

The Epidemiology of Health Problems in Returning Operation Iraqi Freedom and Operation Enduring Freedom Veterans

A National and North Carolina-Based Summary

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As large numbers of veterans return from military service in Operation Iraqi Freedom and Operation Enduring Freedom (OIF/OEF), policy leaders will need to anticipate their health concerns and align resources to serve those needs. This population of recent veterans is younger, much more likely to be female, and has a unique set of medical and mental health needs that vary significantly from those of the majority of the veterans who obtain health care from the Veterans Health Administration (VHA). Although the care provided to these newest veterans is a small portion of the total care provided to veterans enrolled in VHA facilities, these veterans represent a rapidly growing proportion of the veterans being served.

As this is a diverse and mobile population, it is difficult to obtain definitive information about its health care needs. The following information is synthesized from multiple national, regional, and local data sources. Most data are provided by sources within VHA. This is the single most reliable and available source of information, and returning veterans are actively encouraged to seek assistance for health care needs at VHA facilities.

National Data

As a working definition, we consider service members discharged from the Armed Forces beginning in fiscal year 2002 as returning OIF/OEF veterans. This does not include veterans who served in the first Gulf War, but it may include veterans who served recently and did not see combat. As with any group this large, it is problematic to make generalizations about their experience or health care needs.

With those caveats, there are approximately 4.4 million

veterans of the OIF/OEF conflicts, of whom 720 000 have become eligible to receive health care within VHA since the beginning of fiscal year 2002 after completing their military service.¹ Of these, 47% are former active duty troops, and the remainder served in the Reserve forces and with National Guard units. To date, approximately 252 000 (35%) eligible

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OIF/OEF veterans have sought care through the VHA system. This is a significantly higher percentage than the estimated 20% of the entire veteran population that receives health care through VHA. To place this number in perspective, however, the VHA system currently provides care to a total of approximately 5.5 million veterans. Therefore, although 35% of eligible OIF/OEF veterans have sought care, these newest veterans represent only 5% of the total number of veterans served by VHA.²

Of the care the OIF/OEF veterans have received through

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the VA Medical Centers (VAMC), 94% of the visits have been to outpatient clinics, and 4% of the encounters have occurred in an inpatient setting. When analyzed and grouped by diagnosis codes, the 3 most common health problems reported are musculoskeletal ailments (principally joint and back disorders), mental health disorders, and “symptoms, signs, and ill-defined conditions.”²

Approximately 350 000 (48%) OIF/OEF veterans have been seen at least once at a Vet Center. These centers, of which there are currently 207 throughout the country, focus on issues specific to combat veterans and their families. They are based outside of major medical facilities and deliver counseling and outreach services.¹

Almost 95 000 (38%) OIF/OEF veterans have received care for mental health-related problems through the VHA system. Table 1 lists the coded diagnoses assigned to those visits by

category of mental health problem. Posttraumatic stress, substance abuse (which includes tobacco abuse), and depression are the most frequently coded diagnoses.²

North Carolina Data

There are 4 Veterans Affairs Medical Centers in North Carolina. They are arranged into a larger organizational unit, The VA Mid-Atlantic Health Care Network, which also operates medical centers in Virginia and West Virginia. Together they provide comprehensive, integrated primary, specialty, and inpatient care. The location of these facilities in North Carolina is shown in Figure 1.

Of the 147 000 enrolled North Carolina veterans, approximately 12 000 (8%) are considered OIF/OEF veterans.

This is a slightly higher percentage than that seen in the national veteran population, reflecting the large number of military bases in North Carolina. Table 2 describes the demographic characteristics of this group. Compared to the overall population of veterans served by the VA system, this group is younger and contains more women. Considering this is a group of recently discharged veterans, there is a surprising percentage of older veterans. More than one-third of this group deployed to a combat theater more than once. (M. Gentry, oral communication, November 2007.)

