



Department of Veterans Affairs Office of Inspector General

Healthcare Inspection

Review of the Veterans Health Administration's Use of Appropriated Funds for Research

To Report Suspected Wrongdoing in VA Programs and Operations

**Telephone: 1-800-488-8244 between 8:30AM and 4PM Eastern Time,
Monday through Friday, excluding Federal holidays**

E-Mail: yaoighotline@va.gov

Contents

	Page
Executive Summary	i
Introduction	1
Summary	1
Background	1
Scope and Methodology	2
Results and Conclusions	3
Issue 1. Use of the FY07 Medical Research Appropriation	3
Issue 2. Conditions for Which Veterans Received Medical Care in FY08	5
Issue 3. Medical Needs and Research Challenges	7
Conclusions and Comments	8
 Appendixes	
A. Under Secretary for Health Comments	9
B. VERA Research Support FY 2007	11
C. Diagnostic Codes of Conditions for Which Veterans Received Care in FY08	14
D. OIG Contact and Staff Acknowledgments	21
E. Report Distribution	22

Executive Summary

As required by the Military Construction, Veterans Affairs, and Related Agencies Appropriation Bill, fiscal year 2009 (FY09), the VA Office of Inspector General (OIG), Office of Healthcare Inspections (OHI), completed a review of VA research and its relevance to veterans. Because Medical and Prosthetic Appropriation funds are available to VA for 2 years, this report addresses the FY07 appropriation. The purposes of the evaluation were to (1) describe the project areas for which these funds were obligated, (2) delineate the medical requirements of veterans as demonstrated by veteran medical care utilization, and (3) evaluate the relevance of funded research to the demonstrated medical requirements of veterans.

This review addressed (1) the obligations of funds by the commodities purchased by the grant holders and division managers and (2) the categorization of research protocols according into Designated Research Areas (DRAs). DRAs were developed by VHA R&D as a mechanism for reporting to Congress by categorizing the areas of research to which appropriated funds have been assigned.

For a perspective on whether VA research efforts are appropriate to the needs of veterans, we analyzed the use of VA healthcare facilities during FY08 (October 1, 2007 – September 30, 2008). We used the principal discharge diagnosis for all hospitalizations and ranked each of these diagnoses by frequency. For the 100 most frequently recorded discharge diagnoses, we combined those for closely related conditions and added additional diagnoses for related conditions not included in the top 100. For an assessment of outpatient conditions, we used the primary encounter diagnosis and followed the same procedure as for hospitalizations.

For VA, the medical conditions for which veterans were hospitalized and/or treated as outpatients in FY08 correspond well to VHA's DRAs. In particular, mental illness, substance abuse, and the common disorders of aging were the most frequent reasons veterans utilized VA health care facilities. These conditions correspond closely to the top three areas of VA research funding: mental health, aging, and health systems. VA's research into health systems is especially relevant because of its emphasis on the delivery of and access to high quality care. In addition, VA devotes substantial funding to research on traumatic injury and to military and environmental exposures.

We concluded that appropriated funds for VA research address the broad spectrum of medical issues with which veterans contend. Nevertheless, VHA's reporting on appropriated funds for research could be more transparent and detailed through the use of current technologies.

Introduction

Summary

As required by the Military Construction, Veterans Affairs, and Related Agencies Appropriation Bill, fiscal year 2009 (FY09), the VA Office of Inspector General (OIG), Office of Healthcare Inspections (OHI), completed a review of VA research and its relevance to veterans. Because Medical and Prosthetic Appropriation funds are available to VA for 2 years, this report addresses the FY07 appropriation. The purposes of the evaluation were to (1) describe the project areas for which these funds were obligated, (2) delineate the medical requirements of veterans as demonstrated by veteran medical care utilization, and (3) evaluate the relevance of funded research to the demonstrated medical requirements of veterans.

Background

In concert with title 38 U.S.C., section 7303, the Medical and Prosthetic Research Program (Medical Research) focuses on research into the special healthcare needs of veterans. VA is tasked with applying new knowledge to veterans' health care. Management of VA medical research is housed in the Office of Research and Development (R&D) within the Veterans Health Administration (VHA). VA's R&D mission is to "discover knowledge and create innovations that advance the health and care of veterans and the nation."¹

VA R&D operations incorporate several administrative divisions. The Biomedical Laboratory division supports basic science, preclinical research. The Clinical Science division focuses on developing treatments to medical conditions affecting veterans through a variety of strategies including clinical trials. The Health Services division supports studies to identify and promote improvements in the delivery of health care to veterans. Developing approaches for assisting those who are coping with serious illness and impediments is the focus of the Rehabilitation division. The Program for Research Integrity Development and Education (PRIDE) and the Technology Transfer Program are two additional groups that support the VA research mission.

VA research is designed to address VA strategic goals with emphasis on research topics relevant to service-connected disabilities and illness. The research priorities established by President's Interagency Science and Technology group also influence the determination of VA research priorities. VA strives to ensure that research is of the highest quality. A peer review system in accordance with the Federal Advisory Committee Act works to ensure research grants are awarded based on merit. Local facility support is required before a research grant is funded. Additional oversight is provided by the VA National Research Advisory Council (which meets twice a year).

¹ FY 2009 Budget Submission, Department of Veterans Affairs, Vol 2. Pg 2A-1.

Advice from a wide variety of specialty scientific groups, which advise VA leadership on topics of particular national interest, provide VA leadership with input from national experts. VA R&D's PRIDE group undertakes a number of educational activities to ensure the protection of veterans who serve as subjects in VA research activities.

