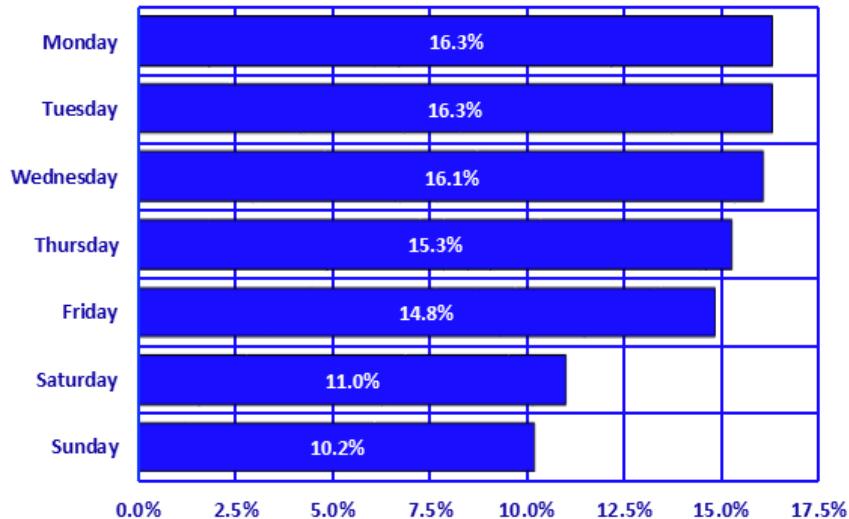
Figure 4A-3
Hospital Inpatient Discharges by Payer, Arizona Residents, 2019



Medicare paid for 33.3 percent of all discharges (**Figure 4A-3**) and 70.0 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 27.8 percent of inpatient discharges. Private insurance accounted for 22.6 percent of hospital inpatient discharges.

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

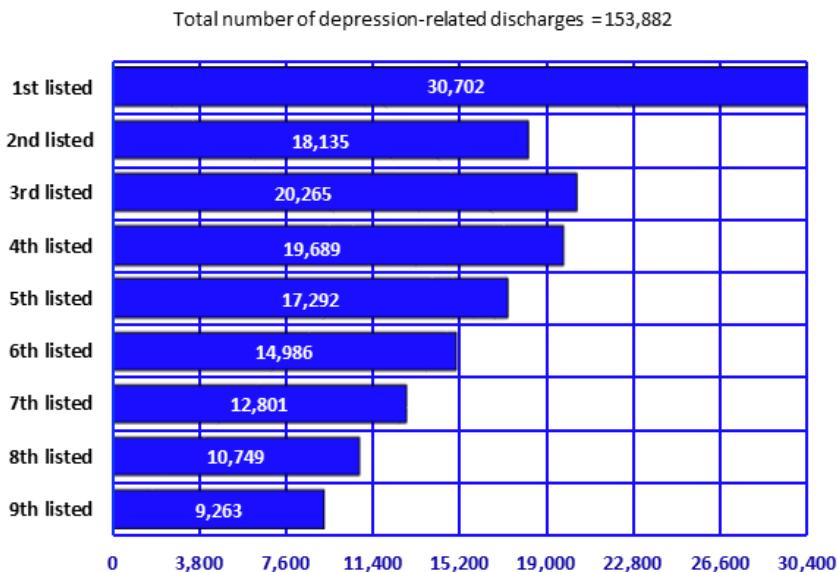
Figure 4A-4
Percent of Hospital Inpatient Admissions by Day of the Week, Arizona Residents, 2019



The rhythm of hospital births by day of the week (see **Figure 1B-14**) reveals that the daily average of resident live births in 2019 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, 2019

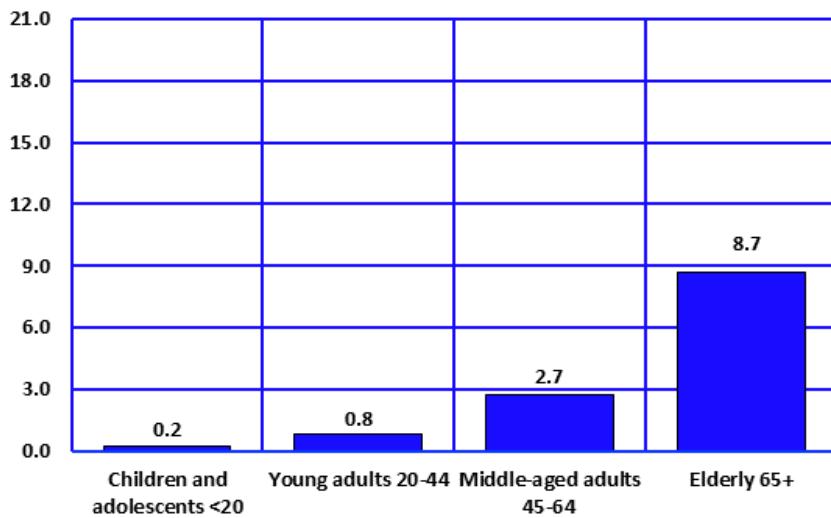


In 2019, depression accounted for 24,369 inpatient discharges and 6,333 emergency room visits as the first-listed diagnosis (for a total of 30,702 hospital encounters; **Figure 4A-5, Table 4A-1, Table 7C-1**).

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 153,882 inpatient discharges and emergency room records (**Figure 4A-5**). When hospital data are 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, 2019



In 2019, 1,791 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 hospitalization rates associated with enterocolitis due to *Clostridium difficile* tend to increase with age. The rate for the elderly 65 years or older (8.65/10,000) was the highest of all age groups (**Figure 4A-6**).

In 2019, 112 Arizonans died from enterocolitis due to *Clostridium difficile*. Elderly 65 years or older accounted for 82.1 percent of these deaths (**Table 2C-27**).

Note: Number of visits per 10,000 population

TABLE 4A-1
NUMBER OF DISCHARGES^a BY FIRST-LISTED DIAGNOSIS AND AGE GROUP, ARIZONA, 2019

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	665,721	30,233	19,409	185,209	162,795	268,070
Infectious and parasitic diseases	56,845	1,145	618	10,369	16,991	27,722
Septicemia	49,636	396	432	8,763	15,079	24,966
Enterocolitis due to <i>Clostridium difficile</i>	1,791	23	11	198	465	1,094
Neoplasms	22,250	415	168	2,497	7,613	11,557
Malignant neoplasms	18,302	339	120	1,534	6,122	10,187
Large intestine	2,444	0	0	170	825	1,449
Prostate	810†	0	0	*	405	401
Trachea bronchus and lung	2,140†	*	*	58	573	1,496
Breast	910†	0	*	190	420	296
Benign neoplasms	3,146	49	34	848	1,263	952
Endocrine nutritional metabolic and immunity diseases	29,216	1,377	646	7,252	10,233	9,708
Diabetes mellitus	14,053	434	417	3,786	5,342	4,074
Volume depletion	1,603	442	38	122	259	742
Morbid obesity	3,699	0	18	1,789	1,597	295
Diseases of the blood and blood forming organs	5,902	618	201	1,202	1,321	2,560
Mental disorders	68,937	4,494	7,634	34,475	17,651	4,683
Psychoses	42,439	2,008	4,005	21,530	11,754	3,142
Alcoholic psychoses	5,620†	*	10	2,585	2,518	508
Drug psychoses	780†	*	58	504	175	35
Schizophrenic disorders	9,056	20	227	5,551	2,942	316
Manic-depressive disorders	39,491	3,871	6,146	18,669	8,600	2,205
Neurotic disorders	15,704	819	1,292	7,049	5,189	1,355
Anxiety states	807	66	136	325	195	85
Depression	24,369	2,127	3,788	11,722	5,243	1,489
Drug dependence	3,019	7	258	2,149	481	124
Nondependent abuse of drugs	330	0	19	165	119	27
Alcohol dependence	7,760†	*	13	3,591	3,447	707
Diseases of the nervous system	17,034	1,318	482	3,260	4,319	7,655
Diseases of the eye and adnexa	576	79	15	144	150	188
Diseases of the ear and mastoid process	661	130	19	93	143	276
Diseases of the circulatory system	95,959	270	167	5,685	25,874	63,963
Heart disease	63,944	153	77	3,376	16,934	43,404
Acute myocardial infarction	12,590†	*	*	568	4,283	7,730
Coronary arteriosclerosis	5,400†	*	*	94	1,728	3,578

