SUPPLEMENTAL MATERIAL

Racial differences in blood pressure control following stroke: The REGARDS study.

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Creation of the inverse probability of attrition weights

In a sensitivity analysis, inverse probability of attrition weighting was used to account for the REGARDS study participants who did not attend the second in-home study visit. Specifically, for this analysis, participants who attended the second visit were weighted to reflect the entire enrolled REGARDS study population. To create weights, we used a logistic regression model with the outcome being attending versus not attending the second REGARDS study visit. Independent variables in this model included race, age, age squared, age cubed, sex, region of residence, education, annual household income, smoking status, marital status, alcohol use, body mass index, physical activity, diabetes, abdominal obesity, chronic kidney disease, systolic blood pressure, diastolic blood pressure, and number of classes of antihypertensive medication being taken. Additionally, all pairwise interactions were included to account for potential collider bias which could occur if the selection process was influenced by the exposure of interest and another predictor of the outcome. We then used backward model selection at a p-value <0.10 to keep variables in the model. Model fit was examined using the Hosmer-Lemeshow goodness-of-fit $\chi 2$ test.

The predicted probability of attending the second study visit for each participant was estimated through the logistic regression model which was then inverted and stabilized to create weights. Stabilization of the weights was done by multiplying the non-stabilized weight by the predicted probability of attending the second study visit including adjustment for race, age, sex and region of residence. Age, sex and region of residence were hypothesized to be predictors of attrition determined concurrently with race and not plausibly affected by race. This was similar to the method previously used by Long et. al., in the REGARDS study (Am J Epidemiol. 2019;188(3):587–597, DOI: 10.1093/aje/kwy253). The estimated stabilized weights were then applied in Poisson regression models estimating the prevalence ratio for BP control comparing Blacks and Whites.

Table I. Definitions of covariates used in the current analysis.

Covariates	Definition
Age	Self-reported during a computer assisted telephone interview conducted in conjunction with the REGARDS second study examination (2013–2016). Age was defined as a continuous variable in the current analysis.
Gender	Self-reported as Male or Female at the REGARDS baseline examination (2003–2007).
Race	Self-reported as Non-Hispanic Black/African-American or Non-Hispanic White at the REGARDS baseline examination (2003–2007).
Region of residence	Based on home addresses reported at the REGARDS baseline examination (2003–2007). Region of residence was categorized into stroke buckle (coastal North Carolina, South Carolina and Georgia), stroke belt (the remaining parts of North Carolina, South Carolina and Georgia, and Tennessee, Mississippi, Alabama, Louisiana and Arkansas), and Non-stroke belt (the remaining 40 contiguous US states and the District of Columbia).
Annual household income	Annual household income from all sources was self-reported at the REGARDS second study examination (2013–2016) and categorized as < $20,000; $20,000 to < $35,000; $35,000 to < $75,000; ≥$75,000 for the current analysis.
Education	Self-reported at the REGARDS baseline examination (2003–2007) and categorized as less than high school, high school graduate, some college, and college graduate for the current analysis.
Marital status	Self-reported at the REGARDS second study examination (2013–2016) and categorized as married or not married (single, divorced, widowed, other) for the current analysis.
Abdominal obesity	Waist circumference was measured by trained technicians during an in-home visit at the REGARDS second study examination (2013–2016). Abdominal obesity was defined as a waist circumference >102cm for men and >88cm for women
Current alcohol use	Self-reported at the second REGARDS study examination (2013–2016). Number of drinks per week was reported to the interviewer with the following questions:

	"Do you presently drink alcoholic beverages, including beer, wine, and other drinks made with hard liquor, even occasionally?" "Thinking over the years that you used alcoholic beverages, on average, about how many drinks did you usually have? For example, one per day, three per week, and so on. Please include beer, wine and hard liquor" Current alcohol use was defined as current use of alcohol.
Physical activity	Self-reported at the second REGARDS study examination (2013–2016). Physical activity was assessed using an interviewer-administered questionnaire. Participants were asked "How many times per week do you engage in intense physical activity enough to work up a sweat?" Physical activity was categorized as none, 1-3 and ≥ 4 times per week.
Current smoking	Self-reported at the second REGARDS study examination (2013–2016). Cigarette smoking was assessed with the following questions: "Have you smoked at least 100 cigarettes in your lifetime?" "Do you smoke cigarettes now, even occasionally?"
Body mass index	During the REGARDS second study examination (2013–2016), technicians measured participants' weight and height. Body mass index was calculated as body weight in kilograms divided by height in meters squared. Body mass index was categorized as <25, 25 to <30, and ≥30 kg/m^2.
Diabetes	Defined as fasting glucose ≥ 126 mg/dL, non-fasting glucose ≥ 200 mg/dL, or self-reported glucose-lowering medication use at the REGARDS second study examination (2013–2016).
Chronic kidney disease	Defined as urinary albumin-to-creatinine ratio ≥ 30 mg/g or estimated glomerular filtration rate (eGFR) < 60 $mL/min/1.73m^2$. eGFR was calculated using serum creatinine from blood sample collected at the REGARDS second study examination (2013–2016), and the Chronic Kidney Disease (CKD) Epidemiology Collaboration equation. Urinary albumin and creatinine were measured from a spot urine sample using a nephelometer (BNII ProSpec nephelometer), and the rate-blanked Jaffe assay (the Modular-P chemistry analyzer), respectively.

REGARDS: Reasons for Geographic And Racial Differences in Stroke.

Table II. Number and percentage of participants with missing data for each study covariate among White and Black REGARDS study participants with and without a history of adjudicated stroke.

