## 4A.

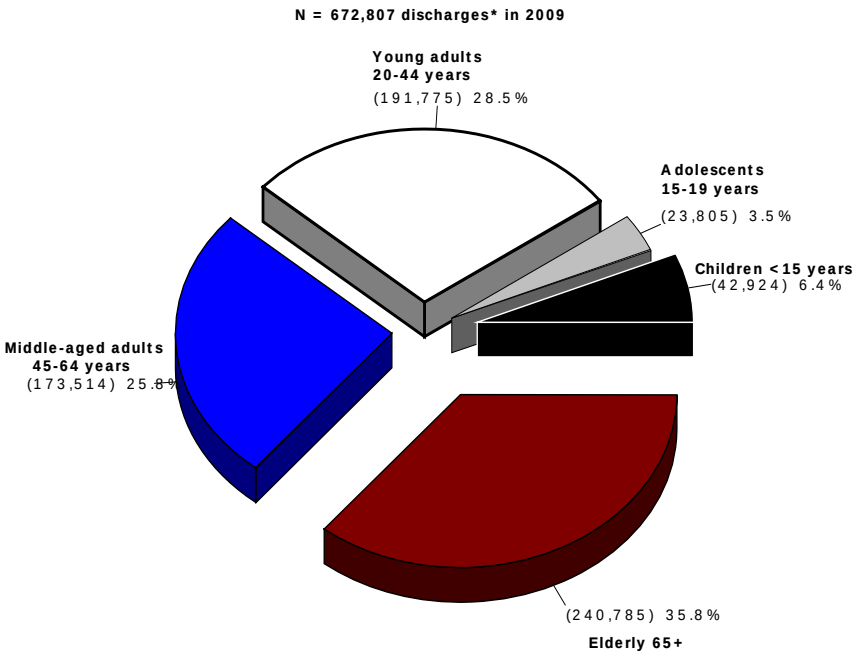
## INPATIENT DISCHARGES FROM SHORT STAY HOSPITALS BY FIRST-LISTED DIAGNOSIS AND PATIENT CHARACTERISTICS

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. All discharges are for residents of Arizona. Discharges of out-of-state residents are not included in this report. Discharges of inpatients exclude newborn infants. Diagnostic groupings and code numbers are based on the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM).

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 codes used to identify specific diagnostic categories can be accessed at http://www.azdhs.gov/plan/hip/cat/icd9primary.xls

*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

**Figure 4A-1**
**Hospital Inpatient Discharges by Age Group, Arizona Residents, 2009**



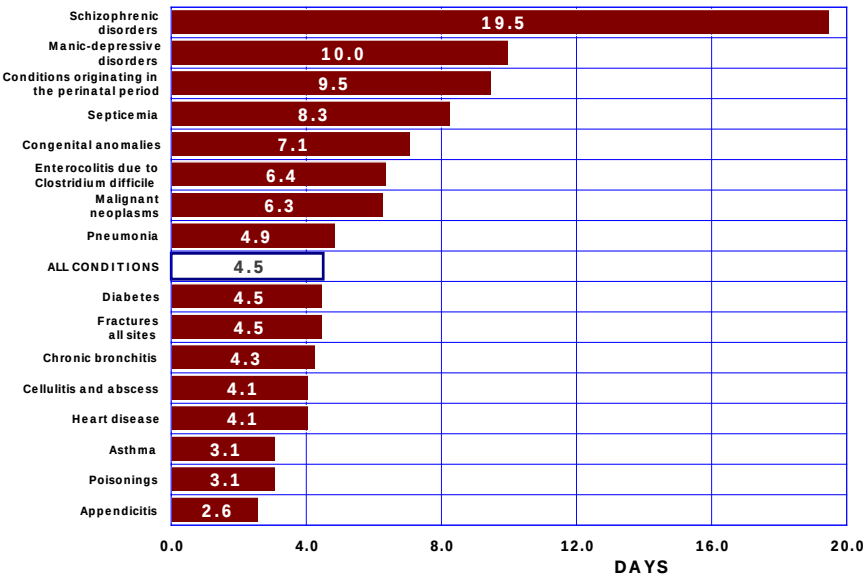

*Excluding newborn infants.

In 2009, there were 672,807 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 35.8 percent of hospital discharges (**Figure 4A-1**), followed by young adults (20-44 years old) who comprised 28.5 percent of discharges, and middle-aged adults 45-64 year olds (25.8 percent of all inpatient discharges)

The discharge rate for all ages was 1020.1 per 10,000 resident population, 0.3 percent greater than the 2008 rate. The discharge rate of 1212.2 for females was 1.5 times greater than the rate of 828.3 for males

*Diseases of the circulatory system* were the most common diagnoses (15.0 percent of all discharges), followed by *digestive system* diagnoses (10.8 percent), and *injury* diagnoses (9.6 percent; percentages based on data in **Table 4A-1**).