Total VA medical R&D resources for FY07 were approximately \$1,690 million. These funds were derived from several sources. The Military Construction, Veterans Affairs, and Related Agencies Appropriations Bill provided funding under the Medical and Prosthetic Research account of \$413 million, with an additional \$32.5 million available from the 2007 Emergency Supplemental legislation for a total of approximately \$446 million. The Military Services, Medical Administration, and Medical Facilities Appropriation of the Military Construction, Veterans Affairs, and Related Agencies Appropriations Bill provided \$373 million in one year research support funding which was distributed through the Veterans Equitable Resource Allocation (VERA) process (see Appendix B for a station breakout of VERA funding). Funding from other federal resources was approximately \$669 million, with other non-federal funding of approximately \$202 million. This review will focus upon the uses for which the Medical and Prosthetic Research funds (\$446 million) were applied, as these were the primary funds under the control of VA to ensure research addresses the needs of veterans. The Medical Research Appropriation supported approximately 3,175 full time employees in FY07.

Scope and Methodology

For this review we examined budget and other relevant documents and obtained additional data from VHA financial managers. To elucidate the process by which appropriated funds are assigned to specific areas of research and to determine how research projects are reported by subject area, we spoke with research administrators within VA and at the National Institutes of Health (NIH).

For one perspective on whether VA research efforts are appropriate to the needs of veterans, we analyzed the use of VA healthcare facilities during FY08 (October 1, 2007 – September 30, 2008). We used the principal discharge diagnosis for all hospitalizations and ranked each of these diagnoses by frequency.² For the 100 most frequently recorded discharge diagnoses, we combined those for closely related conditions and added additional diagnoses for related conditions not included in the top 100. For an assessment of outpatient conditions, we used the primary encounter diagnosis³ and followed the same procedure as for hospitalizations. Only outpatient encounters with associated diagnostic codes were included.

² VA Patient Treatment File.

³ VA National Patient Care file.

We conducted the review in accordance with *Quality Standards for Inspections* published by the President's Council on Integrity and Efficiency.

Results and Conclusions

Issue 1: Use of the FY07 Medical Research Appropriation

The use of the FY07 Medical Research Appropriation can be analyzed in several ways. This review will address (1) the obligations of funds by the commodities purchased by the grant holders and division managers and (2) the categorization of research protocols according into Designated Research Areas (DRAs). DRAs were developed by VHA R&D as a mechanism for reporting to Congress by categorizing the areas of research to which appropriated funds have been assigned.

Department of Veterans Affairs budget documents⁴ provide data on the use of the FY07 research appropriation by sub-activity in the table below.

Table 1 - Obligations by Sub-Activity		
(Dollars in Thousands)		
	2007	2007
		Projects
Research Programs (Investigator Initiated)	\$266,157	1590
Career Development	\$53,841	434
Centers of Excellence	\$45,758	87
Special Research Initiatives	\$6,347	
Service Directed Research	\$2,137	20
Research Compliance (PRIDE)	\$2,908	
R&D Specific Costs	\$53,370	
Franchise Fund	\$1,258	
Reimbursable Programs	\$47,424	
Total Obligations	\$479,200	
Total Appropriation	\$446,480	

⁴ Ibid.

Data on the obligation of funds by commodity class for FYs 07–09 is provided in Table 2 below.

Table 2 - Obligations by Object			
	2007	2008	2009
Personal Services	\$257,723	\$272,520	\$277,449
Travel & Transportation of Persons:			
Employee Travel	\$4,037	\$4,116	\$4,116
All Other	\$206	\$62	\$62
Subtotal	\$4,243	\$4,178	\$4,178
Transportation of Things	\$161	\$173	\$173
Communication, Utilities & Misc.	\$2,600	\$3,562	\$3,562
Printing & Reproduction	\$366	\$448	\$448
Other Services:			
Medical Care Contracts & Agree. w/Insts. & Orgs.	\$43,297	\$65,275	\$62,186
Fee Basis – Medical & Nursing Services, On-Station	\$759	\$1,144	\$1,144
Consultants & Attendance	\$10,832	\$16,331	\$16,331
Scarce Medical Specialist	\$918	\$1,384	\$1,384
Repair of Furniture & Equipment	\$1,669	\$2,516	\$2,516
Maintenance & Repair Services	\$516	\$778	\$778
Contract Hospital Cost	\$0	\$10	\$10
Administrative Contractual Services	\$90,179	\$134,116	\$100,474
Training Contractual Services	\$593	\$894	\$894
Subtotal	\$148,763	\$222,448	\$185,717
Supplies & Materials	\$30,995	\$24,472	\$24,472
Equipment	\$34,158	\$25,827	\$20,827
Lands & Structures	\$191	\$174	\$174
Total Obligations	\$479,200	\$553,802	\$517,000

A review of Research R&D funding by DRA provides data upon which to gain an understanding of the relative funding of research areas.

Table 3 - Designated Research Areas by FY07 Appropriation (Dollars in Thousands)		
	2007 Actual	2007 Percent
Acute & Traumatic Injury	\$29,431	6.59
Aging	\$42,805	9.59
Autoimmune, Allergic & Hematopoietic Disorders	\$14,554	3.26
Cancer	\$35,377	7.92
CNS Injury & Associated Disorders	\$23,973	5.37
Degenerative Diseases of Bones & Joints	\$6,020	1.35
Dementia & Neuronal Degeneration	\$8,583	1.92
Diabetes & Major Complications	\$24,484	5.48
Digestive Diseases	\$12,558	2.81
Emerging Pathogens/Bio-Terrorism	\$331	0.07
Health Systems	\$36,921	8.27
Heart Disease	\$30,919	6.93
Infectious Diseases	\$22,614	5.06
Kidney Disorders	\$14,257	3.19
Lung Disorders	\$7,677	1.72
Mental Illness	\$53,450	11.97
Military Occupations & Environmental Exposures	\$30,371	6.80
Other Chronic Diseases	\$204	0.05
Sensory Loss	\$15,617	3.50
Special Populations	\$15,797	3.54
Substance Abuse	\$20,537	4.60
	\$446,480	100.00

VA R&D funds are distributed nationally to VA researchers through several programs designed to support researchers with a variety of research experience and expertise across a broad basic science, clinical, and epidemiologic framework.