	History of stroke		**No history of stroke**	
Characteristic	White (n = 161)	Black (n = 145)	White (n = 4288)	Black (n = 3405)
Age, years	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Sex	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Region	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Income	29 (18.0)	30 (20.7)	610 (14.2)	463 (13.6)
Education	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.0)
Married	1 (0.6)	1 (0.7)	20 (0.5)	18 (0.5)
Abdominal obesity	0 (0.0)	4 (2.8)	12 (0.3)	18 (0.5)
BMI, kg/m^2	1 (0.6)	2 (1.4)	13 (0.3)	22 (0.6)
Current smoking	0 (0.0)	0 (0.0)	39 (0.9)	41 (1.2)
Current alcohol use	0 (0.0)	1 (0.7)	27 (0.6)	28 (0.8)
Physical activity	1 (0.6)	2 (1.4)	66 (1.5)	46 (1.4)
Diabetes	7 (4.3)	6 (4.1)	124 (2.9)	129 (3.8)
Chronic kidney disease	7 (4.3)	20 (13.8)	270 (6.3)	352 (10.3)
Health insurance	1 (0.6)	1 (0.7)	22 (0.5)	27 (0.8)
Number of antihypertensive medication	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)

REGARDS: REasons for Geographic And Racial Differences in Stroke.
BMI: Body mass index.

Table III. Percentage of White and Black REGARDS study participants with hypertension by history of stroke taking each class of antihypertensive medication.

Antihypertensive medication classes	History of Stroke		No history of stroke	
	Whites (n = 161)	Black (n = 145)	White (n = 4288)	Black (n = 3405)
ACE inhibitors, %	44.7	40.7	41.4	36.8
Alpha blockers, %	6.2	4.1	4.7	4.5
Alpha and beta blocker combination, %	16.2	13.8	7.4	9.4
Angiotensin II receptor blockers, %	28.0	28.3	31.1	33.0
Beta blockers, %				
Cardioselective and nonselective	39.1	42.1	32.0	27.6
Cardioselective and vasodilatory	2.5	1.4	2.4	1.7
Intrinsic sympathomimetic activity	0.0	0.7	0.4	0.2
CCBs, %				
Dihydropyridines	33.5	53.8	27.1	42.8
Non-dihydropyridines	5.0	3.5	6.4	7.0
Central acting agents, %	0.0	1.4	0.2	0.2
Diuretics, %				
Loop	18.0	21.4	13.2	14.5
Potassium-sparing	4.4	4.1	4.4	7.1
Thiazide-like or thiazide-type	26.7	33.1	35.2	45.6
Mineralocorticoid receptor antagonist, %	3.1	9.0	2.8	4.0
Renin inhibitors, %	0.0	0.0	0.2	0.1
Vasodilators, %	3.7	8.3	1.4	4.4

Numbers are percentages.
REGARDS: REasons for Geographic And Racial Differences in Stroke Study.
ACE: angiotensin-converting enzymes.
CCBs: calcium channel blockers.

Table IV. Characteristics of REGARDS study participants who attended versus did not attend visit 2 by history of stroke and race.

Characteristics	Attended visit 2				Did not attend visit 2			
	History of stroke		No history of stroke		History of stroke		No history of stroke	
	White (N = 282)	Black (N = 207)	White (N = 8,829)	Black (N= 5,130)	White (N = 203)	Black (N= 183)	White (N = 5,580)	Black (N = 4,816)
Age, years	67.8 (7.5)	65.1 (8.3)	63.5 (8.4)	62.4 (8.3)	70.7 (7.9)	67.1 (8.3)	64.4 (9.6)	63.0 (9.2)
Men, %	61.7	42.5	48.6	35.0	49.8	31.2	45.3	35.6
Region, %								
Non-stroke belt	44.0	46.4	43.2	46.2	42.4	53.6	39.0	49.3
Stroke buckle	20.2	19.8	23.1	19.8	23.7	16.4	23.7	17.3
Stroke belt	35.8	33.8	33.7	33.9	34.0	30.1	37.4	33.4
Annual household income								
Less than $20,000, %	14.2	31.3	9.1	23.2	19.4	37.5	15.1	33.2
$20,000 to < $35,000, %	31.2	33.0	22.3	28.5	35.4	33.6	26.7	30.5
$35,000 to < $75,000, %	40.3	25.1	39.4	34.7	34.3	24.3	36.7	27.0
$75,000 and above, %	14.2	10.6	29.1	13.7	10.9	4.6	21.6	9.3
Education								
Less than high school, %	8.2	17.9	4.6	13.2	11.8	24.6	8.3	21.3
High school graduate, %	24.1	30.4	21.2	27.1	27.6	33.9	27.9	28.9
Some college, %	27.3	27.5	25.8	27.9	31.5	20.2	28.0	27.3
College graduate, %	40.4	24.2	48.4	31.8	29.1	21.3	35.8	22.6
Married, %	70.2	43.0	73.3	48.4	58.1	41.0	66.4	43.1
Abdominal obesity, %	47.3	58.3	40.7	57.7	51.7	66.9	44.7	58.9
Current alcohol use, %	57.1	37.2	63.4	45.5	45.8	30.6	56.3	41.3
Physical activity, %								
None	26.8	34.3	27.8	34.2	38.3	38.7	32.4	36.3
1 to 3 times/week	41.1	36.7	39.0	38.9	29.1	35.3	35.5	36.3
4+ times/week	32.1	29.0	33.2	26.9	32.7	26.0	32.1	27.3
Current smoking, %	14.6	16.9	9.1	13.9	15.3	21.4	15.1	19.3
BMI, kg/m^2								
< 25	25.3	10.6	28.7	15.8	26.4	19.8	28.3	17.5
25 to 29	44.5	42.5	40.3	33.9	41.3	31.9	38.6	33.0

