Published in final edited form as:

Am J Cardiol. 2014 February 1; 113(3): 413–417. doi:10.1016/j.amjcard.2013.10.010.

Race/Ethnic Differences in Statin Prescription and Clinical Outcomes Among Hospitalized Patients With Coronary Heart Disease

Heidi Mochari-Greenberger, PhD, MPH^a, Ming Liao, MA^{a,b}, and Lori Mosca, MD, PhD, MPH^{a,c}

^aDepartment of Medicine, Columbia University Medical Center, New York, NY

^bDepartment of Surgery, Columbia University Medical Center, New York, NY

^cNew York-Presbyterian Hospital, New York, NY

Abstract

We aimed to evaluate the association between race/ethnicity, statin prescription, and clinical outcomes among hospitalized coronary heart disease (CHD) patients, adjusted for confounders. Racial/ethnic disparities in CHD outcomes may be related to differential uptake of preventive medications, but data from real world settings are limited. This was a 1-year prospective study of patients with preexisting CHD without a documented contraindication to statin (N=3067; 35% black/Hispanic, 65% white/Asian, 35% female) that participated in an NHLBI clinical outcomes study of patients admitted to a cardiovascular service. Baseline clinical/medication data and 30-day/1-year outcomes (death/rehospitalization) were documented by electronic medical record, National Death Index, and/or standardized mail survey. Logistic regression was used to evaluate associations between race/ethnicity, statin prescription, and outcomes adjusted for demographics/comorbidities. Black/Hispanic patients were more likely to be dead/rehospitalized at 1-year (OR=1.23; 95%CI=1.06-1.43) and less likely to report statin use prior to admission (62% vs. 72%; adjusted OR=0.64; 95%CI=0.54-0.76) than whites/Asians; statin prescription was similar at discharge among blacks/Hispanics (81%) vs. whites/Asians (84%). Black/Hispanic patients were more likely to have hypertension, diabetes, or renal failure and less likely to have health insurance than whites/Asians (p<0.05). The increased 1-year odds of death/rehospitalization in minorities vs. whites/Asians was explained by demographics/comorbidities, not by differential statin prescription (adjustedOR=1.10; 95%CI=0.93-1.30). In conclusion, in this study of hospitalized patients with preexisting CHD, differential statin prescription did not explain racial/ethnic disparities in 1-year outcomes. Efforts to reduce CHD rehospitalizations should consider the greater burden of comorbidities among racial/ethnic minorities.

Keywords

Race/Ethnicity; Disparities; Statin; Heart Disease; Outcomes; Rehospitalization

© 2013 Excerpta Medica, Inc. All rights reserved.

Corresponding Author: Dr. Lori Mosca Preventive Cardiology Columbia University Medical Center 51 Audubon Avenue, Room 506 New York, NY 10032 Tel #: 212-305-4866 Fax #: 212-342-5238 Ljm10@columbia.edu; copy to Lmr2@columbia.edu.

Relationships with Industry: None

Publisher's Disclaimer: This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Introduction

It is well documented that statins reduce risk for major vascular events and all-cause mortality in patients with existing CHD (1, 2); recent meta-analysis of over 50 cross sectional studies, cohort studies, and randomized controlled clinical trials that quantified statin adherence showed that uptake of statins was lower among racial/ethnic minorities compared to whites (3). Racial/ethnic differences in CHD clinical outcomes may be attributable to differences in the uptake of statin therapy, but this is not established. The purpose of this study was to evaluate the association between race/ethnic group, statin prescription, and rates of death and hospital readmission in the short term (30 days) and longer term (1 year) among patients with pre-existing CHD admitted to the cardiology service at a major university hospital, adjusted for demographic factors and comorbid medical conditions.

Methods

The study cohort consisted of 3067 patients consecutively admitted to the cardiovascular disease (CVD) service at New-York Presbyterian Hospital (NYPH)/Columbia University Medical Center (CUMC) who took part in the **F**amily **C**ardiac **C**aregiver **I**nvestigation **T**o **E**valuate **O**utcomes (FIT-O) study sponsored by the National Heart Lung and Blood Institute. The design and methods of FIT-O have been previously published (4-6). Briefly, FIT-O was a prospective observational study among 4500 patients hospitalized for CVD designed to evaluate the association between having a caregiver and clinical outcomes one year after hospitalization. Consecutive patients were recruited from November 2009 to June 2010, and were excluded from participation if they were unable to read English or Spanish, lived in a full time nursing facility, were unable to participate due to mental status, or refused to participate for any reason. The overall enrollment rate was 93% (4). Participants were included in this analysis if they had a documented past medical history of coronary heart disease (CHD) and/or a CHD equivalent diagnosis of diabetes mellitus, peripheral vascular disease, abdominal aortic aneurism, or other atherosclerotic disease prior to admission (n=3260) (7). Potential participants were excluded if they did not have a race/ethnic group documented in their medical record (n=175), or if they had a documented contraindication to lipid lowering agents in their medical record (n=18). This study was approved by the CUMC Institutional Review Board.