TABLE 4A-1 (continued)
NUMBER OF DISCHARGES^a BY FIRST-LISTED DIAGNOSIS AND AGE GROUP, ARIZONA, 2019

Category of first-listed diagnosis	Total	Children <15 years	Adolescents 15-19 years	Young adults 20-44 years	Middle-aged adults 45-64 years	Age group	
						Elderly 65+ years	Unknown
Other ischemic heart disease	440†	*	0	29	191	215	0
Cardiac dysrhythmias	13,516	61	17	586	2,944	9,908	0
Cardiac arrest	290†	7	*	39	101	143	0
Congestive heart failure	2,200†	27	*	263	680	1,228	0
Cerebrovascular diseases	21,141	53	33	957	5,444	14,654	0
Diseases of the respiratory system	50,214	8,665	626	4,419	11,554	24,949	*
Acute bronchitis and bronchiolitis	3,130†	2,409	*	78	176	463	0
Pneumonia	13,556	1,198	138	1,106	3,077	8,037	0
Chronic bronchitis	6,440†	*	*	117	2,187	4,132	0
Asthma	2,951	1,056	94	790	597	414	0
Diseases of the digestive system	60,018	1,846	877	11,893	19,202	26,200	0
Appendicitis	2,643	652	204	679	633	475	0
Noninfectious enteritis and colitis	5,022	167	150	1,158	1,290	2,257	0
Diverticula of intestine	5,080†	*	*	619	1,636	2,820	0
Cholelithiasis	3,449	17	50	976	1,063	1,343	0
Diseases of the genitourinary system	27,125	943	334	4,201	7,193	14,453	*
Calculus of kidney and ureter	447	6	10	104	166	161	0
Diseases of the skin and subcutaneous tissue	13,294	742	186	3,531	4,362	4,472	*
Cellulitis and abscess	8,522	360	84	1,977	2,787	3,313	*
Diseases of the musculoskeletal system	44,832	614	369	3,125	13,783	26,941	0
Osteoarthritis and allied disorders	22,440†	*	*	299	6,753	15,381	0
Invertebral disc disorders	2,810†	*	7	494	1,086	1,218	0
Congenital anomalies	2,120	1,240	156	255	288	181	0
Conditions originating in perinatal period	2,198	2,198	0	0	0	0	0
Symptoms signs and ill-defined conditions	12,630	1,112	225	1,695	3,212	6,386	0
Injury and poisoning	66,500	2,208	1,906	12,344	16,886	33,154	*
Fractures, all sites	21,425	464	415	2,914	3,966	13,666	0
Fracture of neck of femur	7,338	19	11	130	766	6,412	0
Poisonings	5,169	303	579	2,063	1,446	778	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-2
NUMBER OF DISCHARGES^a BY FIRST-LISTED DIAGNOSIS AND GENDER, ARIZONA, 2019

Category of first-listed diagnosis	Total	Patient's gender		
		Male	Female	Unknown
All categories	665,721	297,970	367,727	24
Infectious and parasitic diseases	56,845	28,698	28,145	*
Septicemia	49,636	25,369	24,265	*
Enterocolitis due to <i>Clostridium difficile</i>	1,791	617	1,174	0
Neoplasms	22,250	10,798	11,452	0
Malignant neoplasms	18,302	9,611	8,691	0
Large intestine	2,444	1,254	1,190	0
Prostate	810	810	0	0
Trachea bronchus and lung	2,136	971	1,165	0
Breast	910	42	868	0
Benign neoplasms	3,146	814	2,332	0
Endocrine nutritional metabolic and immunity diseases	29,216	14,027	15,189	0
Diabetes mellitus	14,053	8,334	5,719	0
Volume depletion	1,603	720	883	0
Morbid obesity	3,699	741	2,958	0
Diseases of the blood and blood forming organs	5,902	2,712	3,190	0
Mental disorders	68,937	38,214	30,717	6
Psychoses	42,439	24,376	18,060	*
Alcoholic psychoses	5,624	4,092	1,532	0
Drug psychoses	776	536	240	0
Schizophrenic disorders	9,056	5,750	3,306	0
Manic-depressive disorders	39,491	19,322	20,164	*
Neurotic disorders	15,704	9,594	6,109	*
Anxiety states	807	349	458	0
Depression	24,369	11,963	12,402	*
Drug dependence	3,019	1,996	1,023	0
Nondependent abuse of drugs	330	230	100	0
Alcohol dependence	7,761	5,574	2,187	0
Diseases of the nervous system	17,034	8,515	8,519	0
Diseases of the eye and adnexa	576	271	305	0
Diseases of the ear and mastoid process	661	299	362	0
Diseases of the circulatory system	95,959	54,436	41,520	*
Heart disease	63,944	37,316	26,625	*
Acute myocardial infarction	12,587	8,063	4,524	0
Coronary arteriosclerosis	5,403	3,821	1,581	*

TABLE 4A-2 (continued)
NUMBER OF DISCHARGES^a BY FIRST-LISTED DIAGNOSIS AND GENDER, ARIZONA, 2019

Category of first-listed diagnosis	Total	Patient's gender		
		Male	Female	Unknown
Other ischemic heart disease	436	235	201	0
Cardiac dysrhythmias	13,516	7,411	6,105	0
Cardiac arrest	292	168	124	0
Congestive heart failure	2,202	1,300	902	0
Cerebrovascular diseases	21,141	11,000	10,141	0
Diseases of the respiratory system	50,214	24,474	25,739	*
Acute bronchitis and bronchiolitis	3,129	1,685	1,444	0
Pneumonia	13,556	6,575	6,981	0
Chronic bronchitis	6,442	2,714	3,728	0
Asthma	2,951	1,182	1,769	0
Diseases of the digestive system	60,018	28,504	31,514	0
Appendicitis	2,643	1,439	1,204	0
Noninfectious enteritis and colitis	5,022	1,960	3,062	0
Diverticula of intestine	5,080	2,206	2,874	0
Cholelithiasis	3,449	1,450	1,999	0
Diseases of the genitourinary system	27,125	12,429	14,695	*
Calculus of kidney and ureter	447	200	247	0
Diseases of the skin and subcutaneous tissue	13,294	7,369	5,924	*
Cellulitis and abscess	8,522	4,662	3,859	*
Diseases of the musculoskeletal system	44,832	20,680	24,150	*
Osteoarthritis and allied disorders	22,435	9,516	12,918	*
Invertebral disc disorders	2,806	1,428	1,378	0
Congenital anomalies	2,120	1,192	928	0
Conditions originating in perinatal period	2,198	1,249	949	0
Symptoms signs and ill-defined conditions	12,630	6,218	6,411	*
Injury and poisoning	66,500	34,114	32,379	7
Fractures, all sites	21,425	9,298	12,124	*
Fracture of neck of femur	7,338	2,629	4,709	0
Poisonings	5,169	2,472	2,696	*

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

NUMBER OF DISCHARGES^a BY FIRST-LISTED DIAGNOSIS AND RACE/ETHNICITY, ARIZONA, 2019

Category of first-listed diagnosis	Total	Race/ethnicity				
		White non-Hispanic	Hispanic or Latino	Black or African American	American Indian or Alaska Native	Asian or Pacific Islander
Total	665,721	451,520	128,341	38,111	27,649	13,604
Infectious and parasitic diseases	56,845	38,585	11,061	2,778	2,831	1,132
Septicemia	49,636	33,784	9,621	2,339	2,532	966
Enterocolitis due to <i>Clostridium difficile</i>	1,791	1,437	212	56	52	25
Neoplasms	22,250	16,059	3,695	1,127	519	561
Malignant neoplasms	18,302	13,538	2,900	778	414	440
Large intestine	2,444	1,849	347	88	56	67
Prostate	810†	607	122	44	*	21
Trachea bronchus and lung	2,136	1,756	184	109	23	43
Breast	910	671	138	47	22	20
Benign neoplasms	3,146	1,960	657	305	80	99
Endocrine nutritional metabolic and immunity diseases	29,216	17,771	6,738	2,174	1,821	498
Diabetes mellitus	14,053	7,986	3,470	1,110	1,164	207
Volume depletion	1,603	1,152	278	84	60	21
Morbid obesity	3,699	2,180	1,025	376	48	44
Diseases of the blood and blood forming organs	5,902	3,474	1,076	966	197	141
Mental disorders	68,937	45,954	12,119	5,715	3,579	1,163
Psychoses	42,439	28,338	7,374	3,514	2,251	733
Alcoholic psychoses	5,624	4,082	709	188	545	69
Drug psychoses	776	465	176	80	45	6
Schizophrenic disorders	9,056	5,479	1,718	1,316	297	199
Manic-depressive disorders	39,491	26,948	6,764	3,025	1,853	685
Neurotic disorders	15,704	10,870	2,397	763	1,354	201
Anxiety states	807	574	158	48	11	9
Depression	24,369	16,468	4,289	1,659	1,399	415
Drug dependence	3,019	1,968	777	145	83	36
Nondependent abuse of drugs	330†	237	49	12	28	*
Alcohol dependence	7,761	5,577	965	246	831	97
Diseases of the nervous system	17,034	12,335	2,542	1,023	663	281
Diseases of the eye and adnexa	576	357	146	27	19	11
Diseases of the ear and mastoid process	661	434	139	17	37	22
Diseases of the circulatory system	95,959	72,775	12,658	5,142	2,464	1,784
Heart disease	63,944	49,245	8,141	3,213	1,572	1,144
Acute myocardial infarction	12,587	9,476	1,837	481	321	280
Coronary arteriosclerosis	5,403	4,327	658	138	88	133

TABLE 4A-3 (continued)