≥ 30	30.2	46.9	31.0	50.3	32.3	48.4	33.2	49.5
Diabetes, %	18.1	37.1	11.7	25.5	26.5	38.6	16.4	30.1
Chronic kidney disease, %	23.8	39.8	14.1	18.4	29.8	42.5	18.3	24.9
Systolic BP, mm Hg	127.7 (15.3)	134.1 (18.1)	123.7 (15.0)	128.7 (15.9)	131.8 (17.2)	137.4 (17.4)	125.3 (15.6)	130.6 (17.4)
Diastolic BP, mm Hg	76.6 (9.4)	79.7 (9.9)	75.2 (8.9)	78.2 (9.4)	75.4 (9.6)	80.0 (11.1)	75.4 (9.3)	79.0 (10.3)
# of classes of antihypertensive medications, %								
0	41.8	21.3	53.3	35.1	27.1	18.6	47.9	33.5
1	19.2	16.9	20.6	21.8	29.1	26.2	21.3	20.5
2	24.1	31.4	16.3	23.6	22.7	29.5	18.4	25.2
≥ 3	14.9	30.4	9.9	19.6	21.2	25.7	12.4	20.9

Numbers in the tables are mean (standard deviation) or percentages.
Abdominal obesity was defined as a waist circumference >102cm for men and >88cm for women.
REGARDS: REasons for Geographic And Racial Differences in Stroke Study.
BMI: body mass index.
BP: blood pressure.

Table V. Prevalence ratios for controlled blood pressure comparing Black and White REGARDS study participants with and without a history of stroke, defined by an adjudicated stroke between baseline and the second in-home visit or self-reporting a history of stroke at baseline.

	History of stroke		**No history of stroke**		
	White (n = 335)	Black (n = 369)	White (n = 4302)	Black (n = 3417)	*P*-interaction*
Proportion	53.4%	42.6%	55.9%	50.1%	
Prevalence ratio (95% confidence interval)					
Model 1	1 (Ref)	0.80 (0.69 – 0.94)	1 (Ref)	0.89 (0.85 – 0.92)	0.146
Model 2	1 (Ref)	0.84 (0.71 – 0.99)	1 (Ref)	0.92 (0.88 – 0.96)	0.202
Model 3	1 (Ref)	0.84 (0.71 – 0.99)	1 (Ref)	0.92 (0.88 – 0.97)	0.206

REGARDS: REasons for Geographic And Racial Differences in Stroke.

**P*-interaction is the p-value for interaction between race (Black vs. White) and having a history of stroke on blood pressure control.

Model 1 included adjustment for age, sex, and region of residence.

Model 2 included adjustment for the variables in model 1 and income, education, and marital status.

Model 3 included adjustment for the variables in model 2 and body mass index, physical activity, alcohol consumption, current smoking, chronic kidney disease, diabetes, and number of antihypertensive medication classes being taken.

Blood pressure control was defined as systolic blood pressure < 130 mm Hg and diastolic blood pressure < 80 mm Hg for all participants except those 65 years or older without diabetes, chronic kidney disease, history of cardiovascular disease, and with a 10-year predicted atherosclerotic cardiovascular disease risk < 10% where blood pressure control was defined as systolic blood pressure < 130 mm Hg.

Table VI. Prevalence ratios for controlled blood pressure comparing Black and White REGARDS study participants with and without a history of adjudicated stroke, separately using inverse probability weighting.

	History of stroke		**No history of stroke**		
	White (n = 161)	Black (n = 145)	White (n = 4288)	Black (n = 3405)	*P*-interaction*
Proportion	49.5%	38.0%	55.1%	49.9%	
Prevalence ratio (95% confidence interval)					
Model 1	1 (Ref)	0.75 (0.56 – 1.01)	1 (Ref)	0.89 (0.85 – 0.94)	0.240
Model 2	1 (Ref)	0.77 (0.57 – 1.05)	1 (Ref)	0.92 (0.87 – 0.97)	0.245
Model 3	1 (Ref)	0.79 (0.59 – 1.07)	1 (Ref)	0.93 (0.88 – 0.98)	0.263

REGARDS: REasons for Geographic And Racial Differences in Stroke

**P*-interaction is the p-value for interaction between race (Black vs. White) and having a history of stroke on blood pressure control.

Model 1: adjusted for age, sex, and region of residence.

Model 2: adjusted for the variables in model 1 and income, education, and marital status.

Model 3: adjusted for the variables in model 2 and body mass index, physical activity, alcohol consumption, current smoking, chronic kidney disease, diabetes, and number of antihypertensive medication classes being taken.

Blood pressure control was defined as systolic blood pressure < 130 mm Hg and diastolic blood pressure < 80 mm Hg for all participants except those 65 years or older without diabetes, chronic kidney disease, history of cardiovascular disease, and with a 10-year predicted atherosclerotic cardiovascular disease risk < 10% where blood pressure control was defined as systolic blood pressure < 130 mm Hg.

Table VII. Prevalence ratios for controlled blood pressure comparing Black and White REGARDS study participants with and without a history of adjudicated stroke, separately, stratified by sex.