Standardized electronic chart review was conducted by trained research staff that documented: 1) demographic characteristics (race/ethnicity, age, gender, and health insurance status), 2) comorbid medical conditions (hypertension, diabetes, renal failure/dialysis, peripheral vascular disease, chronic obstructive pulmonary disease, heart failure, stroke, history of myocardial infarction or coronary artery bypass surgery, and admission type (surgical (cardiac) vs. not surgical), and 3) smoking status. International Classification of Diseases, ninth revision billing codes and physician or nurse practitioner notes were used to classify medical conditions and were validated by an external physician reviewer (5). Standardized questionnaires were utilized to determine caregiver status, defined as a paid professional or a nonpaid person who assisted the cardiac patient with his or her medical and/or preventive care (4-6, 8).

Self-reported statin prescriptions prior to admission and statins prescribed at discharge were documented by standardized electronic chart review of admission and discharge records. Statin prescription was defined as either a single or combination statin prescription.

Rehospitalization was defined as admission to NYPH/CUMC or another hospital over the one year period following the index hospitalization associated with each participant's

baseline survey date. Rehospitalization at NYPH/CUMC was systematically collected by hospital electronic clinical information system, which was updated daily, at 30-days and 1-year; there was 100% ascertainment of readmission to NYPH/CUMC. Electronic data were supplemented by standardized survey completed by participants one year after the index hospitalization via mail or telephone to document hospitalization outside of NYPH/CUMC at 1-year (82% response rate). One-year results were not materially different when analysis was limited to NYPH/CUMC readmissions only, therefore total readmissions based on clinical information system and survey data were reported. Death outcomes were obtained using the National Death Index, which was used to populate the hospital clinical information system, updated monthly.

Descriptive data are presented as frequencies and percentages. Race/ethnic group was dichotomized as black/Hispanic/other (racial/ethnic minority) versus white/Asian based higher risk of recurrent CVD events among black and Hispanic CHD patients compared to white and/or Asian CHD patients, similar to national statistics (9). Chi square tests were used to determine differences in baseline characteristics by race/ethnic group, and to evaluate the univariate associations between participant characteristics and clinical outcomes at 30-days and at 1-year. Logistic regression was utilized to evaluate whether statin prescription at admission or at discharge confounded the association between race/ethnic group and death/rehospitalization at 1-year, and to adjust for other potential confounders. A stratified analysis and test for interaction were conducted to determine whether the association between race/ethnic group and death/rehospitalization at 1-year was differential among those with versus without health insurance. All tests were 2-sided with significance set at $p < 0.05$. Data were analyzed using SAS, version 9.3 (SAS Institute, Cary, North Carolina).

Results

The baseline characteristics of the study population, overall and by race/ethnic group are presented in Table 1. Among the 3067 participants, 35% were female, 65% White or Asian, 21% Hispanic, 13% black, and 1% were other races. Racial/ethnic minorities were more likely to smoke and to have several comorbid medical conditions including hypertension, diabetes, renal failure/dialysis, and stroke compared to whites/Asians. In contrast, racial/ethnic minority patients were less likely to have health insurance compared to white/Asian patients.

Racial/ethnic minorities were less likely than white/Asian participants to report being on a statin prior to admission (62% vs. 72%; $p < 0.0001$). This association remained significant after adjustment for demographic characteristics and comorbid medical conditions (OR=0.64; 95% CI=0.54-0.76). Frequency of statin prescription at discharge did not significantly differ between racial/ethnic minority and whites/Asian patients (81% vs. 84%; $p = 0.05$).