NUMBER OF DISCHARGES^a BY FIRST-LISTED DIAGNOSIS AND RACE/ETHNICITY, ARIZONA, 2019

Category of first-listed diagnosis	Total	Race/ethnicity				
		White non-Hispanic	Hispanic or Latino	Black or African American	American Indian or Alaska Native	Asian or Pacific Islander
Other ischemic heart disease	440†	329	54	21	19	*
Cardiac dysrhythmias	13,516	11,115	1,350	458	257	201
Cardiac arrest	290†	190	64	15	12	*
Congestive heart failure	2,202	1,635	295	143	91	19
Cerebrovascular diseases	21,141	15,949	2,814	1,042	491	437
Diseases of the respiratory system	50,214	35,553	8,512	2,661	2,215	904
Acute bronchitis and bronchiolitis	3,129	1,611	1,024	181	235	61
Pneumonia	13,556	9,971	2,004	567	656	265
Chronic bronchitis	6,442	5,503	505	260	62	72
Asthma	2,951	1,471	834	408	151	73
Diseases of the digestive system	60,018	41,139	11,648	2,636	3,014	1,068
Appendicitis	2,643	1,529	834	80	108	60
Noninfectious enteritis and colitis	5,022	3,873	697	236	109	67
Diverticula of intestine	5,080	3,862	829	188	106	59
Cholelithiasis	3,449	2,106	937	122	185	69
Diseases of the genitourinary system	27,125	18,741	5,220	1,452	1,013	487
Calculus of kidney and ureter	447	319	87	17	14	8
Diseases of the skin and subcutaneous tissue	13,294	9,185	2,364	615	872	151
Cellulitis and abscess	8,522	6,217	1,353	289	517	80
Diseases of the musculoskeletal system	44,832	36,444	4,376	1,592	1,120	839
Osteoarthritis and allied disorders	22,435	19,299	1,535	602	307	475
Invertebral disc disorders	2,806	2,250	296	99	74	35
Congenital anomalies	2,120	1,191	634	119	101	55
Conditions originating in perinatal period	2,198	1,069	736	137	144	70
Symptoms signs and ill-defined conditions	12,630	9,002	2,018	743	510	227
Injury and poisoning	66,500	47,815	10,687	2,948	3,248	959
Fractures, all sites	21,425	16,736	2,839	566	801	228
Fracture of neck of femur	7,338	6,318	675	104	133	62
Poisonings	5,169	3,372	1,071	350	249	68

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, 2019**

Selected characteristics		Total	Self-pay	Private insurance (indemnity, HMO, PPO)	AHCCCS/Medicaid	Medicare	Other
Total		665,721	14,419	150,545	185,175	221,672	93,910
Gender	Male	297,970	7,008	58,179	79,104	108,262	45,417
	Female	367,727	7,410	92,361	106,063	113,403	48,490
	Unknown	20†	*	*	8	7	*
Age group	Children <15 years	30,233	706	9,235	19,232	35	1,025
	Adolescents 15-19 years	19,409	504	6,608	11,461	52	784
	Young adults 20-44 years	185,209	7,397	64,250	94,909	7,558	11,095
	Middle-aged adults 45-64 years	162,795	5,125	55,061	55,690	26,501	20,418
	Elderly 65+ years	268,070	683	15,391	3,883	187,526	60,587
	Unknown	10†	*	0	0	0	*
Race/ethnicity	White non-Hispanic	451,520	7,903	107,949	85,609	178,763	71,296
	Hispanic or Latino	128,341	4,670	25,398	62,345	22,521	13,407
	Black or African American	38,111	932	7,550	16,797	8,247	4,585
	American Indian or Alaska Native	27,649	374	3,180	14,957	7,043	2,095
	Asian or Pacific Islander	13,604	315	4,655	3,628	3,416	1,590
	Refused/Unknown	6,496	225	1,813	1,839	1,682	937
Patient's marital status	Single	263,861	7,781	56,080	130,327	44,452	25,221
	Married	268,955	5,176	81,141	33,931	106,949	41,758
	Separated	4,975	111	845	2,075	1,269	675
	Divorced	54,132	743	8,033	13,189	21,593	10,574
	Widowed	68,218	320	3,352	3,647	45,935	14,964
	Not Applicable	110†	*	23	70	7	10
	Unknown	5,466	284	1,071	1,936	1,467	708

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
AVERAGE LENGTH OF STAY FOR DISCHARGES^a BY FIRST-LISTED DIAGNOSIS AND AGE GROUP, ARIZONA, 2019

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	5.0	5.9	6.5	4.2	5.4	5.1
Infectious and parasitic diseases	6.4	5.2	4.9	5.9	7.0	6.4
Septicemia	6.6	8.0	5.2	6.2	7.2	6.5
Enterocolitis due to <i>Clostridium difficile</i>	5.2	5.2	4.2	4.2	5.0	5.5
Neoplasms	6.1	11.9	10.3	5.9	5.8	6.0
Malignant neoplasms	6.5	13.2	12.6	7.7	6.3	6.2
Large intestine	6.2	0.0	0.0	6.1	5.9	6.4
Prostate	2.2	0.0	0.0	2.0	1.9	2.5
Trachea bronchus and lung	6.0	4.6	12.5	5.8	5.8	6.0
Breast	4.1	0.0	6.0	3.9	4.2	4.0
Benign neoplasms	3.6	5.9	4.2	2.9	3.4	4.4
Endocrine nutritional metabolic and immunity diseases	4.1	3.6	3.7	3.1	4.3	4.7
Diabetes mellitus	4.8	2.4	2.2	3.5	5.3	5.8
Volume depletion	3.1	2.3	3.8	2.4	3.4	3.4
Morbid obesity	1.6	0.0	1.7	1.5	1.6	1.9
Diseases of the blood and blood forming organs	4.5	4.7	5.8	4.6	4.4	4.3
Mental disorders	8.7	12.6	10.8	7.6	8.5	10.1
Psychoses	8.6	13.6	11.1	7.6	8.3	9.8
Alcoholic psychoses	4.9	7.7	5.5	4.4	5.1	6.3
Drug psychoses	5.1	5.0	6.8	4.8	4.7	8.8
Schizophrenic disorders	11.8	17.6	12.4	11.3	12.2	16.2
Manic-depressive disorders	8.8	12.3	10.7	7.3	8.6	10.6
Neurotic disorders	5.8	9.7	9.7	4.8	5.4	6.6
Anxiety states	6.6	7.8	13.8	4.6	5.5	4.9
Depression	7.7	10.0	8.8	6.6	7.9	9.7
Drug dependence	5.8	23.4	11.2	4.9	6.4	6.8
Nondependent abuse of drugs	4.0	0.0	4.1	3.6	4.2	6.2
Alcohol dependence	5.0	15.3	6.1	4.5	5.2	6.4
Diseases of the nervous system	5.9	4.4	4.0	4.8	5.6	6.9
Diseases of the eye and adnexa	3.3	3.7	3.2	3.4	3.1	3.3
Diseases of the ear and mastoid process	2.8	2.2	2.2	2.8	2.9	3.0
Diseases of the circulatory system	4.8	10.6	5.2	4.6	5.0	4.8
Heart disease	4.4	13.6	5.4	4.2	4.5	4.4
Acute myocardial infarction	4.1	6.0	4.3	3.0	3.9	4.3
Coronary arteriosclerosis	4.9	10.5	4.0	4.0	4.7	5.0

TABLE 4A-5 (continued)
AVERAGE LENGTH OF STAY FOR DISCHARGES^a BY FIRST-LISTED DIAGNOSIS AND AGE GROUP, ARIZONA, 2019

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	2.1	2.0	0.0	1.4	1.9	2.3
Cardiac dysrhythmias	3.3	4.0	2.5	2.8	3.4	3.3
Cardiac arrest	2.4	2.7	5.0	3.1	3.2	1.7
Congestive heart failure	5.6	27.4	5.5	6.0	5.2	5.2
Cerebrovascular diseases	6.2	8.8	5.2	7.0	6.8	5.9
Diseases of the respiratory system	5.1	3.5	4.4	4.8	5.7	5.5
Acute bronchitis and bronchiolitis	3.2	3.2	1.0	2.7	3.3	3.3
Pneumonia	4.5	3.1	4.0	3.8	4.5	4.7
Chronic bronchitis	4.2	6.3	5.0	3.3	4.1	4.4
Asthma	2.7	1.9	2.5	2.8	3.4	3.5
Diseases of the digestive system	4.4	4.5	4.3	3.9	4.4	4.6
Appendicitis	3.4	4.2	3.1	2.5	3.2	3.9
Noninfectious enteritis and colitis	4.3	4.8	7.0	3.9	4.2	4.3
Diverticula of intestine	4.3	7.0	2.0	3.9	4.1	4.5
Cholelithiasis	3.2	2.4	2.5	2.6	3.0	3.9
Diseases of the genitourinary system	3.9	3.2	3.3	3.1	3.9	4.2
Calculus of kidney and ureter	2.7	3.8	1.2	2.6	2.6	3.0
Diseases of the skin and subcutaneous tissue	4.1	2.4	3.5	3.6	4.4	4.6
Cellulitis and abscess	3.8	2.4	2.4	3.2	3.8	4.3
Diseases of the musculoskeletal system	3.0	4.3	4.3	3.9	2.9	2.9
Osteoarthritis and allied disorders	1.7	0.0	2.0	1.5	1.6	1.8
Invertebral disc disorders	3.6	1.0	3.6	3.0	3.1	4.2
Congenital anomalies	8.7	11.6	3.5	4.2	5.2	5.2
Conditions originating in perinatal period	7.0	7.0	0.0	0.0	0.0	0.0
Symptoms signs and ill-defined conditions	3.6	2.7	3.1	3.0	3.3	4.1
Injury and poisoning	5.6	4.1	4.6	5.2	5.9	5.8
Fractures, all sites	5.3	2.1	3.8	4.5	5.3	5.7
Fracture of neck of femur	4.8	1.8	4.2	4.7	5.1	4.8
Poisonings	3.5	2.2	2.5	3.3	4.1	4.4

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. Starting with the 2016 report, all the 12 listed procedures in the database are being taken into account in our analysis.

