

# Hospital Discharges for Mental Illness in the Veterans Health Administration

C Maynard, S Fihn

---

## Citation

C Maynard, S Fihn. *Hospital Discharges for Mental Illness in the Veterans Health Administration*. The Internet Journal of Epidemiology. 2009 Volume 9 Number 1.

## Abstract

In order to better understand the nature of inpatient care in the Veterans Health Administration (VHA), we compared the 10 most common discharge diagnoses for fiscal year 2008 with the top 10 discharge diagnoses in United States community hospitals in 2007. Using the principal discharge diagnosis, we identified the 10 most common discharge diagnoses in VHA and the Nationwide Inpatient Sample (NIS). Because VHA does not provide labor and delivery services or hospital care for children, we eliminated hospitalizations for labor and delivery as well as those for individuals < 18 years of age from the NIS data. There were 588,856 hospital discharges from VHA hospitals, and 30.6 million in the NIS. In VHA, 3 major categories of conditions accounted for about one third each of the 10 most common discharges: cardiac (34%), pulmonary (30%), and mental illness (30%), including affective psychoses, schizophrenia, and alcohol dependence syndrome. Compared with community hospitals, proportionally more VHA hospitalizations were due to mental illness and/or alcohol use disorders (9.1% versus 3.3%). In VHA, hospital discharges with a principal diagnosis of mental illness were among the 10 most common discharges, with affective psychoses ranking first. As a percentage of all discharges for adults, these 3 diagnoses accounted for almost 3 times the proportion of similar hospitalizations in United States community hospitals. Key words: hospital discharge, mental illness, veterans

## INTRODUCTION

The Veterans Health Administration (VHA) provides comprehensive health care services, including inpatient care, to over 7 million individuals including veterans and other eligible individuals (1). In order to better understand the nature of inpatient care in VHA medical centers, we compared the top 10 discharge diagnoses in VHA and United States community hospitals in the Nationwide Inpatient Sample of the Healthcare Cost and Utilization Project (HCUP). We also determined whether specific mental illness and/or substance use disorders were among the 10 most common discharge diagnoses. We then compared the proportion of discharges due to each of these conditions with those from the Nationwide Inpatient Sample (NIS) of United States community hospitals.

## METHODS

We identified the 10 most common 3 character ICD-9 diagnosis codes from the VHA inpatient main file, using the principal diagnosis, defined as the one responsible for hospital admission occurring between October 2007 and September 2008. For the NIS, information on the number of estimated hospital discharges in 2007 and discharges for

specific mental health diagnoses were obtained from the HCUP Net, an online query system (2). Because VHA does not provide labor and delivery services or hospital care for children, we eliminated hospitalizations for labor and delivery as well as those for individuals < 18 years of age from the NIS data.

## RESULTS

In fiscal year 2008, there were 588,856 hospital discharges from VHA hospitals. This number does not include non-VHA hospitalizations that were reimbursed by VHA. These included 22,939 (3.9%) discharges for affective disorders (ICD-9 code 296), 15,678 (2.7%) for schizophrenic disorders (ICD code 295), and 14,994 (2.5%) for alcohol dependence syndrome (ICD-9 code 303) (table 1). Three major categories of conditions each accounted for about one third each of the 10 most common discharges: cardiac (34%), pulmonary (30%), and mental illness (30%). Three mental illness or substance use disorder conditions accounted for 9.1% of all discharge diagnoses and were among the 10 most common ones.

**Figure 1**

Table 1: Top 10 discharge diagnoses: Veterans Health Administration, 2008

3 digit ICD-9 code	Diagnosis description	Number of discharges
296	affective psychoses	22,939
428	congestive heart failure	22,272
414	chronic ischemic heart disease	20,651
786	respiratory system/other chest symptoms	19,968
486	pneumonia	16,735
427	cardiac dysrhythmias	15,726
295	schizophrenic disorders	15,678
491	chronic bronchitis	15,644
303	alcohol dependence syndrome	14,994
780	general symptoms	11,832

Excluding hospitalizations for child birth, in 2007 there were about 30.6 million discharges for individuals 18 years and older recorded in the NIS. The top 10 discharge diagnoses excluding those related to labor and delivery are shown in table 2.

**Figure 2**

Table 2: Top 10 discharge diagnoses: United States Hospitals, 2007

ICD-9 code	Diagnosis description	Number of discharges
486	pneumonia	867,017
428	congestive heart failure	851,342
414	chronic ischemic heart disease	799,624
786.59	chest pain not elsewhere classified	544,923
491.21	obstructive chronic bronchitis with acute exacerbation	420,902
410.71	non ST elevation myocardial infarction	389,115
038.9	unspecified septicemia	381,696
427.31	atrial fibrillation	375,712
599.0	urinary tract infection, site not specified	374,272
584.9	acute renal failure not otherwise specified	370,521

In the United States in 2007, there were an estimated 605,521 (2.0%) discharges for affective disorders, 298,973

(1.0%) for schizophrenia, and 98,221 (0.3%) for alcohol dependence syndrome. Compared with community hospitals, proportionally more VHA hospitalizations were due to mental illness and/or alcohol use disorders (9.1% versus 3.3%).

## DISCUSSION

In VHA, hospital discharges with a principal diagnosis of affective psychoses, schizophrenia, or alcohol dependence syndrome were among the 10 most common discharges, with affective psychoses ranking first. Moreover, as a percentage of all discharges for adults, these 3 diagnostic categories accounted for almost 3 times the proportion of similar hospitalizations in the NIS. It is the case that VHA and United States hospitals have very different missions and patient populations; for example VHA does not provide labor and delivery services, while in United States community hospitals, childbirth is the most common reason for hospitalization. The point of this study was to demonstrate that a significant proportion of VHA care is given to mental illness and/or substance use disorders, which are particularly difficult to treat and demand considerable resources.

## References

1. Weeks WN, West AN, Wallace AE, Fisher ES. Comparing the characteristics, utilization, efficiency and outcomes of VA and non-VA inpatient care provided to VA enrollees. *Medical Care* 2008;46:863-871.
2. Agency for Health Care Quality and Research. Health Care Cost and Utilization Project (HCUP) Net, <http://hcupnet.ahrq.gov/>, accessed September 8, 2010.

**Author Information**

**Charles Maynard, PhD**

Department of Veterans Affairs, Puget Sound Health Care System Health Services Research and Development

**Stephan D. Fihn, MD, MPH**

Department of Veterans Affairs, Puget Sound Health Care System Health Services Research and Development