At 30-days, 10% of patients had been readmitted ($n = 301$) and 2% had died ($n = 49$). The overall rate of death or readmission at 30-days did not vary between racial/ethnic minority (11%) and white/Asian patients (11%; $p = 0.62$). There was no association between taking a statin prior to admission, and death or readmission at 30-days (OR=1.02; 95% CI=0.80-1.31). Patients who were prescribed a statin at discharge were significantly less likely to be readmitted or dead at 30-days compared to those not prescribed a statin at discharge, independent of demographic characteristics and comorbid medical conditions (OR=0.59; 95% CI=0.45-0.77).

At 1-year, 1497 (49%) of participants had been rehospitalized and 238 had died (8%), including 91 participants who were rehospitalized and had died within the 1-year follow-up. Racial/ethnic minority participants were 23% more likely than white/Asian participants to have died or to have been rehospitalized at 1-year (Table 2). Statin prescription prior to admission or at discharge was not associated with death/rehospitalization at 1-year. Significant demographic predictors of death/rehospitalization at 1-year included age > 65 years, having a caregiver, and lack of health insurance.

Race/ethnic group was no longer a statistically significant predictor of death/rehospitalization at 1-year after adjustment for comorbid medical conditions (Table 3). Age > 65 years, having a caregiver, and lack of health insurance were significant multivariable predictors of death/rehospitalization at 1-year.

In stratified analyses, the univariate association between racial/ethnic minority status and rehospitalization/death at 1-year was greater but did not reach statistical significance among participants without health insurance (OR=1.41; 95%CI=0.92-2.14) compared to those with health insurance (OR=1.14; 95%CI=0.97-1.35). A test for interaction between race/ethnic group and health insurance status on odds of death/rehospitalization at 1 year was not statistically significant.

Discussion

In this real world cohort of consecutively hospitalized CHD patients, we documented that racial/ethnic minority patients were 23% more likely to be dead/rehospitalized 1-year after admission compared to white/Asian patients. Odds of statin use prior to admission was 36% lower among racial/ethnic minority patients compared to white/Asian, and was independent of demographic characteristics and comorbid medical conditions. However, neither statin use prior to admission, nor statin prescription at discharge, explained the racial/ethnic disparities in clinical outcomes at 1-year. The association between racial/ethnic minority status and increased risk of death/rehospitalization at 1-year was attenuated and no longer statistically significant after adjustment for comorbidities including diabetes, renal failure, peripheral vascular disease, heart failure, prior coronary artery bypass surgery, and admission type. Older age, having a caregiver, and lack of health insurance were also significant independent predictors of death/rehospitalization at 1-year. The data suggest that increased risk of death/rehospitalization among racial/ethnic minorities was explained by comorbid medical conditions and not by disparities in statin prescription.

These data are consistent with other studies that have documented that increased risk of death or recurrent CHD among racial/ethnic minority cardiac patients is attributable to comorbid conditions (10-12). Similar to this study, Khambata et al recently showed that compared to white percutaneous coronary intervention patients, black patients had more comorbidities, but after adjusting for these differences black patients had similar, if not lower rates of adverse clinical outcomes (11). Likewise, among a large diverse group of cardiac surgery patients, Koch et al documented that low socioeconomic position, not race, was predictive of death after cardiac surgery (10). In contrast, other studies have shown that increased risk of death or CHD events after cardiac admission persist after adjustment for demographic factors and comorbid medical conditions, with higher rates among blacks versus whites/Asian patients with ischemic CVD (13-16). However these studies did not systematically evaluate the uptake of preventive cardiac medications prior to admission or after discharge in multivariable models (13-16).

In this study we documented racial/ethnic minority patients with CHD were less likely to report being on statins at admission, despite higher levels of comorbidity. A lower

proportion of black and Hispanic patients were prescribed a statin at discharge compared to whites/Asians, but this difference was not statistically significant. This suggests that disparities in clinical outcomes may also be due to lower rates of adherence or access to statins among racial/ethnic minority patients compared to white patients, although we were not able to directly measure this. While our data did not establish statin prescription prior to admission or at discharge as a significant predictor of outcomes at 1-year, it did show that statin prescription at discharge was linked to lower rates of death/readmission at 30-days.

Racial/ethnic minorities were also more likely than whites/Asians to have comorbid medical conditions and to have a caregiver, which are linked to increased risk of poor clinical outcomes (5, 6). While medical history of comorbidity is generally non-modifiable, health insurance coverage is a factor that is amenable to change, was lower among blacks and Hispanics compared to whites/Asians, and was a predictor of death/readmission at 1-year in this study. Increased health insurance coverage may be a mechanism to increase access to, and utilization of, healthcare and preventive interventions care, treat comorbidity, and reduce risk of death and rehospitalization among CHD patients.