Issue 2: Conditions for Which Veterans Received Medical Care in FY08

One approach to an evaluation of VHA's use of its appropriation for research is to consider the conditions for which patients received care. During FY08, 465,195 individual patients (median age, 61) were discharged following 804,913 hospitalizations. Nearly 60 percent of all principal discharge diagnoses are included in 20 diagnostic groups, as shown in Table 4.

	Diagnostic Group	Number of hospitalizations	Percent
1	Ischemic Heart Disease	47,606	5.9
2	Alcohol Related Diseases	41,691	5.2
3	Affective Disorders	38,827	4.8
4	Disorders of the Kidney & Bladder	32,712	4.1
5	Respiratory & Chest Symptoms	29,266	3.6
6	Heart Failure	27,140	3.4
7	Pneumonia	26,581	3.3
8	Chronic Airway Obstruction	21,980	2.7
9	Musculoskeletal Disorders	21,976	2.7
10	Cerebrovascular Disease	19,923	2.5
11	Cardiac Dysrhythmias	19,666	2.4
12	Schizophrenia & Related Disorders	18,877	2.3
13	PTSD & Adjustment Reaction	17,183	2.1
14	General Symptoms	15,788	2.0
15	Skin & Subcutaneous Tissue Infections	14,552	1.8
16	Drug Related Diseases	14,522	1.8
17	Diabetes Mellitus	13,460	1.7
18	Fluid, Electrolyte & Acid-Base Disorders	9,699	1.2
19	Anemia	8,636	1.1
20	Malignancies of the Lungs & Pleura	8,214	1.0
	All other diagnoses	356,614	44.3
	TOTAL	804,913	100.0

Table 4. Principal discharge diagnoses for VA acute care hospitalizations in FY08, by diagnostic group. PTSD = post-traumatic stress disorder. See Appendix C for specific ICD-9 codes associated with each diagnostic group.

During FY08, 5,186,305 individual patients (median age, 63) had 65,336,412 outpatient clinical encounters at VA healthcare facilities. Approximately half of all primary encounter diagnoses are included in 20 diagnostic groups, as shown in Table 5.

	Diagnostic Group	Number of Encounters	Percent
1	Diabetes Mellitus	3,288,163	5.0
2	PTSD & Adjustment Reaction	3,264,231	5.0
3	Hypertension	3,145,922	4.8
4	Musculoskeletal Conditions	3,077,843	4.7
5	Drug Related Diseases	2,446,823	3.7
6	Affective Disorders	2,396,110	3.7
7	Eye Disorders	1,991,618	3.0
8	Alcohol Related Diseases	1,440,120	2.2
9	Schizophrenia & Related Disorders	1,429,094	2.2
10	Dental Disorders	1,353,425	2.1
11	Hearing Loss	1,070,660	1.6
12	Hyperlipidemia	1,022,832	1.6
13	Skin & Nail Disorders	936,123	1.4
14	Ischemic Heart Disease	879,807	1.3
15	Chronic Airway Obstruction	709,525	1.1
16	Respiratory & Chest Symptoms	701,022	1.1
17	Anxiety & Related Disorders	643,494	1.0
18	Cardiac Dysrhythmias	557,481	0.9
19	Malignant Neoplasms of the Prostate	472,738	0.7
20	Psychosocial Problems	451,636	0.7
	All other diagnoses	34,057,745	52.1
	TOTAL	65,336,412	100.0

Table 5. Primary encounter diagnoses for VA outpatient visits during FY08, by diagnostic group. PTSD = post-traumatic stress disorder. See Appendix C for specific ICD-9 codes associated with each diagnostic group.

Issue 3: Medical Needs and Research Challenges

Any approach to establishing a focus for medical research must incorporate numerous factors. For VA, the recognized health care needs of veterans is one important component, and medical conditions for which veterans were hospitalized and/or treated as outpatients in FY08 correspond well to VHA's DRAs (Table 3). In particular, mental illness, substance abuse, and the common disorders of aging were the most frequent reasons veterans utilized VA health care facilities. These conditions correspond closely to the top three areas of VA research funding: mental health, aging, and health systems. VA's research into health systems is especially relevant because of its emphasis on the delivery of and access to high quality care. In addition, VA devotes substantial funding to research on traumatic injury and to military and environmental exposures.

The classification of research projects by DRA for reporting purposes is somewhat arbitrary. Many research protocols can plausibly be classified in several ways. For example, research into the management of behavioral problems in patients with Alzheimer's Disease could conceivably be categorized in several of VHA's DRAs – Aging, Dementia & Neuronal Degeneration, Health Systems, Mental Illness, Other Chronic Diseases, and Special Populations. Adding to the difficulties inherent in classifying projects is VHA's method for assigning protocols to DRAs, which is the responsibility of the portfolio manager for projects in a specific area.

Transparency in the use of appropriated and non-appropriated funds with respect to their use and results is important information for taxpayers, the medical community, and veterans. VHA's reporting on appropriated funds for research could be more transparent and detailed through the use of available technologies. For example, the Research Portfolio Online Reporting Tool (RePort) used by NIH permits a more in-depth analysis of the uses of research funds with a richer set of categories for protocols.⁵

Aside from the problem of categorizing any specific research effort, attempts to direct research into a particular area of interest are resisted by the realities of scientific inquiry. The degree to which scientific knowledge has advanced and the methods available to investigators varies widely across disciplines.

Conclusions and Comments

Appropriated funds for VA research address the broad spectrum of medical issues with which veterans contend. VHA's reporting of how research funds are utilized could be more detailed and transparent. The Under Secretary for Health concurred with the draft report and agreed that improvements in reporting how research funds are utilized would further strengthen VHA's research program. See Appendix A pages 9–10 for the full text of these comments.