**Figure 4A-2**
**Average Length of Hospital Stay for Discharges with Selected First-listed Diagnosis, Arizona Residents, 2009**




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 2006. In 1970, the average length of stay was 7.8 days, with one-third of patients hospitalized for 8 days or more. In 2006, the average length of stay decreased nationally to 4.8 days, with 58 percent of inpatients staying 3 days or fewer.

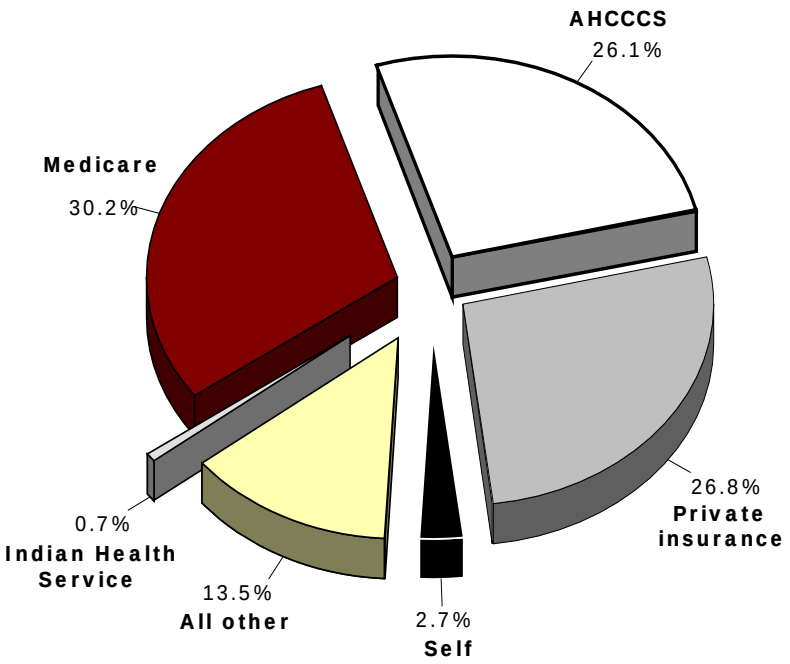
In 2009, the average length of hospital stay for Arizona inpatients was 4.5 days (**Figure 4A-2**, **Table 4A-5**). The percent of patients hospitalized for 3 days or less decreased to 61.9 percent, with only 13.3 percent of inpatients staying 8 days or more.

The average length of stay was 4.1 days for heart disease, 4.5 days for diabetes, 6.3 days for cancer, and 19.5 days for schizophrenic disorders.

*http://www.cdc.gov/nchs/data/ad/ad385.pdf
and http://www.cdc.gov/nchs/data/nhsr/nhsr005.pdf

Medicare paid for 69.7 percent of inpatient discharges of persons aged 65 years or older (**Table 4A-4**) and 30.2 percent of all discharges (**Figure 4A-3**). Private insurance was the second most frequently recorded expected source of payment, accounting for 26.8 percent of inpatient discharges. The Arizona Health Care Cost Containment System (the State's Medicaid Program) accounted for 26.1 percent.

**Figure 4A-3**
**Hospital Inpatient Discharges by Payer, Arizona Residents, 2009**




*Excluding newborn infants.

*Indemnity, HMO, PPO.
**The Arizona Health Care Cost Containment System is the State's Medicaid Program.

The rhythm of hospital births by day of the week (see **Figure 1B-14**) reveals that the daily average of resident live births in 2009 was substantially lower at weekends than on weekdays. The same pattern applies to hospital inpatient admissions excluding newborn infants (**Figure 4A-4**).