This study provides new information about the association between the uptake of statins, race/ethnicity, and clinical outcomes among patients with preexisting CHD, accounting for demographic factors and comorbid conditions. Interpretation of results related to the association between statin prescription and clinical outcomes may be limited because we were not able to directly evaluate patient adherence to statin prescription, though self-reported CVD medication utilization has been shown to be accurate when compared against physician notes in the clinical setting (17). Unmeasured potential confounders, such as baseline education level or body mass index, could have contributed to the observed association between minority race/ethnic group and death/readmission at 1-year. This was a single-site study, which could have limited the generalizability of the results. However, the high participation rate of consecutive patients coupled with diversity of the sample supports the potential to translate these results to other settings.

In this study of hospitalized patients with preexisting CHD, prior statin use and statin prescription at discharge did not explain racial/ethnic differences in clinical outcomes at 1-year. Efforts to reduce CHD death/rehospitalizations should consider the greater burden of comorbid medical conditions among racial/ethnic minorities, adequacy of health insurance coverage, and adherence to evidence-based strategies for secondary prevention as mechanisms to improve clinical outcomes and decrease disparities in the burden of CVD.

Acknowledgments

Grant Support: This study was funded by a research grant from the National Heart, Lung, and Blood Institute (Bethesda, MD; 2R01HL075101) to Principal Investigator, Dr. Lori Mosca and was supported, in part, by a National Institutes of Health Research Career Award to Dr. Mosca (K24HL076346).

References

1. Baigent C, Keech A, Kearney PM, Blackwell L, Buck G, Pollicino C, Kirby A, Sourjina T, Peto R, Collins R, Simes R. Efficacy and Safety of Cholesterol-Lowering Treatment: Prospective Meta Analysis of data from 90,056 Participants in 14 Randomized Trials of Statins. *Lancet*. 2005; 366:1267–1278. [PubMed: 16214597]
2. Smith SC, Benjamin EJ, Bonow RO, Braun LT, Creager MA, Franklin BA, Gibbons RJ, Grundy SM, Hiratzka LF, Jones DW, Lloyd-Jones DM, Minissian M, Mosca L, Peterson ED, Sacco RL, Spertus J, Stein JH, Taubert KA. AHA/ACC Secondary Prevention and Risk Reduction Therapy for Patients with Coronary and Other Atherosclerotic Vascular Disease: 2011 Update. *J Am Coll Cardiol*. 2011; 58:2432–2446. [PubMed: 22055990]

