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ORIGINAL ARTICLE

Changing Rates of Mental Health Disorders Among Veterans Treated in the VHA During Troop Drawdown, 2007–2013

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Abstract

Nationally representative data on mental health disorder prevalence are critical to set informed mental health priorities and policies. Data indicating mental health diagnoses within our nation's veteran population treated at the Veterans Health Administration (VHA) are available, but have yet to be examined for changing trends to inform both VHA and community care. We use VHA national program evaluation data from a time of increasing military enrollment (2007) to troop draw down (2013) to examine changes over time in the number of diagnoses in veterans receiving VHA services. The number of veterans in all diagnostic categories increased during our study period with the smallest increase in psychotic disorders (8%) and the largest in posttraumatic stress disorder (71%). Trends in behavioral health diagnoses among veterans have important implications for policy and clinician competencies within VHA and community providers as veteran mental health care needs change.

Keywords Veterans · National mental health care · Mental illness

Introduction

Nationally representative data on the prevalence of mental health disorders are difficult to obtain, especially with regard to severe mental illnesses, such as schizophrenia and bipolar disorder; yet these rates are critical to understand in order to set national mental health policy and priorities for systems of care. Prevalence estimates of mental illness in community samples (e.g., National Comorbidity Survey Replication) (Kessler et al. 2005a; Kessler et al. 2005c; Merikangas et al. 2007) and nationally-representative databases that capture mental health service utilization (e.g., Medical Expenditure Panel Survey) (Hwang and Henderson 2010) are available. However, the data from these studies are cross-sectional or not specific enough to examine changing trends in mental health diagnoses over time.

National registry data about the prevalence of specific mental health diagnoses are available for our nation's Veteran population who receive services from the Veterans Health Administration (VHA); however, these data have yet to be used to examine changing trends in mental health and substance use diagnoses among served veterans. The VHA is a key provider of behavioral health and physical health care for veterans but veterans make up a significant part of the population seeking healthcare outside the VHA system as well (Borowsky and Cowper 2001; Kessler et al. 2005b).

The opinions expressed in this manuscript are the authors' own and do not reflect the view of the Veterans Health Administration, the Department of Veterans Affairs, or the United States Government.

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Changes in VHA policies and services have been shown to impact non-VHA service systems (Borowsky and Cooper 2001; Hynes et al. 2007).

Recent legislation, including the 2014 Affordable Insurance Exchanges for citizens without other healthcare insurance coverage (Compilation of Patient Protection and Affordable Care Act 2010), the Veterans Choice and Accountability Act (2014), and the recently signed Presidential Executive Order Supporting Our Veterans during Their Transition from Uniformed Service to Civilian Life (2018) underscore the importance of understanding the needs of veterans who seek behavioral health care. Understanding diagnostic trends among VHA users can provide vital information for VHA service providers and service providers outside of the VHA system during this complex time of changing US healthcare policy.

The time frame examined in this study, fiscal year 2007–2013, has seen the majority of staffing increases in the military since the spike in strengths post September 11, 2001 (Defense Manpower Data Center n.d.). These increases coincide with an increase in the number of veterans receiving services within VHA, and the upward trend in VA patient numbers has continued despite military staffing decreases which began in 2013. This continued upward trend is explained by veterans returning in recent years from active duty military service still making up less than half of the VA patient population, while older veterans, primarily Vietnam and post-Vietnam era veterans, are increasingly using VA health care as they age into Medicare years (National Center for Veterans Analysis and Statistics n.d.).

In addition to this increase in the total number of veterans, a growing proportion of veterans received care at the VHA during our study period. Specifically, in 2007 there were over 4,830,000 veterans (about 21% of total veterans) who received VHA care. This number rose to over 5,560,000 (almost 27% of total veterans) in 2013. Within the context of this growth in the VA patient population, coupled with an influx of veterans returning from military service who may seek care outside of the VA, and in order to understand impacts on service systems both within and outside VHA, this study examines the diagnostic changes in mental health diagnoses among VHA services users between 2007 and 2013.