Table 2 also lists the service-connected ratings of current OIF/OEF veterans. A service-connected rating is essentially a disability score awarded by the Veterans Benefits Administration (which is separate from the Veterans Health Administration) for injuries or conditions either caused by or diagnosed during military service. Higher

Table 1.
Coded Mental-Health Diagnoses Attributed to 94 921
OIF/OEF Veterans Who Have Received Health Care Services at
Veterans Affairs Medical Centers Nationwide.²

Psychiatric Diagnosis (ICD-9CM code)	Percent (%) of Total
PTSD (309.81)	26
Nondependent abuse of drugs (305)	21
Depressive disorders (311)	17
Neurotic disorders (300)	14
Affective psychoses (296)	9
Alcohol dependence syndrome (303)	4
Sexual deviations and disorders (302)	2
Special symptoms, not elsewhere classified (307)	2
Drug dependence (304)	2
Acute reaction to stress (308)	2

Figure 1.
Locations of the Major Veterans Affairs Medical Centers in North Carolina as Well as Their
Affiliated Satellite Facilities³

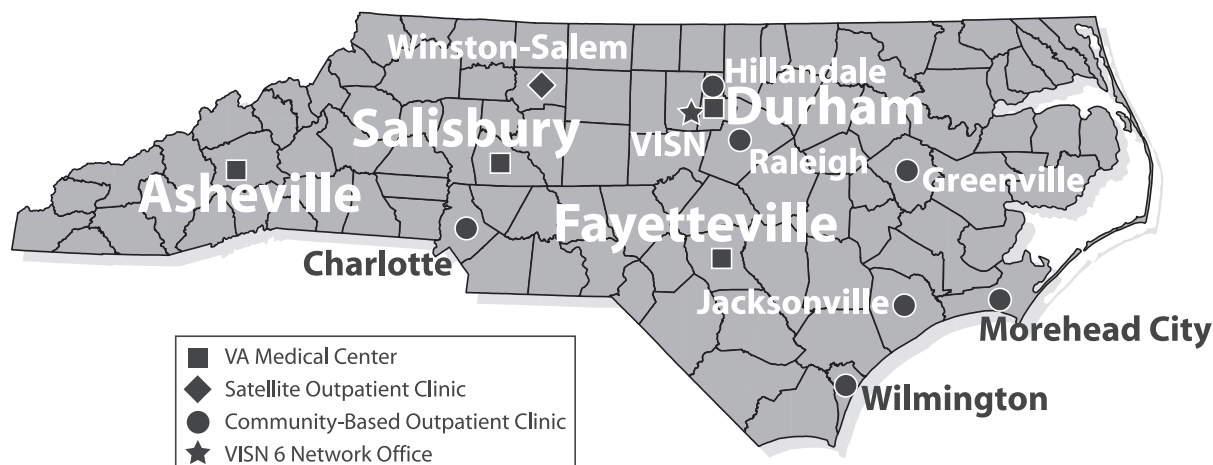


Table 2.
Demographic Breakdown of OIF/OEF Veterans
Registered to Receive Care at North Carolina-Based
Veterans Affairs Medical Centers

Variable	Category	Percent (%)
Service	Air Force	14
	Army	61
	Coast Guard	0.05
	Marine Corps	21
	Navy	4
Multiple deployments	Yes	37
	No	63
Marital status	Divorced	4
	Married	48
	Never married	46
Age (years)	<25	15
	25-29	32
	30-34	15
	35-39	11
	40-44	14
	>=45	14
Sex	Male	88
	Female	12
Race	Black	23
	White	68
	Hispanic	4
	Other	2
	Unknown	3
Service-connected status	None	64
	0%	25
	1%-49%	8
	>=50%	3

Source: M. Gentry, oral communication, November 2007.

ratings reflect greater disability, and ratings greater than 50% are designed to reflect severely disabling conditions. Compared to the general population of veterans followed by VHA, the OIF/OEF veterans are significantly less likely to have been assigned a service-connected disability. Veterans need to apply specifically to receive this rating, and many do not initially apply upon leaving the service. Once a veteran applies, the application process itself can take months or sometimes years to complete, and the percentage of veterans with a service-connected injury is expected to rise over time. The proportionally smaller number of OIF/OEF veterans with service-connected disabilities may also reflect the change from a prior

policy of not allowing some veterans without service connection to enroll in the VA system and thereby selecting for veterans with service-connected disabilities. This service connection restriction does not apply to OIF/OEF veterans.

One particular disability that is associated with OIF/OEF service is traumatic brain injury. Limitations primarily in medical knowledge about the spectrum of this condition make the collection of data difficult. However, the VA has an aggressive system that attempts to identify veterans who may have suffered traumatic brain injuries. At the Durham VAMC, between April and September 2007, almost 3000 veterans were screened for traumatic brain injury (80% of them OIF/OEF veterans). (B. Capehart, oral communication, October 2007.)

