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Racial Differences in Antidepressant Use Among Older Home Healthcare Patients

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Abstract

Objective—The objective of this study is to determine the effect of race (black versus white) on depression diagnosis and antidepressant use in older Home Healthcare patients.

Methods—Cross-sectional data were obtained from the 2007 National Home and Hospice Care Survey of patients 65+ years (N=3,157). Participants were analyzed by race, antidepressant use, and charted depression diagnosis.

Results—In whites compared to blacks, there were greater odds of receiving a depression diagnosis (OR=4.06, 95% CI=1.66-9.93). There were also greater odds of receiving an antidepressant in whites both with (OR=3.08, 95% CI=0.46-20.81) and without a depression diagnosis (OR=2.43, 95% CI=1.53-3.86).

Conclusion—Older blacks were less likely than older whites to receive antidepressants, independent of a depression diagnosis. This suggests that older blacks in home healthcare with depression may face two sets of disparities relative to whites: underdiagnosis and undertreatment of depression.

Introduction

Older home healthcare patients typically have severe medical illness or functional disability, increasing their risk for depression compared to primary care patients. The prevalence of major depression is over 14% among homecare patients (1) with no significant racial differences (2). Over the past decade, rates of antidepressant use in geriatric patients have increased substantially (3); with recently available national data on homecare patients showing that 1/3 were prescribed an antidepressant (4, 5). These data will also be used in this study to compare antidepressant use in whites and blacks.

In the general population, minorities have not demonstrated the same increases in antidepressant use as whites (6). Older community dwelling blacks have nearly half the odds of using antidepressants when compared to whites (7). The goal of this study is to examine the prevalence of diagnosed depression, rates of antidepressant use, and the potential racial

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effect among older homecare patients. We hypothesize that rates of depression diagnosis will be higher and antidepressant use greater in whites compared to blacks independent of the depression diagnosis. The advantage of investigating this population is that homecare provides an opportunity for improving depression recognition and treatment through frequent home visits and enhanced communication between visiting nurses and primary care providers.

Methods

The 2007 National Home and Hospice Care Survey (NHHCS) data were collected from 8/2007 to 2/2008 by the Centers for Disease Control and Prevention's National Center for Health Statistics. The design of this survey was described previously (4, 5). The data were collected through in-person interviews of agency staff and review of medical records. Homecare subjects aged 65 and older were included in the sample (N=3,157). Racial groups other than white or black (i.e. Asian, Pacific Islander, and Native American) were excluded because of small sample size. Hispanic ethnicity was retained as a covariate. The Institutional Review Board of Weill Cornell Medical College approved this study.

Antidepressants were identified from Lexicon plus® by Cerner Multum, the classification system used by the NHHCS. Race, gender, ethnicity, age, marital status, and Activities of Daily Living (ADL) impairments were determined from the medical record. Depression diagnosis was taken from the ICD-9 codes representing unipolar depression in the medical record.

Weighting and variance estimation procedures of PROC SURVEY in SAS 9.2 (SAS Institute Inc., Cary, NC) were used to create a sample comparable to the national population. The dependent variable, antidepressant use, and the independent variable of interest, race, were both dichotomous. The associations between race and the other covariates were tested using t-tests for continuous variables and Rao-Scott chi-squares for categorical variables. Rao-Scott chi-squares were repeated for race and antidepressant use, stratifying by depression status. Multiple logistic regression analyses were used to determine the odds ratios of depression diagnosis by race, and antidepressant use by race overall and stratified by depression diagnosis while controlling for age, gender, and covariates found to be statistically significant at $p < 0.10$ on bivariate analysis.

Results

The sample was 84.6% white and 15.4% black. Compared to blacks, whites in this sample were significantly older (80.6 ± 0.2 vs. 78.1 ± 0.7 , $p < 0.01$), represented a greater number of Hispanics (9.3% vs. 2.9%, $p < 0.01$), were more often married or living with a partner (40.1% vs. 30.4%, $p < 0.01$), had a greater number of prescriptions (10.9 vs. 9.7, $p < 0.01$), and were less Medicaid eligible (20.6% vs. 41.3%, $p < 0.01$). There were no significant differences by female gender (68.3% vs. 71.2%, $p = 0.48$) or number of ADL impairments (2.8 ± 0.1 vs. 2.9 ± 0.1 , $p = 0.60$).

Overall, 6.7% of patients had a documented depression diagnosis, with higher rates in whites (7.6%) than blacks (2.0%). The odds of receiving a depression diagnosis remained

greater in whites when adjusting for age, gender, ethnicity, marital status, Medicaid eligibility, and total number of prescriptions (Unadjusted OR= 4.06, 95% CI=1.66-9.93; Adjusted OR=4.46, 95% CI=1.52-13.09).

A third (33.7%) of patients received antidepressants. The likelihood of antidepressant use was greater among whites compared to blacks regardless of depression diagnosis (Table 1). Among the nondepressed, 33.7% of whites and 17.3% of blacks used antidepressants. Among patients with documented depression, 71.1% of whites and 44.3% of blacks used antidepressants. Adjusting for covariates, antidepressant use was significantly higher in whites overall (OR=2.75, 95% CI=1.67-4.57) and among the nondepressed whites (OR=2.62, 95% CI=1.58-4.36). Antidepressant use in those with a depression diagnosis was higher in whites also but not significantly different (OR=3.08, 95% CI=0.46-20.81).