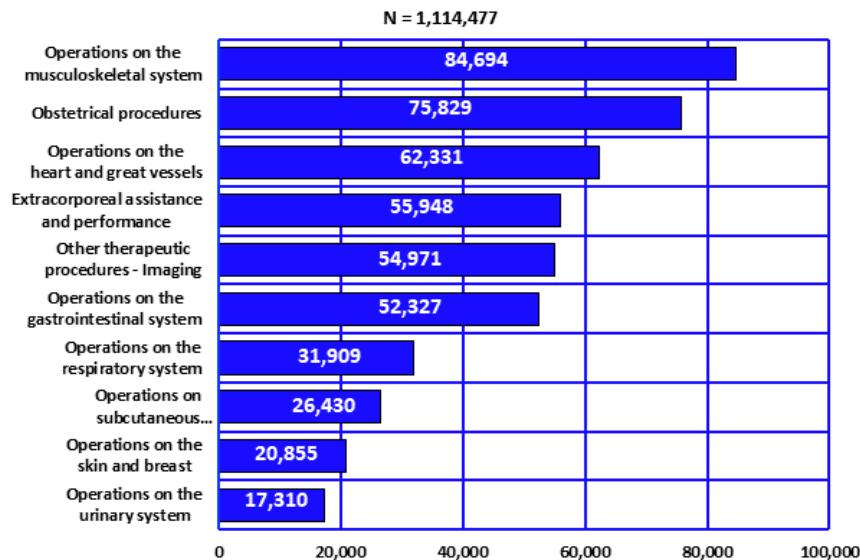
During 2015, all Arizona Hospitals transitioned to the International Classification of Diseases, 10th Revision, and Procedure Coding System (ICD-10-PCS) for coding inpatient procedures. ICD-10-PCS was implemented on October 1, 2015 in replacement of the International Classification of Diseases, Ninth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

In the current report, procedure groupings and codes are based on ICD-10-PCS. 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 2019 hospital discharge data with data from years prior 2016. For further explanation of ICD-10-CM transition, please refer to "The Implementation of the International Classification of Disease, Tenth Revision," Introduction page ix.

*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

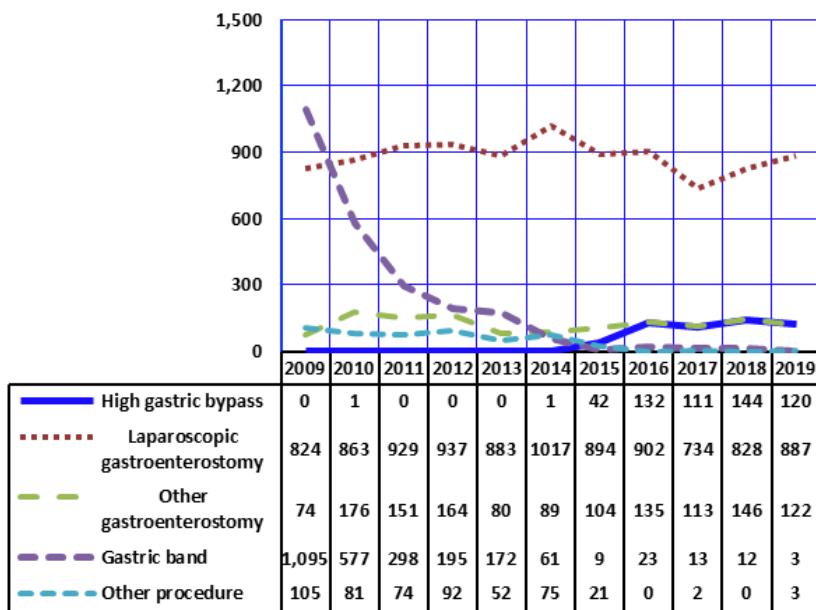
Figure 4B-1
**Ten Leading Categories of All-listed Inpatient Procedures,
 Arizona Residents, 2019**



During 2019, 1,114,477 procedures were performed among the 665,721 total inpatient discharges to Arizona residents. The 2019 rate of procedures was 1,550.2 per 10,000 population, representing an increase from the 2018 rate of 1523 per 10,000.

No specific procedure was recorded for 40.2 percent of all inpatient discharges. Only 1.9 percent of inpatients had six procedures reported while 0.8 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, 2009-2019



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 2019, *morbid obesity* was the principal diagnosis for 3,699 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. Since 2015, the number of *gastric bypass procedures* has seen a dramatic increase (**Figure 4B-2**). As in any years since 2010, *laparoscopic gastroenterostomy* remained the most popular procedure, with 887 surgeries performed in 2019.

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, 2019

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	1,114,477	56,096	23,364	306,087	289,736	439,189
Operations on the central nervous system	15,721	2,339	373	3,159	4,423	5,427
Spinal tap	6,981	1,804	173	1,453	1,744	1,807
Operations on the peripheral nervous system	5,285	83	93	796	1,719	2,594
Operations on the heart and great vessels	62,331	2,607	522	6,730	19,195	33,277
Heart transplant	50†	8	*	6	27	8
Coronary artery bypass graft	3,654	0	0	54	1,188	2,412
Cardiac catheterization	20,152	104	32	1,090	7,102	11,824
Insertion, replacement, removal, of pacemaker leads	4,771	19	7	123	751	3,871
Operations on the upper arteries	14,211	392	149	1,750	4,231	7,689
Operations on the lower arteries	7,615	326	47	657	1,928	4,657
Operations on the upper veins	12,515	247	76	2,099	4,083	6,010
Operations on the lower veins	10,338	1,209	55	1,034	3,277	4,763
Operations on the lymphatic and hemic systems	9,014	319	128	949	2,978	4,640
Operations on the eye	457	91	28	139	107	92
Operations on the ear, nose, sinus	1,066	207	52	224	260	323
Operations on the respiratory system	31,909	2,212	430	5,292	9,994	13,979
Bronchoscopy with or without biopsy	3,083	234	44	461	952	1,392
Operations on the mouth and throat	3,293	915	120	671	795	792
Operations on the gastrointestinal system	52,327	2,322	802	10,469	16,113	22,621
Implantation of gastric band	10†	0	0	*	*	*
Endoscopy of small intestine with or without biopsy	12,261	269	194	2,181	3,805	5,812
Endoscopy of large intestine with or without biopsy	8,416	135	120	1,161	2,360	4,640
Appendectomy, excluding incidental	3,553	711	227	940	942	733
Operations on the hepatobiliary system and pancreas	13,943	171	241	3,004	4,331	6,196
Cholecystectomy	7,489	53	181	2,095	2,267	2,893
Operations on the endocrine system	1,034	18	24	215	392	385
Operations on the skin and breast	20,855	341	1,089	12,501	3,488	3,436
Breast surgery	910†	0	*	190	420	296

TABLE 4B-1 (continued)
NUMBER OF PROCEDURES BY CATEGORY AND AGE GROUP, ARIZONA, 2019

Procedures by category	Total	Age group				
		Children <15 years	Adolescents 15-19 years	Young adults 20-44 years	Middle-aged adults 45-64 years	Elderly 65+ years
Operations on the subcutaneous tissue and fascia	26,430	772	387	5,176	8,837	11,258
Operations on the musculoskeletal system	84,694	1,314	1,856	20,835	21,374	39,314
Open reduction of fracture with or without internal fixation	7,782	287	212	1,286	1,772	4,225
Total hip replacement	10,720 [†]	*	10	319	3,249	7,138
Total knee replacement	11,530 [†]	6	*	118	3,769	7,632
Operations on the urinary system	17,310	316	172	3,086	5,279	8,457
Kidney transplant	270 [†]	*	*	85	117	58
Operations on the male reproductive system	7,557	5,374	16	242	743	1,182
Prostatectomy	1,460	0	0	9	494	957
Operations on the female reproductive system	15,821	72	778	12,325	1,616	1,030
Oophorectomy and salpingo-oophorectomy	3,231	8	22	1,363	1,180	658
Hysterectomy	2,840 [†]	0	*	1,143	1,147	542
Obstetrical procedures	75,829	36	4,112	71,540	141	0
Episiotomy with or without forceps or vacuum extraction	2,580 [†]	*	228	2,347	*	0
Artificial rupture of membranes	22,868	20	1,361	21,451	36	0
Cesarean section	21,170 [†]	*	675	20,415	78	0
Other therapeutic procedures - Imaging	54,971	1,501	310	5,577	17,230	30,353
Computerized tomography (CT Scan)	1,978	112	18	273	562	1,013
Magnetic resonance imaging (MRI)	1,462	677	53	115	235	382
Other therapeutic procedures - Nuclear medicine	190 [†]	33	*	31	42	78
Other therapeutic procedures - Radiation therapy	140 [†]	16	*	30	43	47
Extracorporeal assistance and performance	55,948	3,559	514	7,288	17,807	26,778
Hemodialysis	18,556	24	63	2,478	7,224	8,767

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 4B-2
NUMBER OF PROCEDURES BY CATEGORY AND GENDER, ARIZONA, 2019

Procedures by category	Total	Male	Female	Patient's gender
				Unknown
All procedures	1,114,477	509,062	605,355	60
Operations on the central nervous system	15,721	8,136	7,584	*
Spinal tap	6,981	3,620	3,361	0
Operations on the peripheral nervous system	5,285	2,908	2,377	0
Operations on the heart and great vessels	62,331	36,479	25,850	*
Heart transplant	53	38	15	0
Coronary artery bypass graft	3,654	2,822	832	0
Cardiac catheterization	20,152	12,622	7,528	*
Insertion, replacement, removal, of pacemaker leads	4,771	2,728	2,043	0
Operations on the upper arteries	14,211	7,956	6,251	*
Operations on the lower arteries	7,615	4,670	2,945	0
Operations on the upper veins	12,515	6,019	6,494	*
Operations on the lower veins	10,338	6,681	3,657	0
Operations on the lymphatic and hemic systems	9,014	4,723	4,291	0
Operations on the eye	457	296	161	0
Operations on the ear, nose, sinus	1,066	619	447	0
Operations on the respiratory system	31,909	17,472	14,431	6
Bronchoscopy with or without biopsy	3,083	1,722	1,361	0
Operations on the mouth and throat	3,293	2,042	1,251	0
Operations on the gastrointestinal system	52,327	24,003	28,322	*
Implantation of gastric band	10†	*	*	0
Endoscopy of small intestine with or without biopsy	12,261	6,037	6,224	0
Endoscopy of large intestine with or without biopsy	8,416	4,012	4,403	*
Appendectomy, excluding incidental	3,553	1,820	1,733	0
Operations on the hepatobiliary system and pancreas	13,943	6,439	7,504	0
Cholecystectomy	7,489	3,201	4,288	0
Operations on the endocrine system	1,034	442	592	0
Operations on the skin and breast	20,855	5,778	15,076	*
Breast surgery	910	42	868	0