(original signed by:)

JOHN D. DAIGH, JR., M.D.
Assistant Inspector General for
Healthcare Inspections

⁵ <http://report.nih.gov/rcdc/>. Accessed February 17, 2009.

Under Secretary for Health Comments

**Department of
Veterans Affairs**

Memorandum

Date: Feb 26, 2009

From: Under Secretary for Health (10)

Subject: **OIG Draft Report, Review of the Veterans Health Administration's Use of Appropriated Funds for Research, Project No. 2008-03007-HI-0195 (WebCIMS 423547)**

To: Assistant Inspector General for Health Care (54)

1. I have reviewed the draft report, and I appreciate the thoughtful review of VHA's Medical and Prosthetics Research Program. I concur with the draft report and agree that improvements in reporting how research funds are utilized would further strengthen VHA's research program.

2. I am encouraged by your recognition that any approach to establishing a focus for medical research must incorporate numerous factors. As you concluded in your report, in addition to disease prevalence and cost, there are other factors that appropriately determine the research agenda, including the impact of a disease or condition on the overall health of the patient, the ripeness of a particular problem for scientific inquiry, and VHA's systems capability for undertaking the necessary investigations. Nevertheless, there is a close relationship between the areas of greatest research funding and those with greatest health care burden. VHA carefully maintains this relationship by using a funding mechanism that allows clinician-investigators to submit research proposals that will ultimately benefit patients whom they see every day in their clinics. VHA's Office of Research and Development (ORD) supplements this mechanism by providing special funding opportunities for issues, such as traumatic limb injuries, that do not reflect a high proportion of the patient population, but instead represent areas of investigation that are uniquely important to VA's care of Veterans. In addition, ORD also funds projects for systems research intended to improve VHA's quality of care.

3. VHA has for some time recognized the limitations imposed by both the classification of research projects according to Designated Research Areas

Page 2

OIG Draft Report, *Review of the Veterans Health Administration's Use of Appropriated Funds for Research*, Project No. 2008-03007-HI-0195 (WebCIMS 423547)

(DRAs) and the hand-coding of research proposals. As a result, VA and the National Institutes of Health (NIH) recently entered into an interagency agreement by which electronic submission and review of VHA research proposals is managed using a system developed by NIH. The initial implementation of this change is complete, although some application types, such as those supporting career development awards, await development of corresponding NIH software.

4. ORD is coordinating with NIH to determine whether their automated Research Portfolio Online Reporting Tool, otherwise known as the Research, Condition, and Disease Categories (RCDC) classification, can be made available for VA use. NIH first utilized this tool in FY 2008 to analyze FY 2007 expenditures and wants to ensure that the tool is working properly before discussing its use with other Federal agencies. VHA and NIH discussions continue, but are complicated by the fact that current NIH RCDC classifications do not adequately align with some conditions that are particularly important to VA's care of Veterans. Thus, while I am optimistic that improvements in reporting are forthcoming, I also recognize that any automated reporting tool will have shortcomings when viewed from certain perspectives.

5. Thank you for the opportunity to review this report. If you have any questions, please contact Margaret Seleski, Director, Management Review Service (10B5) at (202) 461-8470.

(original signed by:)

Michael J. Kussman, MD, MS, MACP

National Research Support Cost from Medical Appropriation⁶ FY 07

Station Name	FTEE	Direct Cost	Indirect Cost	Total Research Support Cost
TOGUS, ME	0	0	895	895
WHITE RIVER JCT, VT	3	494,308	985,096	1,479,404
BEDFORD, MA	12	1,608,763	1,537,595	3,146,358
BOSTON, MA	37	5,674,826	5,474,045	11,148,871
MANCHESTER, NH	0	0	138,436	138,436
PROVIDENCE, RI	4	751,508	995,586	1,747,094
WEST HAVEN, CT	24	4,665,980	3,444,090	8,110,070
UPSTATE N.Y. HCS, NY	33	5,231,107	1,814,204	7,045,311
BRONX, NY	32	5,049,311	2,794,468	7,843,779
EAST ORANGE, NJ	18	2,636,926	1,606,099	4,243,024
MONTROSE VA HUDSON HCS, NY	0	77,405	24,928	102,332
N.Y. HARBOR HCS	12	2,154,711	1,429,559	3,584,270
NORTHPORT, NY	6	1,089,852	413,178	1,503,029
WILMINGTON, DE	0	0	0	0
CLARKSBURG, WV	1	144,258	57,121	201,379
COATESVILLE, PA	6	609,968	174,882	784,850
LEBANON, PA	1	68,117	48,316	116,433
PHILADELPHIA, PA	40	6,907,534	2,317,667	9,225,200
PITTSBURGH-UNIV DR, PA	37	6,451,479	3,301,104	9,752,583
WILKES BARRE, PA	1	76,654	19,382	96,036
BALTIMORE, MD	36	6,753,701	4,837,276	11,590,977
WASHINGTON, DC	11	1,817,551	1,516,009	3,333,560
DURHAM, NC	45	6,960,706	4,237,499	11,198,206
FAYETTEVILLE, NC	0	0	401	401
HAMPTON, VA	1	131,765	75,138	206,903
ASHEVILLE-OTTEEN, NC	3	369,526	64,256	433,782
RICHMOND, VA	9	1,729,651	621,716	2,351,367
SALEM, VA	4	443,931	131,532	575,463
SALISBURY, NC	4	469,408	136,662	606,070
ATLANTA, GA	20	3,879,485	6,123,922	10,003,407
AUGUSTA, GA	1	149,718	469,366	619,083
BIRMINGHAM, AL	14	2,445,390	1,448,092	3,893,482
CHARLESTON, SC	16	2,830,015	1,766,858	4,596,873
COLUMBIA, SC	1	269,544	203,510	473,055
TUSCALOOSA, AL	7	700,729	375,504	1,076,234
BAY PINES, FL	4	713,294	413,932	1,127,226
MIAMI, FL	39	4,995,685	2,022,327	7,018,012

⁶ This report is generated monthly using the Estimated ALB. This report calculates the percentage of indirect cost (cost centers 400 thru 599 and 957 excluding 543) of a facility's overall cost (excludes the 300 series of cost centers, DSS Overhead and Depreciation ALBCCs). This percentage is then applied to the research (or education) ALBCCs (by account code) to derive the overall research (or education) support cost by facility. In addition, for the Research Support Cost Report, the Research Appropriation amount (obtained from FMS) is used to calculate its applicable support cost.