	History of stroke			No history of stroke			
	White	Black	*P*-interaction*	White	Black	*P*-interaction†	*P*-interaction‡
	N with controlled BP / N at risk						
Females	38/66	34/87		1256/2198	1187/2291		
Males	43/95	23/58		1144/2090	521/1114		
Proportion with controlled BP							
Females	57.6%	39.1%		57.1%	51.8%		
Males	45.3%	39.7%		54.7%	46.8%		
Prevalence ratio (95% confidence interval) – Model 1							
Females	1 (Ref)	0.65 (0.46 – 0.91)	0.267	1 (Ref)	0.90 (0.85 – 0.95)	0.215	0.079
Males	1 (Ref)	0.89 (0.60 – 1.32)		1 (Ref)	0.86 (0.80 – 0.93)		0.871
Prevalence ratio (95% confidence interval) – Model 2							
Females	1 (Ref)	0.63 (0.45 – 0.88)	0.299	1 (Ref)	0.94 (0.89 – 0.99)	0.185	0.099
Males	1 (Ref)	0.99 (0.65 – 1.52)		1 (Ref)	0.87 (0.81 – 0.94)		0.815
Prevalence ratio (95% confidence interval) – Model 3							
Females	1 (Ref)	0.59 (0.41 – 0.85)	0.334	1 (Ref)	0.96 (0.91 – 1.02)	0.067	0.151
Males	1 (Ref)	0.92 (0.59 – 1.43)		1 (Ref)	0.86 (0.80 – 0.93)		0.815

REGARDS: REasons for Geographic And Racial Differences in Stroke

**P*-interaction is the p-value for interaction between race (Black vs. White) and sex (males vs. females) on blood pressure control among those with a history of stroke.

†*P*-interaction is the p-value for interaction between race (Black vs. White) and sex (males vs. females) on blood pressure control among those without a history of stroke.

‡*P*-interaction is the p-value for interaction between race (Black vs. White) and having a history of stroke on blood pressure control among males and females, separately.

Model 1: adjusted for age, sex, and region of residence.

Model 2: adjusted for the variables in model 1 and income, education, and marital status.

Model 3: adjusted for the variables in model 2 and body mass index, physical activity, alcohol consumption, current smoking, chronic kidney disease, diabetes, and number of antihypertensive medication classes being taken.

Blood pressure control was defined as systolic blood pressure < 130 mm Hg and diastolic blood pressure < 80 mm Hg for all participants except those 65 years or without diabetes, chronic kidney disease, history of cardiovascular disease, and with a 10-year

predicted atherosclerotic cardiovascular disease risk < 10% where blood pressure control was defined as systolic blood pressure < 130 mm Hg.

Table VIII. Prevalence ratios for controlled blood pressure defined using thresholds in the seventh Joint National Commission blood pressure guideline† comparing Black and White REGARDS study participants with and without a history of adjudicated stroke, separately.

	History of stroke		**No history of stroke**		
	White (n = 161)	Black (n = 145)	White (n = 4288)	Black (n = 3405)	*P*-interaction*
Proportion	59.8%	52.5%	68.3%	62.8%	
Prevalence ratio (95% confidence interval)					
Model 1	1 (Ref)	0.86 (0.70 – 1.05)	1 (Ref)	0.91 (0.88 – 0.94)	0.662
Model 2	1 (Ref)	0.87 (0.71 – 1.08)	1 (Ref)	0.94 (0.91 – 0.98)	0.672
Model 3	1 (Ref)	0.93 (0.76 – 1.15)	1 (Ref)	0.97 (0.94 – 1.00)	0.961

REGARDS: REasons for Geographic And Racial Differences in Stroke.

**P*-interaction is the p-value for interaction between race (Black vs. White) and having a history of stroke on blood pressure control.

