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Prevalence of Dementia among Puerto Rican Veterans is Higher than among Mainland US Veterans

José R. Carrión-Baralt, Ph.D., MPH^{*,†}, Erick Suárez-Pérez, Ph.D.[†], Ricardo del Rio, M.S.[‡], Kathleen Moore, RN^{*}, and Jeremy M. Silverman, Ph.D.[§]

^{*}San Juan Veterans Affairs Caribbean Healthcare System, San Juan, Puerto Rico

[†]University of Puerto Rico Medical Sciences Campus, Gerontology Program, Graduate School of Public Health, Rio Piedras, Puerto Rico

[‡]Carlos Albizu University, San Juan, Puerto Rico

[§]Mount Sinai School of Medicine, New York, New York

To the Editor

Dementia prevalence rates vary greatly in different regions of the world,¹ and so do estimates of projected numbers of cases in the decades to come. Even within a single country like the US, significant differences in prevalence of dementia have been noted among races and among regions. Several studies have found that African-Americans, the second group most studied in the US, consistently have prevalence rates of dementia up to 50% higher than non-Hispanic whites, the most studied group.² Further, within one state in the US, prevalence by county of AD in subjects aged 65 to 84 has been found to vary from 1.4% to 5.9%, over a four-fold difference.³ No accurate estimates of prevalence or incidence of dementia can be made from data from other countries, ethnic or racial groups, or regions even within the same country. For agencies and institutions responsible for planning for the health care needs of dementia patients it is imperative to have good estimates of dementia prevalence and incidence of the population they serve so they will be able to plan for services and expenditures.

Hispanics represented 35.3 million, or about 12.5%, of the 281.4 million Americans counted in Census 2000, a 58% increase from 1990. For the year 2050, it is estimated that Hispanics will account for 24.3% of the US population; of these, 13.4 million will be over 65 years of age. Still, there exists very little data regarding prevalence of dementia among Hispanics. Puerto Ricans are the second largest group among US mainland Hispanics after Mexicans. There are 3.8 million Puerto Ricans on the island and another 3.4 million living in the fifty states. Currently there are no published studies on dementia prevalence or incidence in

Corresponding author: José R. Carrión-Baralt, Ph.D., MPH ; VA Caribbean Healthcare System, Research and Development Service (151), 10 Casia St., San Juan, Puerto Rico 00921-3201. Phone- 787-641-2903; Fax- 787-763-0161; jose.carrion6@upr.edu, **Alternate corresponding author:** Jeremy M. Silverman Ph.D., Mount Sinai School of Medicine, Department of Psychiatry, Aron Building, 50 E. 98th St., Suite 1B Right, New York, NY 10029. Phone – (212) 659-8822, Fax – (212) 659-5626, jeremy.silverman@mssm.edu.

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Puerto Rico (PR) even though Alzheimer's disease is the 5th highest cause of mortality in the island.⁴

This study sought to estimate prevalence of dementia among Puerto Rican Veterans. A secondary objective was to compare prevalence of dementia between Puerto Rican Veterans and all US Veterans Affairs Medical Care (VAMC) System users. A previous study showed that prevalence of dementia rates among VAMC system users are comparable to rates observed in non-Veteran populations in the US.²

Diagnostic data were gathered from the database maintained by the Decision Support Service of the Veterans Affairs Caribbean Healthcare System (VACHS) in San Juan, Puerto Rico. All Puerto Rican Veterans aged 65 and over who used the VACHS health care facilities between October 1, 2005 and March 30, 2007 were included. In order to be able to make comparisons with VAMC system users, we followed the same methodology as the 2005 study conducted by Krishnan et al.² Veterans were considered to have a diagnosis of dementia if they had one or more of the following ICD-9 dementia codes: 290.XX, 291.2, 294.XX, 331.XX, 046.1, or 046.3. This study was approved by the VACHS Research and Development Committee.

Of the 35,667 unique patients at the VACHS, 4,525 (12.69%) were diagnosed with some type of dementia. Case distribution percentages by dementia subtype were almost identical in the two samples, with one exception: the percentage of Vascular dementia (VaD) cases was higher in the VACHS than in the VAMC system (15.14% vs. 11.9%).

Figure 1 shows the prevalence rates of all dementia cases in each age group both in the VACHS and in the VAMC system. VACHS rates were higher than in the VAMC system in each age group and among all age groups combined (12.69% vs. 7.3%). The crude Standardized Rate Ratio (SRR) was 1.74 (12.69%/7.3%). However, because the population distribution by age group was different in the two sites, the SRR was re-calculated adjusting for age. The age-adjusted SRR was 1.499 (95% CI = 1.454 – 1.544), which means that Puerto Rican Veterans had between 45% and 54% more probability of being diagnosed with dementia than Veterans in the VAMC system.

According to the 2007 Behavioral Risk Factors Surveillance System, Puerto Rican subjects aged 65 and over had a significantly higher prevalence of self-reported diabetes (29.4% vs. 19%, $p < .001$), hypertension (65.8% vs. 59.3%, $p < .001$), and coronary heart disease (15.6% vs. 12.8%, $p = .004$) than similarly-aged mainland US subjects.

The higher prevalence of dementias in the VACHS in comparison to the VAMC system, the higher relative prevalence of VaD in the VACHS, and the higher prevalence of the most significant cardiovascular risk factors for dementia among PR subjects suggest that a possible association exists between the two, and point to the need for targeted preventive strategies.

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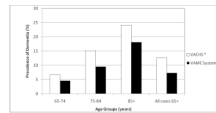


Figure 1. Prevalence of Dementia by Age Group and Overall at the San Juan VACHS (October 2005 through March 2007) and all of the VAMC system (October 1996 through March 2001). *Veterans Affairs Caribbean Healthcare System; †Veterans Affairs Medical Care