Appendix B

W PALM BEACH, FL	0	0	530	530
N FL/S GA HCS	28	3,802,783	2,203,022	6,005,805
SAN JUAN, PR	6	773,065	226,531	999,596
TAMPA, FL	38	3,880,684	1,657,758	5,538,442
HUNTINGTON, WV	2	247,435	47,254	294,689
LEXINGTON-LEESTOWN, KY	7	1,336,973	549,156	1,886,129
LOUISVILLE, KY	5	1,001,875	506,727	1,508,603
MEMPHIS, TN	13	1,988,272	1,919,467	3,907,739
MOUNTAIN HOME, TN	5	571,491	403,795	975,286
VA MID TENN HCS NASH, TN	27	3,582,685	1,827,493	5,410,178
CHILLICOTHE, OH	0	10,162	2,774	12,936
CINCINNATI, OH	15	2,724,613	983,127	3,707,740
CLEVELAND-WADE PARK, OH	15	2,563,642	2,977,465	5,541,107
DAYTON, OH	2	341,856	77,382	419,238
COLUMBUS-IOC, OH	1	42,832	9,292	52,125
ANN ARBOR HCS, MI	37	5,597,534	3,287,078	8,884,612
ILLIANA HCS DANVILLE, IL	1	109,803	24,408	134,211
DETROIT VAMC, MI	4	748,228	911,433	1,659,661
INDIANAPOLIS-10TH ST, IN	20	3,725,699	1,324,363	5,050,061
NORTHERN INDIANA HCS, IN	0	0	1,552	1,552
SAGINAW, MI	0	0	501	501
VA CHICAGO HCS, IL	10	1,841,980	1,702,120	3,544,100
NORTH CHICAGO, IL	3	455,944	118,090	574,034
HINES, IL	10	1,879,871	2,976,227	4,856,099
MADISON, WI	13	1,850,930	792,394	2,643,324
MILWAUKEE, WI	16	2,727,009	1,295,478	4,022,487
VAMC HEARTLAND-W KANSAS, MO	7	1,366,383	991,079	2,357,463
VA HEARTLAND-E VH, MO	14	3,012,989	969,354	3,982,343
GULF COAST HCS, MS	0	0	628	628
FAYETTEVILLE, AR	2	126,797	22,823	149,620
HOUSTON, TX	30	6,530,622	2,502,854	9,033,475
JACKSON, MS	6	1,117,389	408,587	1,525,977
LITTLE ROCK, AR	29	5,227,759	2,067,665	7,295,423
MUSKOGEE, OK	0	11,442	2,818	14,260
SOUTHEAST LA HCS, LA	2	190,074	374,043	564,117
OKLAHOMA CITY, OK	4	719,239	521,280	1,240,519
SHREVEPORT, LA	1	143,227	85,890	229,117
DALLAS, TX	18	5,655,763	4,064,188	9,719,952
SAN ANTONIO, TX	34	5,385,332	2,630,851	8,016,183
VA CENTRAL TEXAS HCS, TX	3	501,503	247,901	749,405
NEW MEXICO HCS, NM	10	2,037,262	3,541,651	5,578,913
AMARILLO HCS	3	353,003	80,669	433,672
PHOENIX, AZ	22	2,918,587	846,337	3,764,924
SOUTHERN ARIZONA HCS, AZ	9	1,297,144	656,094	1,953,238
DENVER, CO	21	3,764,558	1,792,344	5,556,903
SALT LAKE CITY HTHCARE, UT	17	3,298,136	1,258,511	4,556,647
SHERIDAN, WY	0	0	0	0
BOISE, ID	2	265,317	164,887	430,204
PORTLAND, OR	47	6,794,557	4,134,446	10,929,004

Appendix B

VA ROSEBURG HCS, OR	0	0	622	622
PUGET SOUND HCS, WA	73	12,256,099	4,712,960	16,969,059
WALLA WALLA, WA	0	0	375	375
HONOLULU, HI	0	6,014	85,740	91,754
CENTRAL CALIFORNIA HCS, CA	4	698,042	170,164	868,207
NCHC MARTINEZ, CA	9	1,871,001	1,085,642	2,956,643
PALO ALTO-PALO ALTO, CA	39	7,873,922	6,117,634	13,991,556
SIERRA NEVADA HCS, NV	1	274,806	77,169	351,976
SAN FRANCISCO, CA	43	8,550,505	4,199,002	12,749,507
VA SOUTHERN NEVADA HCS, NV	1	140,904	39,421	180,324
VA LONG BEACH HCS, CA	15	2,389,201	1,288,390	3,677,591
LOMA LINDA, CA	8	1,332,579	986,310	2,318,890
VA SAN DIEGO HCS, CA	62	8,015,012	4,317,451	12,332,463
GREATER LA HCS, CA	40	7,295,271	5,509,387	12,804,658
FARGO, ND	0	0	11,232	11,232
SIOUX FALLS, SD	0	0	35,408	35,408
FORT MEADE, SD	2	191,997	48,196	240,193
MINNEAPOLIS, MN	36	6,709,887	3,049,069	9,758,955
VA NEB-WESTERN IA HCS, NE	29	4,692,913	3,849,349	8,542,262
ST CLOUD, MN	0	0	164	164
	1,405	233,173,411	139,794,656	372,968,067

Diagnostic Codes of Conditions for Which Veterans Received Medical Care in FY08

VHA adheres to ICD-9 nomenclature.⁷ Diagnostic group headings used in this report describe logical sets of specific ICD-9 terms.