Methods

Design and Sample

We used a longitudinal study design to examine changes in the prevalence of behavioral health diagnoses among veterans receiving VHA services. To examine changing trends in behavioral health diagnoses among VHA service users we analyzed VHA program evaluation data from FY 2007–2013. Diagnostic data were included for any Veteran who used VHA services in any fiscal year during our study period.

We examined changes over time in the numbers of veterans with one of the following common mental health ICD-9 diagnostic codes: bipolar disorder (296.0; 296.1, 296.4 296.5; 296.6; 296.7; 296.8), psychotic disorders (295.xx, 297.xx, 298.xx), drug/alcohol dependence (303.xx; 304.xx), anxiety disorders (300.0x; 300.1x; 300.2x; 300.3x, 300.6x; 300.7x; 300.8x; 300.9x), post-traumatic stress disorder (309.81), depression (296.2; 296.3; 311.xx), adjustment disorder (309.XX [not including 309.81]), and acute alcohol/drug abuse or alcohol/drug dependence (291.xx; 292.xx; 305xx [not including 305.1]).

Between 2007 and 2013, there were incremental increases in the proportion of VHA service users who had two or more diagnoses assigned (42.3% in 2007 and 49.8% in 2013). In order to ensure veterans were only counted once in our analyses, each Veteran was assigned a primary mental health diagnosis based on the diagnosis code assigned most frequently during his or her VHA provider visits. We developed a decision rule to break any ties among the diagnostic categories enumerated above. Among mental health diagnoses, the presumed highest severity diagnosis was listed as primary, with psychotic disorders presumed most severe, followed by bipolar disorder, PTSD, major depression, anxiety, and adjustment disorder. Among substance use disorders, drug and alcohol dependence were presumed more severe than acute drug and alcohol use. Where a tie existed for a drug or alcohol disorder and any other mental health diagnosis, the mental health disorder was considered the primary diagnosis with drug and alcohol considered secondary diagnoses. Then, rates and frequencies for each disorder over each year of our study period were examined.

Approval to conduct this study was obtained from the Institutional Review Board at VA Connecticut Medical Center.

Results

There was a 15% increase in the VHA population between 2007 (n = 4,830,564) and 2013 (n = 5,566,276) but a 38% increase in the VHA population who had one of the behavioral health diagnoses listed above: 1,313,608 in 2007 versus 1,815,362 in 2013 (see Table 1). With respect to mental health service use within the VHA from 2007 to 2013, between 27 and 33% (n = 1,313,608 and n = 1,815,362) of veterans receiving care within the VHA had a primary mental health diagnosis of bipolar disorder, psychotic disorder, major depression, PTSD, anxiety, adjustment disorder, or substance use/dependence (Table 1).

Table 1 Diagnostic changes

	2007	%	2008	%	2009	%	2010	%	2011	%	2012	%	2013	%	% Δ[a]
VA POP	23,392,676		22,915,943		22,382,962		22,168,038		21,797,348		21,500,559		20,757,863		
VHA POP (% of VA Pop.)	4830,564	20.6	4,884,250	21.3	5,030,301	22.5	5,236,495	23.6	5,376,591	24.7	5,466,453	25.4	5,566,276	26.8	15
VHA POP W/MH DX (% of VHA Pop.)	1,313,608	27.2	1,392,936	28.5	1,499,329	29.8	1,612,527	30.8	1,694,620	31.5	1,752,900	32.1	1,815,362	32.6	38
Adjust DO[b]	48,570	3.7	55,291	4.0	62,149	4.1	68,177	4.2	72,832	4.3	76,520	4.4	78,292	4.3	61
Bipolar DO[b]	75,595	5.8	83,779	6.0	91,817	6.1	96,938	6.0	95,922	5.7	94,588	5.4	92,878	5.1	23
Drug/ETOH acute[b]	85,080	6.5	89,414	6.4	97,443	6.5	100,050	6.2	106,662	6.3	107,549	6.1	107,277	5.9	26
Psychotic DO[b]	103,479	7.9	99,617	7.2	97,461	6.5	105,703	6.6	108,133	6.4	110,473	6.3	111,794	6.2	8
Drug/ETOH[b] dependence	106,239	8.1	109,037	7.8	114,672	7.6	119,693	7.4	121,975	7.2	124,272	7.1	125,491	6.9	18
Anxiety DO[b]	189,341	14.4	193,877	13.9	203,838	13.6	215,336	13.4	224,135	13.2	230,636	13.2	241,553	13.3	28
PTSD[b]	305,967	23.3	343,721	24.7	383,130	25.6	423,225	26.2	463,487	27.4	491,609	28.0	524,506	28.9	71
Depression[b]	399,337	30.4	418,200	30.0	448,819	29.9	483,405	30.0	501,474	29.6	517,253	29.5	533,571	29.4	34