TABLE 4B-2 (continued)
NUMBER OF PROCEDURES BY CATEGORY AND GENDER, ARIZONA, 2019

Procedures by category	Total	Male	Female	Patient's gender
				Unknown
Operations on the subcutaneous tissue and fascia	26,430	14,889	11,540	*
Operations on the musculoskeletal system	84,694	34,143	50,549	*
Open reduction of fracture with or without internal fixation	7,782	3,235	4,547	0
Total hip replacement	10,719	4,627	6,092	0
Total knee replacement	11,526	4,674	6,851	*
Operations on the urinary system	17,310	8,902	8,407	*
Kidney transplant	268	162	106	0
Operations on the male reproductive system	7,557	7,530	22	*
Prostatectomy	1,460	1,460	0	0
Operations on the female reproductive system	15,820†	*	15,817	0
Oophorectomy and salpingo-oophorectomy	3,230†	*	3,228	0
Hysterectomy	2,840†	*	2,833	0
Obstetrical procedures	75,830†	*	75,825	0
Episiotomy with or without forceps or vacuum extraction	2,583	0	2,583	0
Artificial rupture of membranes	22,868	0	22,868	0
Cesarean section	21,170†	*	21,169	0
Other therapeutic procedures - Imaging	54,971	31,420	23,548	*
Computerized tomography (CT Scan)	1,978	987	991	0
Magnetic resonance imaging (MRI)	1,462	759	703	0
Other therapeutic procedures - Nuclear medicine	187	88	99	0
Other therapeutic procedures - Radiation therapy	140	62	78	0
Extracorporeal assistance and performance	55,948	32,587	23,356	*
Hemodialysis	18,556	10,350	8,206	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 4B-3
NUMBER OF PROCEDURES BY CATEGORY AND RACE/ETHNICITY, ARIZONA, 2019

Procedures by category	Total	Race/ethnicity				Refused /Unknown	
		White non-Hispanic	Hispanic or Latino	Black or African American	American Indian or Alaska Native		
All procedures	1,114,477	738,436	229,570	59,346	48,114	25,322	13,689
Operations on the central nervous system	15,721	10,429	3,117	905	679	312	279
Spinal tap	6,981	4,184	1,681	536	337	144	99
Operations on the peripheral nervous system	5,285	4,147	630	188	168	77	75
Operations on the heart and great vessels	62,331	44,576	10,080	3,092	2,680	1,223	680
Heart transplant	50†	34	11	*	*	*	*
Coronary artery bypass graft	3,654	2,829	503	74	79	118	51
Cardiac catheterization	20,152	15,230	2,796	928	515	399	284
Insertion, replacement, removal, of pacemaker leads	4,771	3,847	532	132	122	75	63
Operations on the upper arteries	14,211	10,014	2,284	771	621	277	244
Operations on the lower arteries	7,615	5,498	1,257	353	287	129	91
Operations on the upper veins	12,515	8,547	2,111	852	687	212	106
Operations on the lower veins	10,338	6,897	1,990	533	538	231	149
Operations on the lymphatic and hemic systems	9,014	6,640	1,442	451	192	211	78
Operations on the eye	457	244	135	30	29	9	10
Operations on the ear, nose, sinus	1,066	684	236	50	57	28	11
Operations on the respiratory system	31,909	21,772	5,664	1,953	1,364	688	468
Bronchoscopy with or without biopsy	3,083	2,107	535	188	128	81	44
Operations on the mouth and throat	3,293	2,021	722	233	183	104	30
Operations on the gastrointestinal system	52,327	35,846	9,919	2,839	2,039	1,157	527
Implantation of gastric band	10†	*	*	*	0	0	0
Endoscopy of small intestine with or without biopsy	12,261	8,432	2,193	653	645	237	101
Endoscopy of large intestine with or without biopsy	8,416	6,072	1,362	445	310	152	75
Appendectomy, excluding incidental	3,553	2,147	1,035	119	144	72	36
Operations on the hepatobiliary system and pancreas	13,943	8,941	3,327	516	723	304	132
Cholecystectomy	7,489	4,632	1,982	249	409	146	71
Operations on the endocrine system	1,034	679	199	80	29	30	17
Operations on the skin and breast	20,855	12,060	5,876	1,133	1,028	465	293
Breast surgery	910	671	138	47	22	20	12

TABLE 4B-3 (continued)
NUMBER OF PROCEDURES BY CATEGORY AND RACE/ETHNICITY, ARIZONA, 2019

Procedures by category	Total	Race/ethnicity				Refused /Unknown
		White non-Hispanic	Hispanic or Latino	Black or African American	American Indian or Alaska Native	
Operations on the subcutaneous tissue and fascia	26,430	17,442	5,077	1,584	1,618	467
Operations on the musculoskeletal system	84,694	62,508	13,235	3,108	2,805	2,092
Open reduction of fracture with or without internal fixation	7,782	5,771	1,241	247	345	82
Total hip replacement	10,719	9,503	555	308	100	162
Total knee replacement	11,526	9,467	1,060	348	227	310
Operations on the urinary system	17,310	12,273	3,178	775	564	365
Kidney transplant	268	128	65	27	22	25
Operations on the male reproductive system	7,557	5,392	1,253	472	88	295
Prostatectomy	1,460	1,156	193	56	9	29
Operations on the female reproductive system	15,821	7,498	5,930	1,170	583	483
Oophorectomy and salpingo-oophorectomy	3,231	1,851	878	257	96	101
Hysterectomy	2,836	1,579	766	273	78	98
Obstetrical procedures	75,829	36,011	28,035	5,255	2,684	2,925
Episiotomy with or without forceps or vacuum extraction	2,583	1,276	898	137	66	165
Artificial rupture of membranes	22,868	11,052	8,329	1,574	865	779
Cesarean section	21,172	10,135	7,480	1,706	721	856
Other therapeutic procedures - Imaging	54,971	39,651	8,689	2,518	2,301	1,025
Computerized tomography (CT Scan)	1,978	1,344	312	114	67	51
Magnetic resonance imaging (MRI)	1,462	756	396	118	106	37
Other therapeutic procedures - Nuclear medicine	190†	132	39	8	6	*
Other therapeutic procedures - Radiation therapy	140†	95	17	11	10	*
Extracorporeal assistance and performance	55,948	35,012	11,255	3,833	3,843	1,240
Hemodialysis	18,556	8,689	5,241	1,836	2,144	522

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 4B-4
NUMBER OF PROCEDURES BY CATEGORY AND EXPECTED SOURCE OF PAYMENT, ARIZONA, 2019

Procedures by category	Total	Self-pay	Private insurance (indemnity, HMO, PPO)	AHCCCS/ Medicaid	Medicare	Other
All procedures	1,114,477	21,854	281,675	294,001	356,353	160,594
Operations on the central nervous system	15,721	273	4,326	4,482	4,487	2,153
Spinal tap	6,981	168	1,784	2,640	1,616	773
Operations on the peripheral nervous system	5,285	58	1,374	880	2,033	940
Operations on the heart and great vessels	62,331	923	11,507	12,438	27,501	9,962
Heart transplant	50†	*	28	8	8	6
Coronary artery bypass graft	3,654	37	822	374	1,738	683
Cardiac catheterization	20,152	432	4,140	2,869	8,964	3,747
Insertion, replacement, removal, of pacemaker leads	4,771	39	589	312	2,847	984
Operations on the upper arteries	14,211	202	2,305	2,878	6,535	2,291
Operations on the lower arteries	7,615	89	1,149	1,336	3,574	1,467
Operations on the upper veins	12,515	146	1,788	3,115	4,613	2,853
Operations on the lower veins	10,338	164	2,211	2,658	3,734	1,571
Operations on the lymphatic and hemic systems	9,014	120	2,336	1,485	3,650	1,423
Operations on the eye	457	18	103	200	85	51
Operations on the ear, nose, sinus	1,066	29	321	304	295	117
Operations on the respiratory system	31,909	610	6,102	8,593	11,963	4,641
Bronchoscopy with or without biopsy	3,083	29	594	824	1,168	468
Operations on the mouth and throat	3,293	109	929	1,204	718	333
Operations on the gastrointestinal system	52,327	949	13,340	11,891	18,237	7,910
Implantation of gastric band	10†	0	*	*	*	*
Endoscopy of small intestine with or without biopsy	12,261	207	2,416	2,896	4,798	1,944
Endoscopy of large intestine with or without biopsy	8,416	124	1,762	1,462	3,732	1,336
Appendectomy, excluding incidental	3,553	183	1,338	1,115	577	340
Operations on the hepatobiliary system and pancreas	13,943	368	3,469	3,241	4,837	2,028
Cholecystectomy	7,489	252	2,039	1,944	2,244	1,010
Operations on the endocrine system	1,034	17	340	215	315	147
Operations on the skin and breast	20,855	702	6,869	8,194	3,021	2,069
Breast surgery	910	13	371	179	230	117