Principal Inpatient Discharge Diagnostic Groups and Predominant Diagnoses		
	Diagnosis Group and Predominant Diagnoses within Group	Number (percent)
1	Ischemic Heart Disease (410-414)	47,606 (6.4)
	COR ATHEROSCL NATV C VSL (414.01)	23,233
	SUBENDO INFARCT, INITIAL (410.71)	9,276
	COR ATHEROSCL UNSP TYP-VES (414)	3,558
	All other	11,539
2	Alcohol Related Disease (291, 303, 305-305.03)	41,691 (5.6)
	ALCOH DEP NEC/NOS-CONTIN (303.91)	14,026
	ALCOHOL WITHDRAWAL (291.81)	7,484
	ALCOH DEP NEC/NOS-UNSPEC (303.9)	7,351
	AC ALCOHOL INTOX-CONTIN (303.01)	3,842
	All other	8,988
3	Affective Disorders (296, 311, 292.84)	38,827 (5.2)
	DEPRESSIVE DISORDER NEC (311)	6,133
	DRUG-INDUCED MOOD DISORD (292.84)	4,840
	RECURR DEPR DISORDER-UNSP (296.3)	3,196
	DEPRESS DISORDER-UNSPEC (296.2)	2,607
	RECUR DEPR DISORDER-SEVERE (296.33)	2,579
	BIPOLAR DISORDER NOS (296.8)	2,498
	REC DEPR DISORDER-PSYCHOTIC (296.34)	2,197
	EPISODIC MOOD DISORD NOS (296.9)	1,834
	BIPOL I CUR DEPRES NOS (296.5)	1,831
	RECURR DEPR DISORDER-MOD (296.32)	1,414
	BIPOL I CURRNT MANIC NOS (296.4)	1,204
	BIPOLOR I CURRENT NOS (296.7)	1,169
	All other	7,325
4	Disorders of Kidney & Bladder (580-599)	32,712 (4.4)
	URIN TRACT INFECTION NOS (599)	10,567
	ACUTE RENAL FAILURE NOS (584.9)	9,119
	CALCULUS OF KIDNEY (592)	1,840
	CALCULUS OF URETER (592.1)	1,659
	HEMATURIA (599.7)	1,487
	END STAGE RENAL DISEASE (585.6)	1,300
	All other	6,740
5	Respiratory & Chest Symptoms (786)	29,266 (3.9)
	CHEST PAIN NEC (786.59)	16,965

⁷ Hart AC, Hopkins CA, Ford B, Eds. International Classification of Diseases, 9th Revision. Salt Lake City: Ingenix, 2005.

Appendix C

	CHEST PAIN NOS (786.05)	8,418
	All other	3,883
6	Heart Failure (428)	27,140 (5.5)
	CONGEST HEART FAIL UNSPECIFIED (428)	22,791
	All other	4,349
7	Pneumonia (480-486, 507)	26,581 (3.6)
	PNEUMONIA, ORGANISM NOS (486)	19,481
	FOOD/VOMIT PNEUMONITIS (507)	3,289
	All other	3,811
8	Chronic Airway Obstruction (490-492, 496)	21,980 (2.9)
	OBS CHR BRONC W(AC) EXAC (491.21)	16,884
	CHR AIRWAY OBSTRUCT NEC (496)	2,249
	OBS CHR BRONC W AC BRONC (491.22)	1,649
	All other	1,198
9	Musculoskeletal Disorders (715, 717-722, 724)	21,976 (2.9)
	LOC OSTEOARTH NOS-L/LEG (715.36)	5,193
	LOC OSTEOARTH NOS-PELVIS (715.35)	1,924
	OSTEOARTHROS NOS-L/LEG (715.96)	1,800
	SPINAL STENOSIS-LUMBAR (724.02)	1,686
	LUMBAR DISC DISPLACEMENT (722.1)	1,484
	All other	9,889
10	Cerebrovascular Disease (430-438)	19,923 (2.7)
	CRB ART OCCL, UNSP W/ CRB INF (434.91)	5,743
	OCCL&STEN/CAR ART W/O CRB INF (433.1)	3,887
	TRANS CEREB ISCHEMIA NOS (435.9)	3,040
	LATE EFF CEREB/VASC,HEMIPL,UNS (438.2)	1,106
	All other	6,147
11	Cardiac Dysrhythmias (427)	19,666 (2.6)
	ATRIAL FIBRILLATION (427.31)	9,502
	CARDIAC DYSRHYTHMIAS NEC (427.89)	3,696
	ATRIAL FLUTTER (427.32)	2,787
	PAROX VENTRIC TACHYCARD (427.1)	1,354
	SINOATRIAL NODE DYSFUNCT (427.81)	1,079
	All other	1,248
12	Schizophrenia & Related Disorders (295)	18,877 (2.5)
	SCHIZOAFFECTIVE DIS NOS (295.7)	4,899
	PARANOID SCHIZO-CHRONIC (295.32)	3,126
	PARAN SCHIZO-CHR/EXACERB (295.34)	2,376
	PARANOID SCHIZO-UNSPEC (295.3)	2,332
	SCHIZOAFFTV DIS-CHR/EXAC (295.74)	1,408
	SCHIZOPHRENIA NOS-UNSPEC (295.9)	1,154
	SCHIZOAFFECTIVE DIS-CHR (295.72)	1,030
	All other	2,552
13	PTSD & Adjustment Reaction (309)	17,183 (2.3)