Discussion

This paper reports two major findings. The first was the higher rate of charted depression diagnosis in older whites in homecare compared to blacks, even after adjusting for other covariates. These findings, using chart diagnoses, contrasts with previous homecare research that reported no racial difference in prevalence rates of major depression assessed by structured clinical interviews (1, 2). The racial differences in depression diagnosis may reflect factors that lead to underreporting of depression in older blacks such as the stigma of having a mental illness, lack of education regarding depression, mistrust of mental health system, and lack of acceptance of treatment (8).

The other major finding of this study was the higher percentage of antidepressants prescribed to older whites in homecare compared to blacks, regardless of depression diagnosis. Although the difference was only statistically significant among those overall and without the diagnosis, there was a larger difference observed in the depressed group. While the small number of blacks with documented depression affects statistical power, it is also a function of the significantly lower rates of charted depression diagnosis in blacks compared to whites.

A third of patients received antidepressants, but only 7% carried a depression diagnosis. This disproportionately higher rate of antidepressant use could be due in part to acute depression not documented in the medical record; maintenance therapy of depression that has remitted; or other conditions; such as anxiety disorders and forms of chronic pain. It is also possible that depression is treated and documented by the primary care provider but the diagnosis did not transfer to the homecare chart.

This lower use of antidepressants by blacks is consistent with findings among older primary care patients (9) and may reflect both patient and provider factors. It is important to note that the antidepressant use was based on the medication prescription records, not actual use. Furthermore, we cannot evaluate whether the prescription dosage received was adequate to relieve depressive symptoms. Previous studies of homecare patients showed 1/3 of those receiving antidepressants were on inadequate doses (1). Harmon and colleagues found that

blacks were less likely to fill their antidepressant prescription, but when they did, the rate of appropriate treatment was equivalent (10).

The NCHHS relied on administrative data rather than direct assessment of patients. While the use of surveys limits the type of data available for investigating the dynamics underlying the observed differences, the advantages are that they represent the national population, therefore giving more accurate estimates of national trends in depression recognition, reporting, and treatment, and are less subjected to selection biases.

Conclusion

These findings indicate that disparities continue to exist in depression management of older homecare blacks. These data suggest that older blacks with depression face two sets of disparities relative to whites: underdiagnosis and undertreatment. Future research should identify and address the barriers that prevent blacks from achieving equivalent rates of diagnosis and adequate treatment for depression.

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References

1. Bruce ML, McAvay GJ, Raue PJ, et al. Major depression in elderly home health care patients. *American Journal of Psychiatry*. 2002; 159:1367–1374. [PubMed: 12153830]
2. Fyffe DC, Sirey JA, Heo M, et al. Late-life depression among black and white elderly homecare patients. *American Journal of Geriatric Psychiatry*. 2004; 12:531–535. [PubMed: 15353393]
3. Zhang Y, Chow V, Vitry AI, et al. Antidepressant use and depressive symptomatology among older people from the Australian Longitudinal Study of Ageing. *International Psychogeriatrics*. 2010; 22:437–444. [PubMed: 20105349]
4. Weissman J, Meyers BS, Ghosh S, et al. Demographic, clinical and functional factors associated with antidepressant use in the home healthcare elderly. *American Journal of Geriatric Psychiatry*. in press.
5. Shao H, Peng TR, Bruce ML, et al. Diagnosed depression among medicare home health patients: national prevalence estimates and key characteristics. *Psychiatric Services*. 2011; 62:538–540. [PubMed: 21532081]
6. Mojtabai R. Increase in antidepressant medication in the US adult population between 1990 and 2003. *Psychotherapy and Psychosomatics*. 2008; 77:83–92. [PubMed: 18230941]
7. González HM, Croghan T, West B, et al. Antidepressant use in black and white populations in the United States. *Psychiatric Services*. 2008; 59:1131–1138. [PubMed: 18832498]
8. Conner KO, Copeland VC, Grote NK, et al. Barriers to treatment and culturally endorsed coping strategies among depressed older adults. *Aging and Mental Health*. 2010; 14:971–83. [PubMed: 21069603]
9. Gallo JJ, Bogner HR, Morales KH, et al. Patient ethnicity and the identification and active management of depression in late life. *Archives of Internal Medicine*. 2005; 165:1962–1968. [PubMed: 16186465]
10. Harman JS, Edlund MJ, Fortney JC. Disparities in the adequacy of depression treatment in the United States. *Psychiatric Services*. 2004; 55:1379–1385. [PubMed: 15572565]

Table 1
Antidepressant Usage among 3,157 Home Health Care Patients Age 65 and Older, by Race and Depression Diagnosis

Depression Status and race	Unweighted		Antidepressant Use (% weighted)	Rao-Scott			Unadjusted		Adjusted	
	N	Total N		X ²	DF	p-value	OR	95% CI	OR	95% CI
Overall				20.42	1	<0.01	2.65	1.70-4.13	2.75	1.67-4.57
White	972	2,797	36.6							
Black	65	360	17.9							
No Depression Diagnosis				15.20		<0.01	2.43	1.53-3.86	2.62	1.58-4.36
White	783	2,547	33.7		1					
Black	61	354	17.3							
Depression Diagnosis				1.54	1	0.21	3.08	.46-20.81	7.68	.39-151.56
White	189	250	71.1							
Black	4	6	44.1							

* Adjusted for age, gender, ethnicity, marital status, Medicaid eligibility, and total number of prescriptions; overall analyses also adjusted for depression.