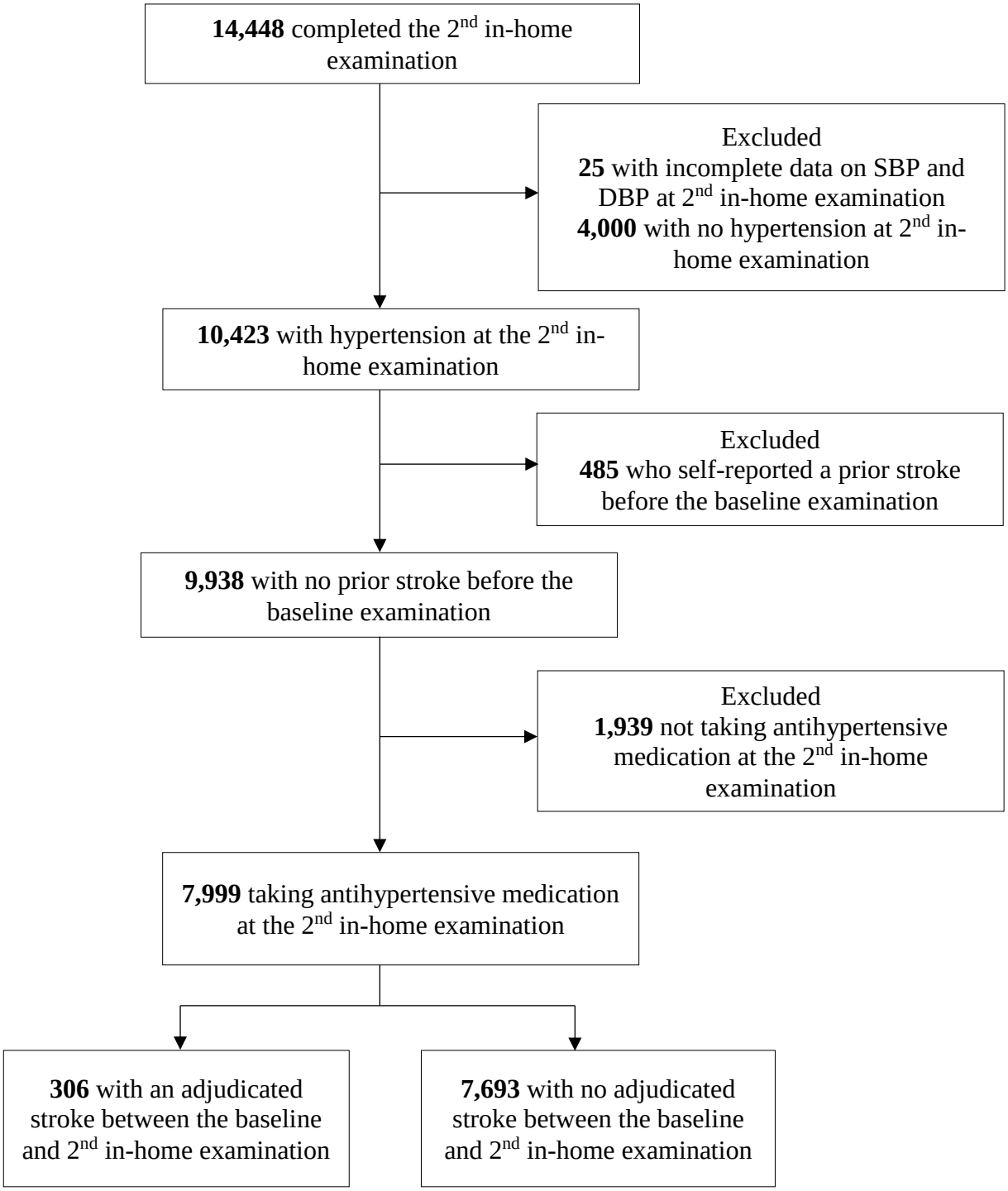
Model 1 included adjustment for age, sex, and region of residence.

Model 2 included adjustment for the variables in model 1 and income, education, and marital status.

Model 3 included adjustment for the variables in model 2 and body mass index, physical activity, alcohol consumption, current smoking, chronic kidney disease, diabetes, and number of antihypertensive medication classes being taken.

†Blood pressure control was defined as systolic blood pressure < 140 mm Hg and diastolic blood pressure < 90 mm Hg for all participants except those with diabetes or chronic kidney disease where blood pressure control was defined as systolic blood pressure < 130 mm Hg and diastolic blood pressure < 80 mm Hg for participants with diabetes or chronic kidney disease.

Figure I. Flowchart showing the inclusion and exclusion of participants in the REasons for Geographic And Racial Differences in Stroke Study for the current analysis.



SBP: systolic blood pressure, DBP: diastolic blood pressure

STROBE Statement—checklist of items that should be included in reports of observational studies

	Item No.	Recommendation	Page No.	Relevant text from manuscript
Title and abstract	1	(*a*) Indicate the study's design with a commonly used term in the title or the abstract	2	Study design: cross-sectional. We used data from the REasons for Geographic And Racial Differences in Stroke (REGARDS) study, a national prospective cohort.
		(*b*) Provide in the abstract an informative and balanced summary of what was done and what was found	2-3	Few studies have examined racial differences in BP control among stroke survivors. We examined disparities in BP control between Black and White adults, with and without a history of stroke using the REasons for Geographical And Racial Differences in Stroke (REGARDS) study. There was a lower proportion of controlled BP among Black compared with White adults with or without a history of stroke, with no statistically significant differences after multivariable adjustment.
Introduction				
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	5	Hypertension is recognized as the most important risk factor for a first or recurrent stroke. Stroke is largely preventable if hypertension is treated and controlled. The 2014 American Heart Association/American Stroke Association (AHA/ASA) guidelines recommend resuming antihypertensive medication following an acute stroke in neurologically stable individuals who were previously treated and to initiate antihypertensive medication for those with systolic BP (SBP) ≥ 140 mm Hg or diastolic BP (DBP) ≥ 90 mm Hg. Compared with previous guidelines, the 2017 American College of Cardiology (ACC)/AHA BP guideline statement set a lower BP target, SBP/DBP < 130/80 mm Hg, for adults with a history of stroke. Few studies have evaluated racial differences in BP control among stroke survivors using the 2017 ACC/AHA BP guideline thresholds.
Objectives	3	State specific objectives, including any prespecified hypotheses	5	The goal of the current study was to examine racial differences in BP control following a stroke using the 2017 ACC/AHA BP guideline thresholds. For comparison, we also examined racial differences in BP control for participants who did not experience a stroke. To address these goals, we analyzed data from the REasons for Geographic And Racial Differences in