Appendix C

	POSTTRAUMATIC STRESS DIS (309.81)	13,821
	ADJUSTMNT DIS W DEPRESSN (309)	1,603
	All other	1,759
14	General Symptoms (780)	15,788 (2.1)
	SYNCOPE AND COLLAPSE (780.2)	6,716
	OTHER CONVULSIONS (780.39)	2,630
	ALTERED MENTAL STATUS (780.97)	1,827
	DIZZINESS AND GIDDINESS (780.4)	1,352
	OTHER MALAISE AND FATIGUE (780.79)	1,150
	FEVER (780.6)	1,076
	All other	1,037
15	Skin & Subcutaneous Tissue Infections (680-686)	14,552 (1.9)
	CELLULITIS OF LEG (682.6)	7,074
	CELLULITIS OF FOOT (682.7)	1,516
	CELLULITIS OF ARM (682.3)	1,303
	CELLULITIS OF TRUNK (682.2)	1,150
	All other	3,509
16	Drug Related Disease (292, 304, 305.1-305.9)	14,522 (1.9)
	COCAINE DEPEND-CONTIN (304.21)	3,065
	COCAINE DEPEND-UNSPEC (304.2)	2,179
	DRUG WITHDRAWAL (292)	1,510
	OPIOID DEPENDENCE CONT (304.01)	1,416
	All other	6,352
17	Diabetes Mellitus (250)	13,460 (1.8)
	DMII OTH NT ST UNCNTRLD (250.8)	4,228
	DMII WO CMP UNCNTRLD (250.02)	1,352
	DMII NEURO NT ST UNCNTRL (250.6)	1,240
	All other	6,640
18	Fluid, Electrolyte & Acid-Base Disorders (276)	9,699 (1.3)
	DEHYDRATION (276.51)	4,198
	HYPOSMOLALITY (276.1)	1,736
	HYPERPOTASSEMIA (276.7)	1,304
	All other	2,461
19	Anemia (280-285)	8,636 (1.2)
	ANEMIA NOS (285.9)	2,677
	IRON DEFIC ANEMIA NOS 9280.9)	1,792
	All other	4,167
20	Malignant Neoplasms of Lungs & Pleura (162-163)	8,214 (1.1)
	MAL NEO BRONCH/LUNG NOS (162.9)	3,206
	MAL NEO UPPER LOBE LUNG (162.3)	2,584
	MAL NEO LOWER LOBE LUNG (162.5)	1,137
	All other	1,287
	All other diagnoses	298,403 (40.0)
	TOTAL	746,702 (100.0)

Appendix C

Primary Outpatient Encounter Diagnostic Groups and Predominant Diagnoses		
	Diagnostic Group and Predominant Diagnoses within Group	Number (percent)
1	Diabetes Mellitus (250, V65.46)	3,288,163 (5.0)
	DMII WO CMP NT ST UNCNTR (250)	2,510,378
	DMII WO CMP UNCNTRLD (250.02)	197,598
	DMII NEURO NT ST UNCNTRL (250.6)	158,441
	DMI WO CMP NT ST UNCNTRL (250.01)	83,503
	DMII OPHTH NT ST UNCNTRL (250.5)	79,507
	DMII OTH NT ST UNCNTRLD (250.8)	70,069
	All other	188,667
2	PTSD & Adjustment Reaction (309)	3,264,231 (5.0)
	POSTTRAUMATIC STRESS DIS (309.81)	2,988,653
	ADJUST DIS W ANXIETY/DEP (309.28)	100,335
	ADJUSTMENT REACTION NOS (309.0)	83,937
	ADJUSTMNT DIS W DEPRESSN (309)	53,162
	All other	38,144
3	Hypertension (401)	3,145,922 (4.8)
	HYPERTENSION NOS (401.9)	2,970,327
	BENIGN HYPERTENSION (401.1)	172,858
	MALIGNANT HYPERTENSION (401)	2,737
4	Musculoskeletal Disorders (715, 717-722, 724)	3,077,843 (4.7)
	LUMBAGO (724.2)	716,471
	JOINT PAIN-L/LEG (719.46)	274,631
	OSTEOARTHROS NOS-UNSPEC (715.9)	267,927
	JOINT PAIN-SHLDER (719.41)	246,609
	BACKACHE NOS (724.5)	238,763
	JOINT PAIN-ANKLE (719.47)	161,121
	OSTEOARTHRO NOS-OTH SITE (715.98)	105,571
	JOINT PAIN-PELVIS (719.45)	82,456
	OSTEOARTHROS NOS-L/LEG (715.96)	76,317
	LUMBOSACRAL NEURITIS NOS (724.4)	70,352
	All other	837,625
5	Drug Related Disease	2,446,823 (3.7)
	(292, 304, 305.1-305.9, V65.42)	
	OPIOID DEPENDENCE UNSPECIFIED (304)	536,822
	TOBACCO USE DISORDER (305.1)	284,803
	COCAINE DEPEND-UNSPEC (304.2)	264,822
	COMB DRUG DEP NEC-UNSPEC (304.8)	221,750
	OPIOID DEPENDENCE CONT (304.01)	185,640
	OTHER DRUG ABUSE-UNSPEC (305.9)	169,559