[a]Percent change in the number of veterans receiving service from VHA in these diagnostic categories from 2007 to 2013

[b]Proportion of all veterans receiving service from VHA with behavioral health diagnoses with this diagnosis

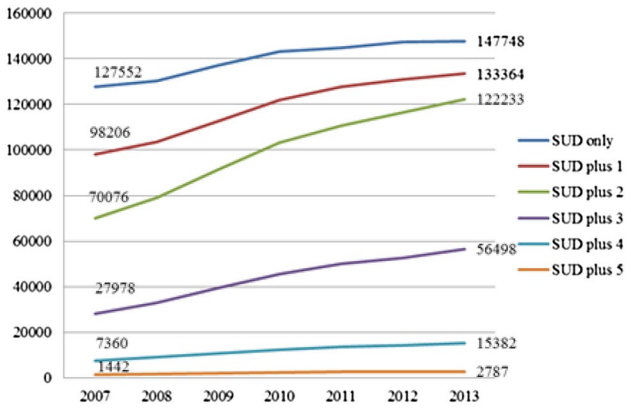

Fig. 1 SUD and dual diagnoses

Proportion

In 2007, the largest diagnostic group (proportion) among those with any behavioral health diagnoses was depression (30.4%, n = 399,337), followed by PTSD (23%, n = 305,967), anxiety (14.4%, n = 189,341), drug/alcohol dependence (8.1%, n = 106,239), psychotic disorder (7.9%, n = 103,479), drug/alcohol abuse, acute (6.5%, n = 85,080), bipolar disorder (5.8%, n = 75,595), and adjustment disorder (3.7%, n = 48,570). This order did not change during our study period. That is, in 2013, depression was still proportionally the largest diagnostic group and adjustment disorder was the smallest diagnostic group.

Growth

Despite the proportions of those with any behavioral health diagnosis remaining stable by order, there was an increase (percent change over time) in all categories between 2007 and 2013. The largest growth was observed within the PTSD diagnosis group with a 71% increase during our study period. This was followed by increases in adjustment disorder (61%), depression (34%), anxiety disorder (28%), acute drug/alcohol abuse (26%), bipolar disorder (23%), drug/alcohol dependence (18%), and psychotic disorder (8%).

Substance Use Versus Mental Health

To explore the co-occurrence of mental health and substance use disorders (see Fig. 1), we examined the following groups: (1) veterans who had only a substance use diagnosis (i.e., drug/alcohol dependence or acute alcohol/drug abuse) (9.7% in 2007 and 8.1% in 2013); (2) veterans who had co-occurring mental illness and substance use disorders (15.6% in 2007 and 18.2% in 2013); and (3) veterans who had two or more mental health diagnoses without a substance use diagnosis (33.2% in 2007 and 41.4% in 2013). As shown in

Fig. 1, each year of our study period saw steady and incremental increases in the numbers of veterans in each of these three groups.