				Stroke (REGARDS) study. We hypothesized that the likelihood of controlled BP will be lower among Black compared with White adults with or without a history of stroke.
Methods				
Study design	4	Present key elements of study design early in the paper	6	A population-based cohort of 30,239 non-Hispanic Black and White adults aged ≥ 45 years between 2003 and 2007 from across the contiguous US. The REGARDS study oversampled Black adults and residents from the stroke buckle (Coastal North Carolina, South Carolina, and Georgia), and stroke belt (the remainder of North Carolina, South Carolina, Georgia, and Alabama, Tennessee, Arkansas, and Louisiana) of the southeastern US. The current analysis using a cross-sectional design was restricted to participants who completed the REGARDS study second in-home examination…"
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	6-8	The REGARDS study enrolled a population-based cohort of 30,239 non-Hispanic Black and White adults aged ≥ 45 years between 2003 and 2007 from across the contiguous US. The REGARDS study oversampled Black adults and residents from the stroke buckle (Coastal North Carolina, South Carolina, and Georgia), and stroke belt (the remainder of North Carolina, South Carolina, Georgia, and Alabama, Tennessee, Arkansas, and Louisiana) of the southeastern US. The current analysis …was restricted to participants who completed the REGARDS study second in-home examination, which was conducted between 2013 and 2016 (n=14,448). A standardized questionnaire was administered during every six-month telephone interview to assess new stroke symptoms, hospitalizations, or ambulatory evaluations for stroke or transient ischemic attack (TIA).
Participants	6	(*a*) *Cohort study*—Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up *Case-control study*—Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls *Cross-sectional study*—Give the eligibility criteria, and the sources and methods of selection of participants	6	The current analysis was restricted to participants who completed the REGARDS study second in-home examination (n=14,448). We excluded participants with incomplete information on SBP or DBP (n = 25) and those who did not have hypertension, defined below (n = 4,000). Of the remaining 10,423 participants, we excluded those who self-reported a prior stroke at baseline (n = 604) as medical records were not retrieved to confirm these prevalent events. We further excluded participants who were not taking antihypertensive medication at the time of the second in-home examination (n=1,939). After

				these exclusions, we analyzed data from 306 participants who had an adjudicated incident stroke between the first and second in-home visit and 7,693 participants without an adjudicated incident stroke between first and the second in-home visit. (Figure I in the Data Supplement)."
		(*b*) *Cohort study*—For matched studies, give matching criteria and number of exposed and unexposed *Case-control study*—For matched studies, give matching criteria and the number of controls per case		N/A
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	7-8	**Outcome**: BP control was defined as SBP < 130 mm Hg and DBP < 80 mm Hg, except for low-risk adults aged 65 years or older for whom BP control was defined as SBP < 130 mm Hg. Low risk was defined by not having diabetes, CKD, or a history of cardiovascular disease (CVD) but having a 10-year predicted atherosclerotic CVD risk < 10%. **Exposure**: Race was self-reported at baseline during the computer assisted telephone interview. Race defined as non-Hispanic White or Black. **Confounders and covariates**: Age, sex, race and education were self-reported at baseline. Income, marital status, alcohol consumption, smoking, physical activity and health insurance status were self-reported during a telephone interview conducted in conjunction with the second in-home study visit. After completion of the interview, the second in-home examination was conducted by a trained technician following standardized protocols. Height, weight and waist circumference were measured following a standardized protocol. Blood and urine specimens were collected and used to measure serum creatinine, serum glucose, and urinary albumin and urinary creatinine. Diabetes was defined as a fasting serum glucose level ≥ 126 mg/dL, non-fasting serum glucose ≥ 200 mg/dL for those failing to fast, or self-reported glucose-lowering medication use. Chronic Kidney Disease (CKD) was defined as albumin-to-creatinine ratio ≥ 30 mg/g or estimated glomerular filtration rate < 60 mL/min/1.73 m^2. Pill bottles for medications being taken by study participants in the two weeks prior to the study visit were reviewed as part of a medication inventory.
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group	7-8	**Outcome**: BP was measured two times following a standardized protocol after participants had rested for five minutes using an aneroid sphygmomanometer (American Diagnostic Corporation, Hauppauge, NY). Quality control was monitored by central

examination of digit preference, and retraining of technicians took place as necessary. The mean of the two measurements was used to defined SBP and DBP. BP control was defined using thresholds in the 2017 ACC/AHA BP guideline. BP control was defined as SBP < 130 mm Hg and DBP < 80 mm Hg, except for low-risk adults aged 65 years or older for whom BP control was defined as SBP < 130 mm Hg. Low risk was defined by not having diabetes, CKD, or a history of cardiovascular disease (CVD) but having a 10-year predicted atherosclerotic CVD risk < 10%.

Assessment of history of stroke: A standardized questionnaire was administered during every six-month telephone interview to assess new stroke symptoms, hospitalizations, or ambulatory evaluations for stroke or transient ischemic attack (TIA). When any of these events were reported, the participant's medical records were retrieved and reviewed by at least two physicians including a neurologist. Participants who experienced a focal neurological deficit lasting ≥ 24 hours, the World Health Organization definition of stroke, or a focal or non-focal neurological deficit with positive imaging, clinical definitions of stroke, were considered to have a stroke event. A history of stroke at the second in-home study examination was defined by an adjudicated incident stroke between the baseline and second in-home examination.

Other variables: Age, sex, race and education were self-reported at baseline. Income, marital status, alcohol consumption, smoking, physical activity and health insurance status were self-reported during a telephone interview conducted in conjunction with the second in-home study visit. After completion of the interview, the second in-home examination was conducted by a trained technician following standardized protocols. Height, weight and waist circumference were measured following a standardized protocol. Blood and urine specimens were collected and used to measure serum creatinine, serum glucose, and urinary albumin and urinary creatinine. Diabetes was defined as a fasting serum glucose level ≥ 126 mg/dL, non-fasting serum glucose ≥ 200 mg/dL for those failing to fast, or self-reported glucose-lowering medication use. Chronic Kidney Disease (CKD) was defined as albumin-to-creatinine ratio ≥ 30 mg/g or estimated glomerular filtration rate < 60 mL/min/1.73 m^2. Pill bottles for medications being taken