**Figure 4A-4**
**Percent of Hospital Inpatient Admissions by Day of the Week, Arizona Residents, 2009**

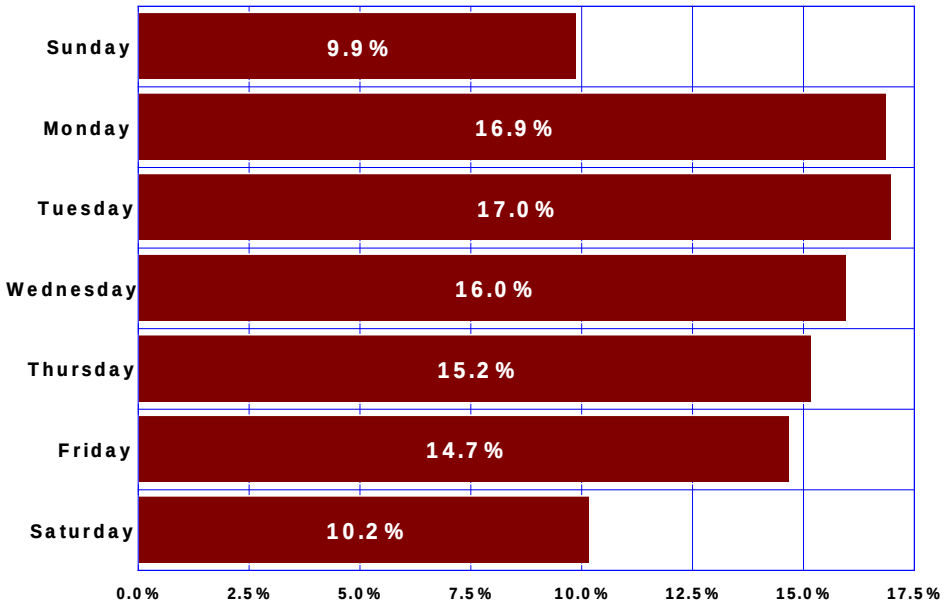
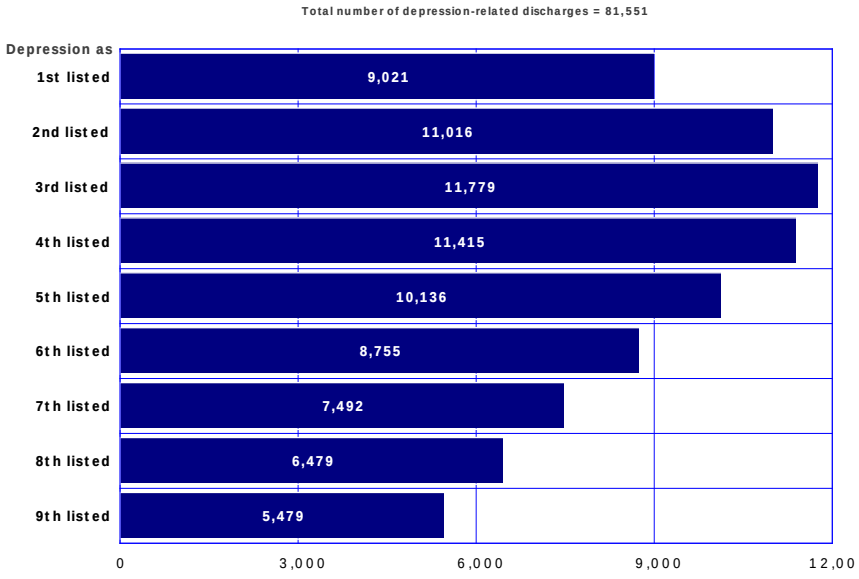


**Figure 4A-5**
**Number of Depression-related* Inpatient Discharges and Emergency Room Visits of Arizona Residents, 2009**




ICD-9C M diagnostic codes 300.4 and 311.

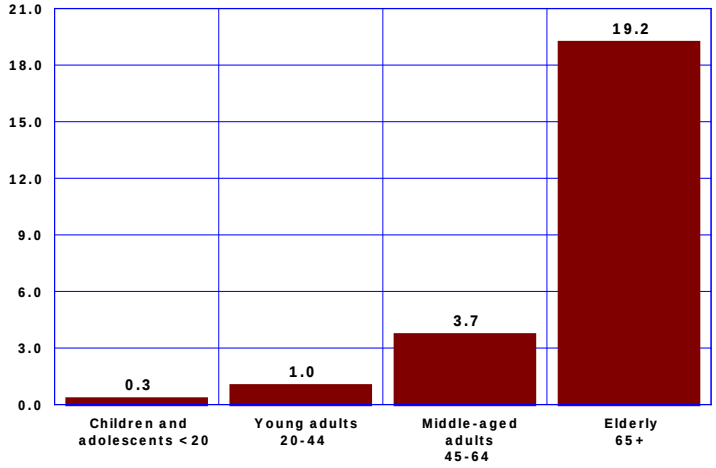
In 2009, the ICD-9-CM diagnostic codes 300.4 and 311 for depression were used on 884 inpatient discharge and 8,137 emergency room records as the first-listed diagnosis (for a total of 9,021 hospital encounters; **Figure 4A-5, Table 4A-1, Table 7C-1**).

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 81,551 inpatient discharge and emergency room records. In fact, the depression diagnosis was substantially more frequently present as 2nd – 5th 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, 2009**




In 2009, 2,496 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 (19.2/10,000) was 64 times greater than the rate for children and adolescents (**Figure 4A-6**).

The disparity in enterocolitis-related hospitalization rates was 1.7 times as high for females (4.8 inpatient discharges per 10,000) as for males (2.8/10,000).

In 2009, 161 Arizonans died from enterocolitis due to *Clostridium difficile* (**Table 2B-6**). Elderly 65 years or older accounted for 90.1 percent of these death (**Table 2C-28**).