TABLE 4B-4 (continued)
NUMBER OF PROCEDURES BY CATEGORY AND EXPECTED SOURCE OF PAYMENT, ARIZONA, 2019

Procedures by category	Total	Self-pay	Private insurance (indemnity, HMO, PPO)	AHCCCS/ Medicaid	Medicare	Other
Operations on the subcutaneous tissue and fascia	26,430	509	4,829	7,099	9,982	4,011
Operations on the musculoskeletal system	84,694	1,463	23,485	15,714	30,006	14,026
Open reduction of fracture with or without internal fixation	7,782	203	1,344	1,534	3,339	1,362
Total hip replacement	10,719	81	2,708	613	5,129	2,188
Total knee replacement	11,526	53	3,103	673	5,310	2,387
Operations on the urinary system	17,310	415	4,192	3,230	6,949	2,524
Kidney transplant	270†	*	111	15	122	16
Operations on the male reproductive system	7,557	274	4,194	1,531	860	698
Prostatectomy	1,460	17	437	81	666	259
Operations on the female reproductive system	15,821	470	6,255	7,275	931	890
Oophorectomy and salpingo-oophorectomy	3,231	149	1,332	937	547	266
Hysterectomy	2,836	129	1,268	748	456	235
Obstetrical procedures	75,829	2,349	33,100	36,377	367	3,636
Episiotomy with or without forceps or vacuum extraction	2,583	114	1,192	1,112	24	141
Artificial rupture of membranes	22,868	693	9,629	11,392	64	1,090
Cesarean section	21,172	598	9,725	9,700	148	1,001
Other therapeutic procedures - Imaging	54,971	1,062	10,689	9,869	23,150	10,201
Computerized tomography (CT Scan)	1,978	46	409	401	712	410
Magnetic resonance imaging (MRI)	1,462	43	387	580	233	219
Other therapeutic procedures - Nuclear medicine	190†	*	44	44	58	36
Other therapeutic procedures - Radiation therapy	140†	*	40	30	43	24
Extracorporeal assistance and performance	55,948	830	8,500	13,129	25,006	8,483
Hemodialysis	18,556	78	1,707	3,405	10,685	2,681

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.



4C.

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

This section focuses 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.

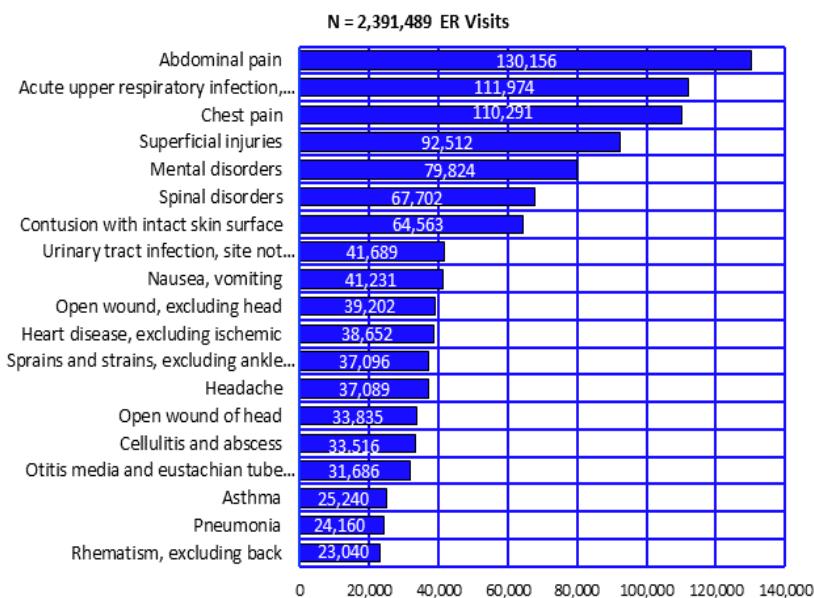
All emergency room visits are those of the residents of Arizona. Ambulatory care visits to hospital emergency rooms of out-of-state residents are not included in this report. In the current report, diagnostic groupings and code numbers are solely based on the International Classification of Diseases 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, 2019**



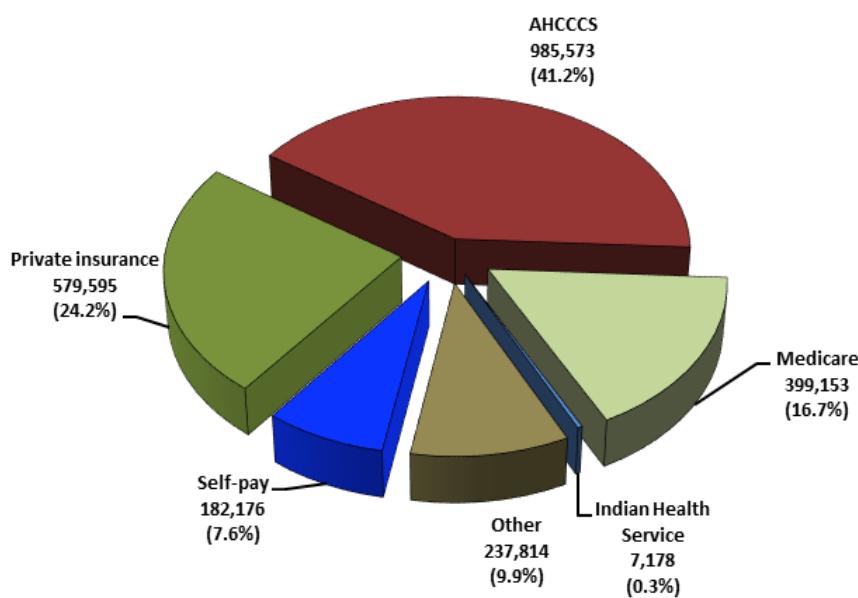
During 2019, approximately 2.4 million visits were made by Arizona residents to hospital emergency rooms (ER), which translate to 33.3 visits per 100 persons. The utilization rates vary by geographic region, with the Western United States having the lowest ER visit rate.

In 2019, *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 27.4 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, 2019



The Arizona Health Care Cost Containment System (AHCCCS, the State's Medicaid program) was the most frequently recorded expected source of payment, accounting for 41.2 percent of ER visits (**Figure 4C-3**). Private insurance was the second most frequent payer (24.2 percent of ER visits), followed by Medicare (16.7 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
NUMBER OF EMERGENCY ROOM VISITS^a BY FIRST-LISTED DIAGNOSIS AND AGE GROUP, ARIZONA, 2019

Category of first-listed diagnosis	All Ages	Children <15 years	Adolescents- cents 15-19 years	Young adults 20-44 years	Middle- aged adults 45-64 years	Age group	
						Elderly 65+ years	Unknown
Total, all causes	2,391,489	426,711	136,867	833,908	531,359	462,537	107
Infectious and parasitic diseases	56,425	25,739	3,384	14,968	6,981	5,351	*
Neoplasms	6,614	215	93	1,480	2,272	2,554	0
Endocrine nutritional metabolic and immunity diseases	61,782	2,683	2,105	21,151	20,123	15,718	*
Diabetes mellitus	18,485	606	513	5,293	7,475	4,598	0
Mental disorders	79,824	3,533	6,327	41,202	21,422	7,330	10
Psychoses	52,418	1,286	3,734	27,628	15,280	4,480	10
Alcoholic psychoses	4,722	20	98	2,573	1,755	276	0
Drug psychoses	2,177	46	260	1,431	362	77	*
Schizophrenic disorders	850†	*	21	483	298	45	0
Manic-depressive disorders	8,337	943	1,475	3,388	1,864	667	0
Neurotic disorders	68,969	3,276	5,520	35,439	19,095	5,630	9
Anxiety states	18,699	531	1,518	10,107	4,376	2,167	0
Depression	6,333	753	1,248	2,485	1,326	521	0
Drug dependence	3,310†	*	192	2,092	733	294	0
Nondependent abuse of drugs	9,109	137	754	5,773	2,174	270	*
Alcohol dependence	7,850†	*	15	3,997	3,349	481	*
Diseases of the nervous system	65,690	3,347	3,421	27,080	19,147	12,691	*
Diseases of the eye and adnexa^b	23,584	6,126	1,154	7,308	5,232	3,763	*
Diseases of the ear and mastoid process^b	49,336	27,489	2,268	10,512	5,321	3,745	*
Diseases of the circulatory system	82,221	1,216	849	11,677	26,046	42,421	12
Diseases of the respiratory system	264,763	111,876	14,881	68,340	38,351	31,308	7
Acute bronchitis and bronchiolitis	29,447	12,328	866	7,437	5,045	3,770	*
Pneumonia	24,160	6,285	966	5,726	5,345	5,838	0
Chronic bronchitis	13,022	14	6	525	5,273	7,204	0
Asthma	25,240	8,740	1,701	8,900	4,335	1,564	0
Diseases of the digestive system	166,492	20,482	7,638	64,937	41,747	31,656	12
Diseases of the genitourinary system	145,537	11,078	9,509	63,144	31,622	30,183	*
Diseases of the skin and subcutaneous tissue	86,467	15,438	4,942	33,453	20,153	12,475	6
Diseases of the musculoskeletal system	171,271	9,382	6,684	59,479	54,425	41,296	*
Symptoms signs and ill-defined conditions	551,510	75,589	29,331	186,369	138,169	122,044	8
Injury and poisoning	467,141	98,606	35,307	149,812	91,943	91,442	31
Fractures, all sites	67,564	14,324	4,156	17,301	14,642	17,140	*
Sprains	48,043	7,650	5,417	18,849	10,376	5,747	*
Intracranial	13,537	2,872	1,831	4,244	2,143	2,447	0
Open wounds	91,362	21,987	5,902	29,627	15,721	18,116	9
Superficial injuries	92,512	21,105	6,497	27,606	17,798	19,501	*
Contusions with intact skin surface	64,563	12,485	4,544	19,018	13,011	15,502	*
Foreign bodies	10,483	4,267	407	2,551	1,732	1,526	0
Burns and corrosions	7,279	1,897	515	2,810	1,420	637	0
Trauma complications and unspecified injuries	28,025	8,969	1,952	6,268	3,942	6,892	*
Poisonings	12,809	1,811	1,942	5,674	2,243	1,136	*
Surgical and medical complications	15,295	859	337	3,109	4,412	6,578	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
NUMBER OF EMERGENCY ROOM VISITS FOR THE LEADING DIAGNOSIS GROUPS^a AND AGE GROUP, ARIZONA, 2019