3. Lewey J, Shrank WH, Bowry AD, Kilabuk E, Brennan TA, Choudhry NK. Gender and racial disparities in adherence to statin therapy: a meta analysis. *Am Heart J.* 2013; 165:665–678. [PubMed: 23622903]
4. Mosca L, Mochari-Greenberger H, Aggarwal B, Liao M, Suero-Tejeda N, Comellas M, Rehm L, Umann TM, Mehran R. Patterns of caregiving among patients hospitalized with cardiovascular disease. *J Cardiovasc Nurs.* 2011; 26:305–311. [PubMed: 21330929]
5. Mosca L, Aggarwal B, Mochari-Greenberger H, Liao M, Blair J, Cheng B, Comellas M, Rehm L, Sureo-Tejeda N, Umann T. Association between having a caregiver and clinical outcomes 1 year after hospitalization for cardiovascular disease. *Am J Cardiol.* 2012; 109:135–139. [PubMed: 21962999]
6. Mochari-Greenberger H, Mosca M, Aggarwal B, Umann TM, Mosca L. Caregiver Status. A Simple Marker to Identify Cardiac Surgery Patients at Risk for Longer Postoperative Length of Stay, Rehospitalization, or Death. *J Cardiovasc Nurs.* 2013 [Epub Jan 14].
7. National Cholesterol Education Program Expert Panel on Detection E, Treatment of High Blood Cholesterol in A. Third Report of the National Cholesterol Education Program (NCEP) Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III) Final Report. *Circulation.* 2002; 106:3143–3421. [PubMed: 12485966]
8. National Alliance for Caregiving and AARP. Caregiving in the U.S, 2009. National Alliance for Caregiving and AARP; 2009. p. 74http://www.caregiving.org/data/Caregiving_in_the_US_2009_full_report.pdf [Accessed 7/11/13]
9. Go AS, Mozaffarian D, Roger VL, Benjamin EJ, Berry JD, Borden WB, Bravata DM, Dai S, Ford ES, Fox CS, Franco S, Fullerton HJ, Gillespie C, Hailpern SM, Heit JA, Howard VJ, Huffman MD, Kissela BM, Kittner SJ, Lackland DT, Lichtman JH, Lisabeth LD, Magid D, Marcus GM, Marelli A, Matchar DB, McGuire DK, Mohler ER, Moy CS, Mussolino ME, Nichol G, Paynter NP, Schreiner PJ, Sorlie PD, Stein J, Turan TN, Virani SS, Wong ND, Woo D, Turner MB, on behalf of the American Heart Association Statistics Committee and Stroke Statistics Subcommittee. Heart disease and stroke statistics—2013 update: a report from the American Heart Association. *Circulation.* 2013; 127:e6–e245. [PubMed: 23239837]
10. Koch CG, Li L, Kaplan GA, Wachterman J, Shishehbor MH, Sabik J, Blackstone EH. Socioeconomic Position, Not Race, Is Linked to Death After Cardiac Surgery. *Circ Qual Cardiovasc Outcomes.* 2010; 3:267–276.
11. Khambatta S, Seth M, Rosman HS, Share D, Aronow HD, Moscucci M, Lalonde T, Dixon SR, Gurm HS. The association between patient race, treatment, and outcomes of patients undergoing contemporary percutaneous coronary intervention intervention. Insights from the Blue Cross Blue Shield of Michigan Cardiovascular Consortium (BMC2). *Am Heart J.* 2013; 165:893–890. [PubMed: 23708159]
12. Maynard C, Wright CM, Every NR, Ritchie JL. Racial differences in outcomes of veterans undergoing percutaneous coronary interventions. *Am Heart J.* 2001; 142:309–313. [PubMed: 11479471]
13. Batchelor WB, Ellis SG, Ormiston JA, Stone GW, Joshi AA, Wang H, Underwood PL. Racial Differences in Long-Term Outcomes after Percutaneous Coronary Intervention with Paclitaxel-Eluting Coronary Stents. *J Interv Cardiol.* 2013; 26:49–57.
14. Konety SH, Vaughan Sarazub MS, Rosenthal GE. Patient and Hospital Differences Underlying Racial Variation in Outcomes After Coronary Artery Bypass Graft Surgery. *Circulation.* 2005; 111:1210–1216. [PubMed: 15769760]
15. Thomas KL, Honeycutt E, Shaw LK, Peterson ED. Racial Differences in Long-term Survival among Patients with Coronary Artery Disease. *Am Heart J.* 2010; 160:744–751. [PubMed: 20934570]
16. Qian F, Fonarow GC, Smith EE, Xian Y, Pan W, Hannan EL, Shaw BA, Glance LG, Peterson ED, Eapen ZJ, Hernandez AF, Schwamm LH, Bhatt DL. Racial and Ethnic Differences in Outcomes in Older Patients With Acute Ischemic Stroke. *Circ Cardiovasc Qual Outcomes.* 2013; 6:284–292. [PubMed: 23680966]
17. Keyhoe R, Wu S-Y, Leske MC, Chylack LT Jr. Comparing Self-reported and Physician-reported Medical History. *Am J Epidemiol.* 1994; 139:813–818. [PubMed: 8178794]

Table 1

Baseline Characteristics of Study Participants by Race/Ethnic Group (N=3067)

Variable	Race/Ethnic Group			P value
	All Participants	Black/Hispanic/Other (n=1063)	White/Asian (n=2004)	
Statin Prescription				
At Admission	2097 (68%)	656 (62%)	1441 (72%)	<0.0001
At Discharge	2549 (83%)	864 (81%)	1685 (84%)	0.05
Men	1994 (65%)	580 (55%)	1414 (71%)	<0.0001
Age ≥ 65 Years	1828 (60%)	565 (53%)	1263 (63%)	<0.0001
No Health Insurance	384 (13%)	239 (22%)	145 (7%)	<0.0001
Has a Caregiver	1149 (37%)	450 (42%)	699 (35%)	<0.0001
Prior/Current Hypertension	2373 (77%)	864 (81%)	1509 (75%)	0.0002
Prior/Current Diabetes Mellitus	1290 (42%)	547 (51%)	743 (37%)	<0.0001
Prior/Current Renal Failure/Dialysis	173 (6%)	75 (7%)	98 (5%)	0.02
Prior/Current Peripheral Vascular Disease	476 (16%)	153 (14%)	323 (16%)	0.23
Prior/Current Chronic Obstructive Pulmonary Disease	188 (6%)	46 (4%)	145 (7%)	0.001
Prior/Current Heart Failure	566 (18%)	235 (22%)	389 (19%)	0.08
Prior/Current Stroke	313 (10%)	131 (12%)	196 (10%)	0.03
Prior Myocardial Infarction	987 (32%)	350 (33%)	637 (32%)	0.54
Prior Coronary Bypass	657 (21%)	159 (15%)	498 (25%)	<0.0001
Current Smoker	276 (9%)	124 (12%)	152 (8%)	0.0002
Surgical Admission	365 (12%)	64 (6%)	301 (15%)	<0.0001