Another high-profile injury from the recent conflict is "polytrauma," or severely injured veterans. These veterans have suffered significant injury that has affected multiple organ systems, often resulting in amputation and cognitive deficits. At this time the North Carolina VAMCs are currently managing fewer than 100 of these veterans (M. Gentry, oral communication, November 2007).

Table 3 summarizes care that OIF/OEF veterans have received through the North Carolina VAMCs in fiscal year 2007. The care provided to these veterans during that year is almost equal to the cumulative number of visits provided in fiscal years 2002 through 2006, showing that as more and more veterans of the recent conflict become eligible for VHA care, their use of the system is growing exponentially. Table 4 lists the most common types of outpatient visits from fiscal year 2007. Compared to veterans from other periods, OIF/OEF veterans are far more likely to be seen in a mental health clinic. Table 5 lists the primary treating specialties of the inpatient care received during the same period. Inpatient stays for

Table 3.
Geographic Breakdown of OIF/OEF Veterans Who Received Care at
North Carolina-Based Veterans Affairs Medical Centers in Fiscal Year
2007

Visit Type	Facility	Visits by OIF/OEF Veterans	Percent (%) of Total
Inpatient	Durham	94	1.94
	Fayetteville	69	3.88
	Salisbury	86	3.69
	Asheville	51	1.54
	Total	300	2.45
Outpatient	Durham	1351	1.90
	Fayetteville	1861	2.89
	Salisbury	1652	1.81
	Asheville	405	0.90
	Total	5269	1.86

Source: M. Gentry, oral communication, November 2007.

Table 4.
Outpatient Visit Types by OIF/OEF Veterans,
Fiscal Year 2007, All North Carolina Facilities

Clinic	Visits	Percent (%) of All Visits by OIF/OEF Veterans
Primary care	5589	11.0
Mental health	5062	10.0
Emergency department	1023	2.0
Physical therapy	783	1.5
Dental	624	1.2

Source: M. Gentry, oral communication, November 2007.

Table 5.
Inpatient Admission Types by OIF/OEF
Veterans, Fiscal Year 2007, All North
Carolina Facilities

Ward Type	Visits	Percent (%) of Inpatient Stays
Surgery	50	17
Medicine	71	24
Psychiatry	175	58

Source: M. Gentry, oral communication, November 2007.

recent veterans are far more likely to occur on a psychiatric ward, and somewhat more likely to occur on a surgical ward, than they are for veterans from other periods whose hospitalizations are more likely to occur on a medicine service.

Limitations

The preceding data are the best available to provide a synthesis of the objective health needs of North Carolina OIF/OEF veterans. Unfortunately, the majority (65%) of OIF/OEF veterans have not sought care through the VHA system. It is very possible that veterans who seek VHA care differ from those veterans who do not. At this time there is no systematic and accessible system that tracks the health needs of veterans not served by VHA, so analysis of VHA data remains the best and currently only method to estimate the health needs of the entire group.

It is also likely that the needs of OIF/OEF veterans will change over time. It has already been documented that screening tools used to identify posttraumatic stress among recently returning veterans likely underestimate the prevalence of this disease, and identified cases will increase over time.⁴

Furthermore, much of the data presented here derive from specialized queries performed explicitly for this manuscript and may not be completely reproducible. **NCMJ**

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REFERENCES

- 1 Gulf War Veterans Information System, May 2007 Summary Report. Released June 30th, 2007. Department of Veterans Affairs Web site. www1.va.gov/rac-gwvi/docs/GWVIS_May2007.pdf. Accessed December 11, 2007.
- 2 Kang H. Analysis of VA Health Care Utilization Among US Southwest Asian War Veterans. Operation Iraqi Freedom and Operation Enduring Freedom. Washington, DC: Office of Public Health and Environmental Hazards, Veterans Affairs Health Administration; July 2007.
- 3 Veterans Affairs Mid-Atlantic Health Care Network Home Web site. <http://www.visn6.va.gov/>. Accessed December 11, 2007.
- 4 Milliken CS, Auchterlonie JL, Hoge CW. Longitudinal assessment of mental health problems among active and reserve component soldiers returning from the Iraq War. *JAMA*. 2007; 298(18):2141-2148.