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	2,391,489	426,711	136,867	833,908	531,359	462,537
Abdominal pain	130,156	15,414	9,190	57,294	30,883	17,374
Acute upper respiratory infection, excluding pharyngitis	111,974	63,883	4,544	24,131	11,781	7,632
Chest pain	110,291	2,454	3,779	36,830	39,481	27,744
Superficial injuries	92,512	21,105	6,497	27,606	17,798	19,501
Mental disorders	79,824	3,533	6,327	41,202	21,422	7,330
Spinal disorders	67,702	1,661	2,137	25,476	22,181	16,245
Contusion with intact skin surface	64,563	12,485	4,544	19,018	13,011	15,502
Urinary tract infection, site not specified	41,689	5,333	2,284	12,654	8,106	13,312
Nausea, vomiting	41,231	13,903	2,780	14,295	5,890	4,363
Open wound, excluding head	39,202	4,116	3,050	16,939	8,139	6,952
Heart disease, excluding ischemic	38,652	316	290	4,576	11,693	21,768
Sprains and strains, excluding ankle and back	37,096	5,262	3,516	14,390	8,797	5,129
Headache	37,089	3,064	2,646	16,768	9,867	4,744
Open wound of head	33,835	11,257	2,291	7,629	4,631	8,026
Cellulitis and abscess	33,516	3,597	1,169	12,371	9,568	6,809
Otitis media and eustachian tube disorders	31,686	23,812	1,217	4,631	1,458	567
Asthma	25,240	8,740	1,701	8,900	4,335	1,564
Pneumonia	24,160	6,285	966	5,726	5,345	5,838
Rheumatism, excluding back	23,040	1,003	793	8,533	7,510	5,199
Gastroenteritis and colitis	22,505	4,270	1,287	8,368	4,940	3,640
Chronic and unspecified bronchitis	21,525	511	344	3,776	7,698	9,196
Acute pharyngitis	19,442	6,446	2,532	7,735	1,866	863
Fever	17,134	13,325	463	1,537	868	941
Migraine	15,779	705	1,296	8,573	4,389	816
Sprains and strains of neck and back	4,159	216	335	2,161	1,008	439
Unspecified viral and chlamydial infection	240	38	53	140	9	0

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).

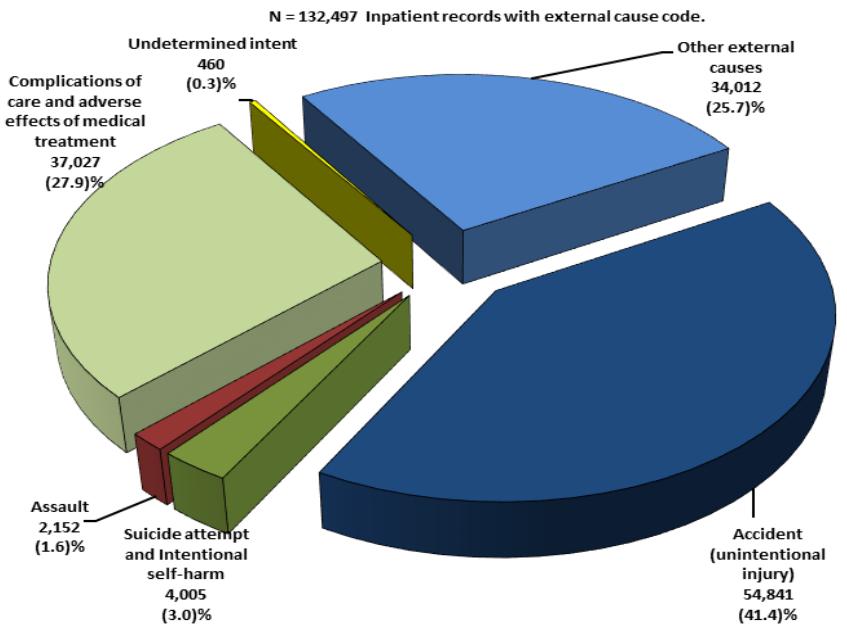
In 2009, the reporting requirements for hospitals were revised and the non-injury first-listed diagnoses may also have an external cause of injury code (E-code). Beginning with the 2009 edition of this report, the reader is advised that the number of suicides, accidents, etc. shown in **Table 4D-1** 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. 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.

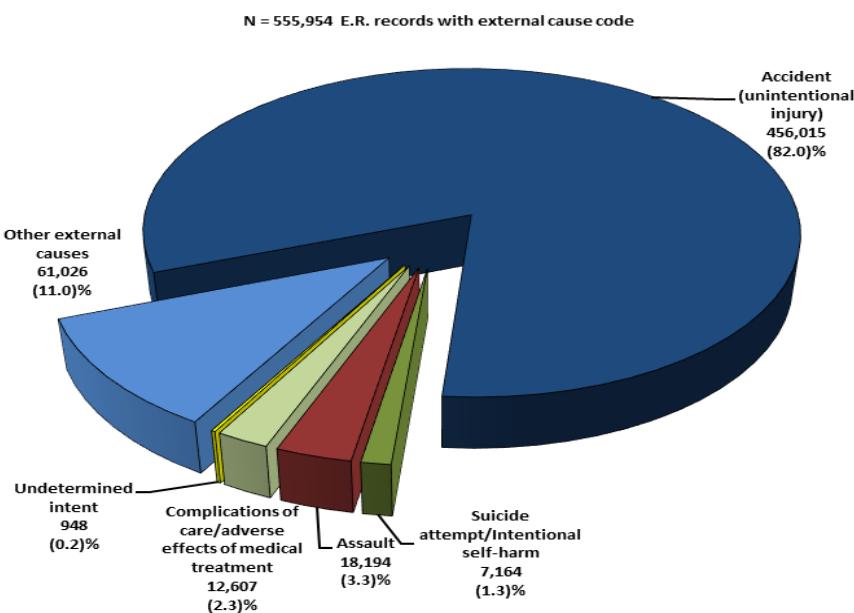
4D. INJURY-RELATED INPATIENT DISCHARGES AND EMERGENCY ROOM VISITS BY INTENT AND MECHANISM OF INJURY

Figure 4D-1
**Percent Distribution of Inpatient Discharges by Intent of Injury,
Arizona Residents, 2019**



In 2019, injury and poisoning as a joint category was indicated as the principal diagnosis on 66,500 inpatient discharge records (**Table 4A-1**). *Unintentional injuries or accidents* accounted for the absolute majority of inpatient hospitalizations by the intent of injury (41.4 percent) and *complications of medical care and adverse effects of medical treatment* accounted for 28.0 percent of all inpatient discharges by intent of injury. *Assault* accounted for 2,152 inpatient hospitalizations (1.6 percent of all hospital discharges with known intent of injury). *Intentional self-inflicted injuries* including *suicide attempt* resulted in 4005 inpatient hospitalizations (3.0 percent).

Figure 4D-2
Percent Distribution of Emergency Room Visits by Intent of Injury, Arizona Residents, 2019



In 2019, *Unintentional injuries or accidents* accounted for eight out of ten (456,015 or 82.0 percent) of all injury-related emergency room visits (**Figure 4D-3, Table 4D-2**). The external cause of injury was classified as *assault* for 18,194 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 *intentional self-inflicted injuries* (2.3 percent vs. 1.3 percent, respectively; **Figure 4D-3, Table 4D-2**).

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

Self-inflicted injuries result from actions of individuals trying to deliberately harm themselves (i.e. behavior with no suicide intent) or kill themselves (i.e. suicide attempt). Beginning in 2008, there was a substantial increase in the number of *intentional self-inflicted injuries* related inpatient discharges and emergency room visits (**Figure 4D-3** and **Table 4D-2**), partly due to the change in the reporting requirements for hospitals.

In 2019, there were 4,005 inpatient discharges attributed to intentional self-inflicted injuries.

Mental disorders were identified as the principal diagnosis on 1,266 intentional self-inflicted injury/ suicide attempt-related records. *Injury or poisoning* was the principal diagnosis on 2,645 inpatient discharge records related to self-inflicted injuries.