Discussion

This study uses 7 years of VHA administrative data to examine changes in behavioral health diagnoses among VHA service users and makes important contributions to the literature regarding the understanding of behavioral health needs of our large and growing Veteran population. Here, we find sharp increases in the diagnoses of PTSD and adjustment disorder, notable increases in all other categories, and an overall increase in the percentage of VHA service users with any behavioral health diagnosis during our study period. Juxtaposed with estimates from the Substance Abuse and Mental Health Services Administration (SAMHSA) that show the overall prevalence rates of any mental illness among U.S. adults to be 20% in 2010, 18.6% in 2012, and 18.6% in 2013, (SAMHSA 2012, 2013, 2014) behavioral health disorders among veterans who use VHA services show markedly higher numbers—30.8, 32.1 and 32.6%—during these same years.

During our study period there was 15% increase in the VHA population between 2007 and 2013; however, this alone does not explain the increase in VHA service users with mental health diagnoses and there are several likely contributors to the increases we observed in our study. During our study period, the VHA made strong efforts to improve screening and evaluation of veterans presenting for care for trauma, depression, and PTSD and also increased screenings for suicidality. In addition, the VHA and the Department of Defense have worked to decrease stigma associated with mental health concerns and the stigma associated with seeking mental health care. Finally, there has been much work on increasing access to VHA services, including mental health services, for veterans seeking care from VHA facilities. These efforts could explain the increases in the number of veterans who are VHA service users with mental health diagnoses.

It is important to note that our sample does not include all veterans, only those seeking care in the VHA, so we cannot discuss the prevalence rates within the Veteran community in general. However, regardless of the reasons behind the increase in the number of veterans using VHA services, both the numbers and proportions of mental health service users are increasing and our data illustrate a picture of the dynamically changing needs among veterans seeking VHA care. In the context of the increasing number of veterans with high levels of service needs (e.g., psychotic disorder, bipolar disorder, PTSD, major depression), our findings forecast a sharp increase in the need for mental health providers and related services for veterans—both within VHA and in the community.

The VHA is sensitive to growing need for healthcare for veterans. To this end, VHA increased its mental health care budget by 39% between 2009 and 2012 and increased its mental health workforce beginning in April of 2012, hiring an additional 1600 mental health professionals (Bureau of Labor Statistics n.d.). It is difficult to know, however, if this level of staffing provides sufficient resources given, not only the differing needs for the type and intensity of services for those with mental health issues (e.g., the steady increase in VHA Veteran service users who have co-occurring substance use and mental health disorders), but the increase in the number of veterans eligible for services since the signing of the Presidential Executive Order in January, 2018. In addition, clinician competencies, flexibility, and training—including training in evidence-based practices—are likely to be as important as staffing levels, particularly in the treatment of complex disorders like PTSD, bipolar disorder, and psychotic disorders.

The data and results presented here provide a timely and compelling picture of the changing behavioral health profile and needs of a large and growing segment of the Veteran population in the U.S. at a time of significant troop draw down. The strengths of our study include a large, longitudinal data set of veterans and their service use-associated diagnoses. The limitations of using these types of data are well known and caution should be used in generalizing the results of VHA service users to non-VHA populations. Ongoing service reorganization efforts within the VHA can draw on finer levels of VHA program evaluation data to refine programming, policy, and VHA resource distribution to respond to the evolving mental health needs of veterans. Unfortunately, with even fewer resources and less specialized expertise, non-VA providers will face similar if not stronger challenges in responding to the growing and shifting mental health needs of veterans seeking mental health care in community settings.

Conclusions

The number of veterans with behavioral health diagnosis is increasing. Trends in specific behavioral health diagnoses and combinations of diagnoses should guide planning for the future of behavioral health within the VHA organization and within community service agencies given VHA's emphasis on Choice (community-delivered) care options. In addition, trends in behavioral health disorders should inform mandated clinical competencies, training of new and existing staff, and policies guiding specialty programs and the reorganization of outpatient services to team-based care. Flexibility in re-conceptualizing VHA and community-based

behavioral health services to meet growing and intense service needs of veterans is critical, particularly during this time of budget concerns and policy changes. In planning for the future healthcare for our veterans, VHA data can and should provide critical, real-time guidance for the allocation of resources and the alignment of veterans' clinical needs and services.

Compliance with Ethical Standards

Conflict of interest The authors declare that they have no conflict of interest.

Informed Consent For this type of study formal consent is not required.

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