Table 2

Association between Race/Ethnic Group, Demographic Factors, Comorbid Conditions, and Death/Rehospitalization at 1-Year among Study Participants (N=3067)

Variable	Rehospitalized/Dead at 1-Year	P value
	OR (95%CI)	
Black/Hispanic/Other ^a	1.23 (1.06-1.43)	0.008
Statin Prescription		
At Admission	1.11 (0.95-1.29)	0.20
At Discharge	0.94 (0.78-1.14)	0.56
Men	0.87 (0.75-1.01)	0.07
Age ≥ 65 years	1.30 (1.12-1.50)	0.0004
No Health Insurance	1.41 (1.13-1.75)	0.002
Has a Caregiver	1.56 (1.35-1.81)	<0.0001
Prior/Current Hypertension	1.12 (0.94-1.33)	0.19
Prior/Current Diabetes Mellitus	1.58 (1.37-1.83)	<0.0001
Prior/Current Renal Failure/Dialysis	2.09 (1.50-2.92)	<0.0001
Prior/Current Peripheral Vascular Disease	1.50 (1.23-1.83)	<0.0001
Prior/Current Chronic Obstructive Pulmonary Disease	1.33 (0.99-1.80)	0.06
Prior/Current Heart Failure	2.31 (1.91-2.78)	<0.0001
Prior/Current Stroke	1.19 (0.95-1.50)	0.14
Prior Myocardial Infarction	1.19 (1.02-1.39)	0.02
Prior Coronary Bypass	1.41 (1.19-1.68)	0.0001
Current Smoker	0.91 (0.71-1.16)	0.49
Surgical Admission	0.67 (0.53-0.83)	0.0003

^aReferent Group=White/Asian

Table 3
Multivariate Models: Association between Race/Ethnic Group, Statin Prescription, and Rehospitalization/Death at 1-Year among Hospitalized Coronary Heart Disease Patients

Variable	Model 1: Adjusted for Statin	Model 2: Demographic Adjusted	Model 3: Demographic and Comorbidity Adjusted
	OR (95% CI)	OR (95% CI)	OR (95% CI)
Black/Hispanic/Other ^a	1.25 (1.07-1.45)	1.17 (1.00-1.38)	1.10 (0.93-1.30)
Statin Prescription			
Prior to Admission	1.20 (1.01-1.42)	1.16 (0.97-1.37)	1.08 (0.91-1.30)
At Discharge	0.86 (0.70-1.07)	0.89 (0.71-1.10)	0.99 (0.79-1.23)
Men		0.93 (0.80-1.09)	0.92 (0.78-1.07)
Age 65 years		1.27 (1.09-1.47)	1.20 (1.03-1.40)
No Health Insurance		1.33 (1.06-1.66)	1.27 (1.07-1.60)
Has a Caregiver		1.48 (1.28-1.72)	1.26 (1.08-1.47)
Prior/Current Hypertension			0.95 (0.80-1.14)
Prior/Current Diabetes Mellitus			1.37 (1.17-1.60)
Prior/Current Renal Failure/Dialysis			1.50 (1.06-2.13)
Prior/Current Peripheral Vascular Disease			1.33 (1.07-1.64)
Prior/Current Chronic Obstructive Pulmonary Disease			1.07 (0.78-1.46)
Prior/Current Heart Failure			1.93 (1.58-2.36)
Prior/Current Stroke			0.98 (0.77-1.25)
Prior Myocardial Infarction			1.09 (0.93-1.28)
Prior Coronary Bypass			1.28 (1.06-1.55)
Current Smoker			1.02 (0.79-1.33)
Surgical Admission			0.64 (0.51-0.81)

^a Referent Group=White/Asian