Figure 4D-3
**Intentional self-inflicted injury Inpatient Discharges by Year,
Arizona Residents, 2009–2019**

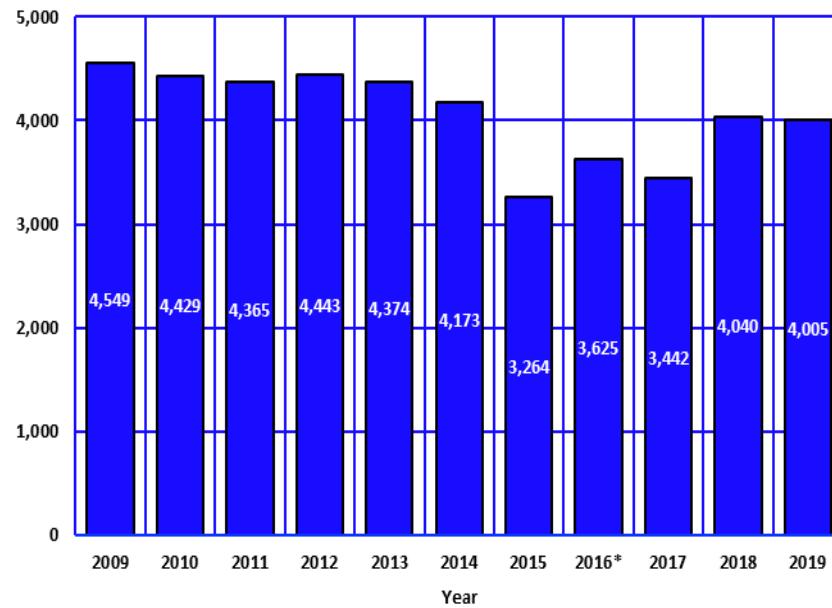


Figure 4D-4
**Intentional self-inflicted injury Emergency Room Visits by Year,
Arizona Residents, 2009–2019**

In 2019, self-inflicted injuries resulting in ER visits accounted for 7,164, a decrease of 7.8 percent from 2018. Of all the ER visits related to *intentional self-inflicted injuries*, *mental disorders* were identified as the principal diagnosis on 389 ER discharges. *Injury or poisoning* was recorded as the principal diagnosis on 6,353 (88.7 percent) ER discharges related to self-inflicted injury.

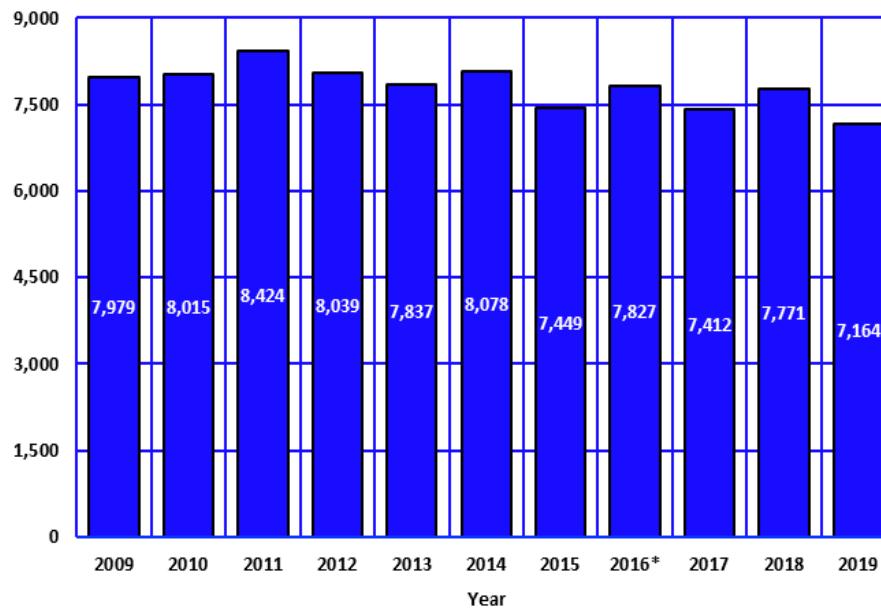


TABLE 4D-1
INPATIENT DISCHARGES BY INTENT AND MECHANISM FOR SELECTED EXTERNAL CAUSES BY GENDER, AGE GROUP, AND RACE/ETHNICITY, ARIZONA, 2019

	Total ^a	Male	Female	Gender	Age group						Race/ethnicity					
					Children <15 years	Adolescents 15-19 years	Young adults 20-44 years	Middle-aged adults 45-64 years	Elderly 65+ years	Unkown						
UNINTENTIONAL INJURY OR ACCIDENT	54,841	27,060	27,779	*	1,576	1,188	8,084	11,857	32,135	*	41,538	7,694	1,839	2,400	702	668
Falls	34,455	14,660	19,795	0	469	154	1,880	5,810	26,141	*	28,093	3,684	806	1,121	428	323
Transport accidents	8,499	5,418	3,080	*	370	567	3,053	2,514	1,995	0	5,580	1,692	384	511	113	219
Natural and environmental factors	6,180	3,465	2,715	0	282	172	1,327	1,870	2,529	0	4,277	1,062	347	352	81	61
Exposure to excessive natural heat	480†	346	130	0	*	6	132	172	162	0	308	106	36	12	7	7
Fire and flames	354	222	132	0	31	13	119	114	77	0	190	69	33	44	11	7
Machinery	160†	152	10	0	*	*	67	61	28	0	88	54	*	11	*	*
SUICIDE ATTEMPT AND INTENTIONAL SELF-HARM	4,005	1,745	2,259	*	358	763	1,799	819	266	0	2,574	793	220	318	57	43
ASSAULT	2,152	1,671	479	*	67	139	1,330	507	108	*	939	514	256	366	10	67
INJURIES OF UNDETERMINED INTENT	460	257	203	0	163	24	124	90	59	0	223	133	49	40	6	9
COMPLICATIONS OF CARE AND ADVERSE EFFECTS OF MEDICAL TREATMENT	37,027	19,660	17,364	*	671	311	5,234	12,263	18,548	0	26,015	6,376	2,018	1,539	769	310
Misadventures to patients	360†	178	180	0	8	*	44	103	202	0	246	59	17	24	8	*
Surgical and medical procedures as the cause of adverse reaction	32,378	17,195	15,180	*	594	276	4,611	10,822	16,075	0	22,748	5,592	1,753	1,337	681	267

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 the 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, 2019

	Total ^a	Gender		Age group						Race/ethnicity					
		Male	Female	Children <15 years	Adolescents 15-19 years	Young adults 20-44 years	Middle-aged adults 45-64 years	Elderly 65+ years	Unknown	White non-Hispanic	Hispanic or Latino	African or Black or Native American or Alaskan or Native Hawaiian	Asian or Pacific Islander	Refused/Unknown	
UNINTENTIONAL INJURY OR ACCIDENT															
Falls	456,015	226,232	229,769	14	94,908	32,494	142,324	91,038	95,222	29	272,170	121,904	32,444	17,582	7,847/ 4,068
Transport accidents	164,718	71,880	92,836	*	38,527	5,932	26,823	32,236	61,196	*	109,349	37,306	8,060	6,150	2,598/ 1,255
Struck against or struck accidentally by objects or persons	73,015	36,033	36,974	8	8,636	8,239	34,620	15,058	6,452	10	39,765	21,027	7,155	2,561	1,589/ 918
Overexertion	54,259	31,110	23,147	*	17,275	5,990	16,919	8,271	5,804	0	30,081	16,419	4,269	2,131	885/ 474
Cutting or piercing instruments or objects	36,742	18,191	18,551	0	5,308	3,844	15,107	8,152	4,327	*	20,638	10,619	3,115	1,521	579/ 270
Natural and environmental factors	61,852	31,250	30,602	0	10,834	3,693	22,438	14,067	10,816	*	35,076	17,211	5,504	2,452	1,119/ 490
Exposure to excessive natural heat	1,599	1,117	482	0	86	85	750	442	236	0	903	441	133	75	27/ 20
Fire and flames	2,349	1,290	1,059	0	492	167	922	528	240	0	1,313	678	166	132	38/ 22
Machinery	2,100	1,836	264	0	85	91	872	641	411	0	1,306	627	68	55	20/ 24
Pedal cycle, nontraffic and other	5,564	4,082	1,482	0	1,577	445	1,675	1,322	543	*	3,717	1,232	269	181	96/ 69
Motor vehicle, nontraffic	775	509	266	0	133	77	337	155	72	*	501	173	48	31	17/ *
Firearm missile	971	838	133	0	84	173	520	139	51	*	445	337	126	39	10/ 14
Drowning/submersion	110†	64	47	0	91	6	8	*	*	0	53	38	10	*	*
SUICIDE ATTEMPT AND INTENTIONAL SELF-HARM	7,164	2,736	4,425	*	880	1,758	3,313	970	242	*	4,299	1,728	510	428	120/ 79
ASSAULT	18,194	10,841	7,351	*	951	1,903	11,226	3,544	565	*	7,934	5,292	2,329	2,188	235/ 216
INJURIES OF UNDETERMINED INTENT	948	504	444	0	280	122	351	127	67	*	500	280	82	63	15/ 8
COMPLICATIONS OF CARE AND ADVERSE EFFECTS OF MEDICAL TREATMENT	12,607	6,832	5,775	0	514	255	2,734	3,778	5,326	0	8,278	2,766	803	454	229/ 77
Misadventures to patients	110†	46	61	0	9	*	34	33	30	0	62	31	*	7	*
Surgical and medical procedures as the cause of adverse reaction	10,158	5,432	4,726	0	431	214	2,280	3,026	4,207	0	6,676	2,200	657	362	195/ 68

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