



Parkinson's Disease: Demographic and Geographic Distribution of Affected Veterans (1998-2002)

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OBJECTIVE: To describe the demographic and geographic distribution of veterans with an ICD-9 CM diagnostic code for Parkinson's Disease (PD) (332.0) within the US Department of Veterans Affairs (VA) health care system during fiscal years 1998-2002.

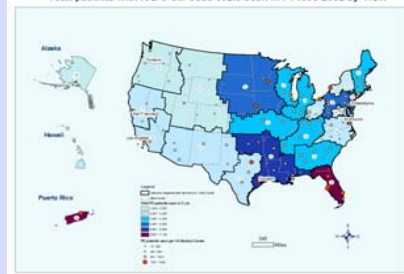
BACKGROUND: To emphasize the importance of supporting clinical and research activities to enhance the care of veterans with PD, VA has established six Parkinson's Disease Research, Education and Clinical Centers (PDRECC), each with a sphere of responsibility for a portion of the US. The current research was undertaken to gain more knowledge about the general characteristics and distribution of the VA PD patient population. Since rural residence and farming/ranching have been implicated as possible risk factors for PD, an understanding of these patients geographic location will be informative.

METHODS: Data collected from VA medical centers across the US are transmitted to a central repository and selected elements maintained in SAS datasets. These databases were queried to identify veterans with the ICD code for PD, retaining one record for each unique individual. Demographic variables (age, gender, and race/ethnicity), were obtained along with geographic variables (county and zip code). Information on the number of VA patients seen by county was downloaded from the VA Planning and Systems Support Group (PSSG), USDA Rural Urban Continuum Codes (RUCC) per county were linked to the VA data to obtain the percentages of patients residing in metropolitan versus non-metropolitan areas. Geographic Information System (GIS) software was used to create national level maps displaying patient characteristics and locations by VA service region (VISN) and by county.

RESULTS: A total of 79,448 unique veterans with PD were treated nationally over the five-year period. Patients were 98% men and their mean age was 73.4. In 2000, the percentage of people living in non-metropolitan counties (RUCC codes 4-9) was 17.4% for the US population, 23.7% for total VA veterans, and 25.6% for veterans with PD.

CONCLUSIONS: A substantial number of veterans with PD seek medical care through the VA health care system. The total number of these patients has been increasing in recent years. The combined use of VA national databases with GIS mapping provided estimates of the characteristics and locations of veterans with PD across the US.

Total patients with ICD-9 CM code 332.0 seen in FY1998-2002 by VISN

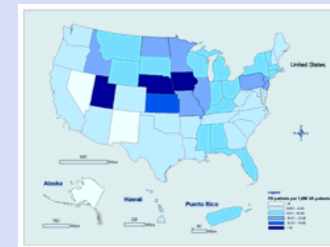


Unique PD patients seen during FY1998-2002

FY1998-2002 PD Patient Distribution

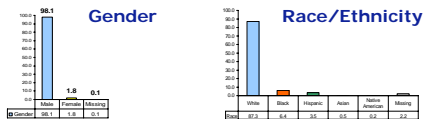


Geographic distribution by zip code for VA PD patients seen FY1998-2002

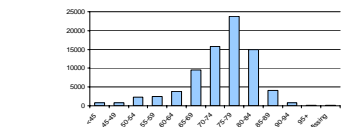


Number of PD (ICD-9 CM 332.0) patients seen per 1,000 VA patients seen during FY2002.

Demographic distribution



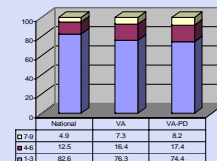
Age Distribution



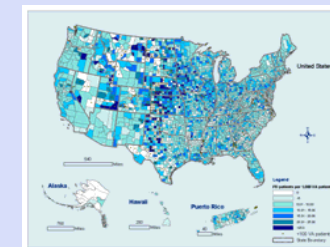
PD prevalence per 1,000 VA enrollees by VISN and year

VISN	Veterans Integrated Service Network	1998	1999	2000	2001	2002
1	New England Healthcare System	8.0	8.3	8.8	8.9	9.0
2	Healthcare Network Update New York	6.3	8.9	8.6	9.0	9.2
3	New York-New Jersey Network	9.2	10.8	10.7	11	11.3
4	VA States & Stripes Healthcare Network	6.1	6.7	6.8	10.3	11
5	Capital Network	6.5	6.4	6.9	7.1	7.6
6	Mid Atlantic Network	5.3	6.6	7.0	7.8	7.8
7	Healthcare System of Atlanta	6.3	6.7	7.2	7.4	7.8
8	Florida/Puerto Rico Sunshine Healthcare Network	7.1	7.3	8.0	8.8	9.1
9	Mid South Healthcare Network	6.0	7.7	8.0	8.1	8.2
10	Healthcare System of Ohio	7.0	8.3	8.2	10.3	10.3
11	VIP (Veterans In Partnership) Network	8.4	9.1	9.7	10.2	10
12	Great Lakes Healthcare System	7.9	8.6	9.5	10.3	10.4
13	VA Upper Midwest Network (now VISN 23)					
14	VA Central Plains Health Network (now VISN 23)					
15	Heartland Network	9.8	9.9	10.2	10.8	10.9
16	Veterans Integrated Service Network	6.4	7.8	7.8	8.1	8.6
17	VA Heart of Texas Health Care Network	5.7	6.4	7.0	7.1	7.1
18	Southwest Healthcare Network	6.8	6.8	7.0	7.4	7.7
19	Rocky Mountain Network	7.7	8.5	9.1	9.6	9.4
20	Northwest Network	5.7	6.3	6.4	6.8	6.8
21	North Pacific Network	6.0	6.3	6.3	6.1	6.1
22	Desert Pacific Healthcare Network	5.7	5.9	6.1	6.0	7.1
23	Veterans Integrated Service Network 23	9.3	9.8	10.5	11.2	12.1

VA PD patient distribution by residence in Rural Urban Continuum Code subsets compared with all VA and US



1 = most urban
9 = most rural



Number of PD patients (ICD-9 CM 332.0) seen per 1,000 VA patients seen in FY 2002 by County.



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