Appendix C

	UNSPEC DRUG DEPEND NEC UNSPEC (304.9)	162,505
	COUNSEL-SUBS USE/ABUSE (V65.42)	131,493
	COCAINE DEPEND-CONTIN (304.21)	77,262
	All other	412,167
6	Affective Disorders (296, 311, 292.84)	2,396,110 (3.7)
	DEPRESSIVE DISORDER NEC (311)	915,139
	RECURR DEPR DISORDER-UNSP (296.3)	339,994
	BIPOLOR I CURRENT NOS (296.7)	229,499
	RECURR DEPR DISORDER-MOD (296.32)	141,095
	DEPRESS DISORDER-UNSPEC (296.2)	84,416
	EPISODIC MOOD DISORD NOS (296.9)	74,981
	BIPOLAR DISORDER NOS (296.8)	70,395
	BIPOL I CURRNT MIXED NOS (296.6)	70,316
	All other	470,275
7	Eye Disorders (365-379)	1,991,618 (3.0)
	REFRACTION DISORDER NOS (367.9)	206,767
	PRESBYOPIA (367.4)	205,544
	PRIM OPEN ANGLE GLAUCOMA (365.11)	179,089
	SENILE NUCLEAR CATARACT (366.16)	149,314
	CATARACT NOS (366.9)	144,451
	PREGLAUCOMA NOS (365)	103,737
	OPN ANGL W BORDERLN FIND (365.01)	86,008
	LEGAL BLINDNESS-USA DEF (369.4)	70,942
	GLAUCOMA NOS (365.9)	67,650
	All other	778,116
8	Alcohol Related Disease (291, 303, 305-305.03)	1,440,120 (2.2)
	ALCOH DEP NEC/NOS-UNSPEC (303.9)	881,922
	ALCOH DEP NEC/NOS-REMISS (303.93)	163,238
	ALCOH DEP NEC/NOS-CONTIN (303.91)	149,133
	ALCOHOL ABUSE-UNSPEC (305)	136,735
	All other	109,092
9	Schizophrenia & Related Disorders (295)	1,429,094 (2.2)
	PARANOID SCHIZO-UNSPEC (295.3)	359,088
	SCHIZOAFFECTIVE DIS NOS (295.7)	311,640
	SCHIZOPHRENIA NOS-UNSPEC (295.9)	243,228
	PARANOID SCHIZO-CHRONIC (295.32)	231,641
	SCHIZOAFFECTIVE DIS-CHR (295.72)	107,919
	All other	175,578
10	Dental Disorders (521-523, 525)	1,353,425 (2.1)
	DENTAL DISORDER NOS (525.9)	487,024
	UNSP ACQUIRED ABSENCE TEETH (525.1)	246,614

Appendix C

	UNSPECIFIED DENTAL CARIES (521)	192,287
	ACCRETIONS ON TEETH (523.6)	161,975
	CHRONC PERIODONTITIS NOS (523.4)	87,277
	All other	178,248
11	Hearing Loss (389, V53.2)	1,070,660 (1.6)
	SENSORNEUR LOSS COMB TYP (389.18)	429,416
	ADJUSTMENT HEARING AID (V53.2)	296,883
	SENSORNEUR HEAR LOSS NOS (389.1)	126,277
	HEARING LOSS NOS (389.9)	87,809
	SENSORY HEARING LOSS (389.11)	130,275
12	Hyperlipidemia (272.0 - 272.4)	1,022,832 (1.6)
	HYPERLIPIDEMIA NEC/NOS (272.4)	768,310
	All other	254,522
13	Skin & Nail Disorders (110, 702-703,706-709)	936,123 (1.4)
	DERMATOPHYTOSIS OF NAIL (110.1)	250,167
	ACTINIC KERATOSIS (702)	172,033
	SEBACEOUS CYST (706.2)	62,321
	All other	451,602
14	Ischemic Heart Disease (410-414)	879,807 (1.3)
	CHR ISCHEMIC HRT DIS NOS (414.9)	372,503
	COR ATHEROSCL UNSP TYP-VES (414)	240,337
	COR ATHEROSCL NATV C VSL (414.01)	176,371
	All other	90,596
15	Chronic Airway Obstruction (490-492, 496)	709,525(1.1)
	CHR AIRWAY OBSTRUCT NEC (496)	572,095
	BRONCHITIS NOS (490)	71,578
	All other	65,852
16	Respiratory & Chest Symptoms (786)	701,022 (1.1)
	CHEST PAIN NOS (786.5)	231,574
	SHORTNESS OF BREATH (786.05)	133,295
	COUGH (786.2)	114,239
	CHEST PAIN NEC (786.59)	89,105
	All other	132,809
17	Anxiety and Related Disorders (300)	643,494 (1.0)
	ANXIETY STATE NOS (300)	246,905
	DYSTHYMIC DISORDER (300.4)	163,264
	GENERALIZED ANXIETY DIS (300.02)	121,696
	All other	111,629
18	Cardiac Dysrhythmias (427)	557,481 (0.9)
	ATRIAL FIBRILLATION (427.31)	374,242
	CARDIAC DYSRHYTHMIAS NEC (427.89)	64,494

Appendix C

	All other	118,745
19	Malignant Neoplasms of the Prostate (185)	472,738 (0.7)
20	Psychosocial Problems (V60.0, V62.9)	451,636 (0.7)
	PSYCHOSOCIAL CIRCUM NOS (V62.9)	238,398
	LACK OF HOUSING (V60.0)	213,238
	All other diagnoses	34,057,745 (52.1)
	TOTAL	65,336,412 (100.0)

OIG Contact and Staff Acknowledgments

OIG Contact	John D. Daigh, Jr., M.D. (202) 461-4705
Acknowledgments	Jerome E. Herbers, Jr. M.D. Sandra Crawford

Report Distribution

VA Distribution

Office of the Secretary
Veterans Health Administration
Assistant Secretaries
General Counsel
Veterans Integrated Service Network Directors (1-23)

Non-VA Distribution

House Committee on Veterans' Affairs
House Appropriations Subcommittee on Military Construction, Veterans Affairs, and Related Agencies
House Committee on Oversight and Government Reform
Senate Committee on Veterans' Affairs
Senate Appropriations Subcommittee on Military Construction, Veterans Affairs, and Related Agencies
Senate Committee on Homeland Security and Governmental Affairs
National Veterans Service Organizations
Government Accountability Office
Office of Management and Budget

This report is available at <http://www.va.gov/oig/publications/reports-list.asp>.

**To Report Suspected Wrongdoing in VA Programs and Operations
Call the OIG Hotline – (800) 488-8244**