				by study participants in the two weeks prior to the study visit were reviewed as part of a medication inventory.
Bias	9	Describe any efforts to address potential sources of bias	7-9	Variables in the analyses were defined as a combination of self-reported data and objective measures as available. Potential selection bias was addressed by conducting an inverse probability weighting to account for participants who did not attend the second study visit. To minimize bias due to missing data, we performed multiple imputations by chained equations.
Study size	10	Explain how the study size was arrived at	6-7	The current analysis was restricted to participants who completed the REGARDS study second in-home examination, which was conducted between 2013 and 2016 (n=14,448). We excluded participants with incomplete information on SBP or DBP (n = 25) and those who did not have hypertension, defined below (n = 4,000). Of the remaining 10,423 participants, we excluded those who self-reported a prior stroke at baseline (n = 604) as medical records were not retrieved to confirm these prevalent events. We further excluded participants who were not taking antihypertensive medication at the time of the second in-home examination (n=1,939). After these exclusions, we analyzed data from 306 participants who had an adjudicated incident stroke between the first and second in-home visit and 7,693 participants without an adjudicated incident stroke between first and the second in-home visit (Figure I in the Data Supplement).

Continued on next page

Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	7	Age was measured as a continuous variable, annual house hold income was categorized as <$20,000, $20,000 to <$35,000, $35,000 to < $75,000, $75,000 and above; Education was categorized as less than high school, high school graduate, some college, college graduate; Abdominal obesity was defined as a waist circumference >102 cm for men and >88 cm for women, Current alcohol use was defined as any current use of alcohol in the past 30 days; Current smoking was defined as having smoked at least 100 cigarettes in ones lifetime and smoking cigarettes now, even occasionally; Body mass index was categorized as < 25 kg/m^2, 25 to 29 kg/m^2, ≥ 30 kg/m^2, Systolic and diastolic blood pressure were continuous variables; Number of antihypertensive medication classes was categorized as 1, 2, ≥3. The definition, assessment and categorization of each quantitative variable is provided in Table I in the Data Supplement.
Statistical methods	12	(*a*) Describe all statistical methods, including those used to control for confounding	9-10	Characteristics and the percentage of participants with controlled BP were calculated by race for those with and without a history of stroke, separately. Three Poisson models with robust variance estimators and progressive adjustment were fitted to calculate prevalence ratios (PR) for having controlled BP for Black compared with White participants among those with and without a history of stroke, separately. The first model included adjustment for age, sex, and region of residence. The second model included additional adjustment for income, education, and marital status. The third model included variables in the second model and body mass index (BMI), physical activity, alcohol consumption, current smoking, CKD, diabetes, and the number of antihypertensive medication classes being taken. Differences in the association between race and BP control for participants with and without a history of stroke were assessed by a test of interaction. Next, we calculated the PR for BP control associated with the study covariates one at a time including adjustment for age, sex, and region of residence among White and Black participants, with and without a history of stroke, separately. The proportion of White and Black participants taking each

			class of antihypertensive medication was calculated for those with and without a history of stroke, separately.
	(*b*) Describe any methods used to examine subgroups and interactions	9-10	We conducted a sub-group analysis of the association between race and BP control among those with and without a history of stroke, separately, stratified by sex. Differences in the association of race with BP control by sex, for participants with and without a history of stroke, were assessed by a test of interaction using cross product terms between race and sex in the Poisson regression model.
	(*c*) Explain how missing data were addressed	10	Missing data was addressed using multiple imputation with 10 datasets using chained equations. The number and percentage of participants with missing data for each variable is presented in Table II in the Data Supplement.
	(*d*) *Cohort study*—If applicable, explain how loss to follow-up was addressed *Case-control study*—If applicable, explain how matching of cases and controls was addressed *Cross-sectional study*—If applicable, describe analytical methods taking account of sampling strategy	9	In a sensitivity analysis, we used inverse probability of attrition weighting to account for potential selection bias from study withdrawal for participants who did not attend the REGARDS second visit but were alive at the time of the second visit. Detailed information on the creation of the inverse probability of attrition weighting is provided in the Data Supplement.
	(*e*) Describe any sensitivity analyses	9-10	In a sensitivity analysis, we defined a history of stroke as an adjudicated incident stroke between baseline and the second in-home examination or a self-reported history of stroke at baseline. In another sensitivity analysis, we used inverse probability of attrition weighting to account for potential selection bias from study withdrawal for participants who did not attend the REGARDS second visit but were alive at the time of the second visit. Detailed information on the creation of the inverse probability of attrition weighting is provided in the Data Supplement. Also, we conducted a supplemental analysis defining hypertension and BP control according to the seventh Joint National Committee (JNC 7) guideline. For this analysis, hypertension was defined as SBP ≥ 140 mm Hg, DBP ≥ 90 mm Hg, or antihypertensive medication use. BP control was defined as SBP < 140 mm Hg and DBP < 90 mm Hg except for participants with CKD or diabetes, wherein BP control was defined as SBP < 130 mm Hg and DBP < 80 mm Hg.
Results			

Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed	6-7	The current analysis was restricted to participants who completed the REGARDS study second in-home examination, which was conducted between 2013 and 2016 (n=14,448). We excluded participants with incomplete information on SBP or DBP (n = 25) and those who did not have hypertension, defined below (n = 4,000). Of the remaining 10,423 participants, we excluded those who self-reported a prior stroke at baseline (n = 604) as medical records were not retrieved to confirm these prevalent events. We further excluded participants who were not taking antihypertensive medication at the time of the second in-home examination (n=1,939). After these exclusions, we analyzed data from 306 participants who had an adjudicated incident stroke between the first and second in-home visit and 7,693 participants without an adjudicated incident stroke between first and the second in-home visit (Figure I in the Data Supplement).
		(b) Give reasons for non-participation at each stage		N/A
		(c) Consider use of a flow diagram		Exclusion cascade is provided (Figure I in the Data Supplement).
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders	10-11	Among the 306 participants with a history of stroke, Blacks were younger, less likely to be men, had a lower annual household income and less education and were less likely to be married than Whites (Table 1). Additionally, Blacks were less likely than Whites to drink alcohol and participate in physical activity four or more times per week and more likely to be a current smoker, have BMI $\geq$ 30 kg/m^2 and diabetes, and to be taking three or more classes of antihypertensive medication. Among participants without a history of stroke, Blacks were younger, less likely to be men, have an annual household income $\geq$ \$75,000 per year, be a college graduate, be married, and consume alcohol and more likely to have BMI $\geq$ 30 kg/m^2 and diabetes and to be taking $\geq$ 3 classes of antihypertensive medication than Whites.
		(b) Indicate number of participants with missing data for each variable of interest		The number and percentage of participants with missing data for each variable is presented in Table II in the Data Supplement.
		(c) *Cohort study*—Summarise follow-up time (eg, average and total amount)		NA
Outcome data	15*	*Cohort study*—Report numbers of outcome events or summary measures over time		
		Case-control study—Report numbers in each exposure category, or summary measures of exposure		

		Cross-sectional study—Report numbers of outcome events or summary measures	11	Among participants with history of stroke, 50.3% of Whites and 39.3% of Blacks had controlled BP (Table 2). Among participants without a history of stroke, 56.0% of White participants and 50.2% of Black participants had controlled BP.
Main results	16	(*a*) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included	11,12,and 29	Among participants with history of stroke, in the unadjusted model, the PR for controlled BP comparing Black to White participants was 0.76 (95% CI: 0.58 – 0.98). After full multivariable adjustment (adjusted for age, sex, region of residence, income, education, marital status, body mass index, physical activity, alcohol consumption, current smoking, chronic kidney disease, diabetes, and number of antihypertensive medication classes), the PR for controlled BP comparing Black to White participants was not statistically significant: 0.77 (95% CI: 0.59 – 1.02). Among participants without a history of stroke, in the unadjusted model, the PR for controlled BP comparing Black to White participants was 0.89 (95% CI: 0.85 – 0.92). After full multivariable adjustment (adjusted for age, sex, region of residence, income, education, marital status, body mass index, physical activity, alcohol consumption, current smoking, chronic kidney disease, diabetes, and number of antihypertensive medication classes), the PR for BP control comparing Black to White participants without a history of stroke was marginally statistically significant: 0.92 (95% CI: 0.88 – 0.97). There was no evidence that the association of race with BP control differed between participants with and without a history of stroke (each p-value for interaction > 0.05)
		(*b*) Report category boundaries when continuous variables were categorized		Annual household income was categorized as <$20,000, $20,000 to <$35,000, $35,000 to <$75,000, $75,000 and above; Body mass index was categorized as <25 kg/m^2, 25 to 29 kg/m^2, ≥30 kg/m^2; Number of antihypertensive medication classes was categorized as 1, 2, ≥3.
		(*c*) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period		

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Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses		For both participants with and without a history of stroke, Black adults were less likely than White adults to have BP control when we defined history of stroke as an adjudicated incident stroke between baseline and the second in-home examination or a self-reported history of stroke at baseline (Table V in the Data Supplement). Additionally, these associations were present when we used inverse probability of attrition weighting to account for REGARDS participants who did not attend the second in-home study visit (Table VI in the Data Supplement). There was no evidence of effect modification between race and sex on BP control among those with and without a history of stroke (Table VII in the data Supplement).
Discussion				
Key results	18	Summarise key results with reference to study objectives	13	In this large, geographically diverse cohort, a lower proportion of Black compared with White participants with a history of stroke had controlled BP, but the association was not statistically significant after full adjustment. Also, among those without a history of stroke, Black participants were less likely than White participants to have controlled BP. The association was marginally statistically significant after multivariable adjustment. There was no evidence that the association of race with BP control differed between participants with versus without history of stroke.
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	16	There are known and potential limitations. BP was measured at a single visit. Guidelines recommend estimating BP as the average of measurements obtained at two or more visits. Therefore, some participants without hypertension may have been categorized as having hypertension while other participants with hypertension may have been categorized as not having hypertension. We included a modest sample size (n=306) of participants with an adjudicated incident stroke. Only REGARDS participants who completed the second in-home visit were included in the current analysis. However, there was no evidence of selection bias when we used inverse probability of attrition weighting to account for participants who did not attend the second study visit.
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	16	In this contemporary cohort of US adults, the proportion of Black and White adults with and without a history of stroke with BP control was low. Focused interventions are needed to

				improve BP control among Blacks and Whites, including stroke survivors.
Generalisability	21	Discuss the generalisability (external validity) of the study results	16	Our study's strengths include the large, national biracial sample, rich baseline data, BP measurement following standardized protocol, and adjudicated stroke events. However, we included only a modest sample size (n=306) of participants with an adjudicated incident stroke.
Other information				
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	17	The REGARDS study is supported by cooperative agreement U01 NS041588 co-funded by the National Institute of Neurological Disorders and Stroke (NINDS) and the National Institute on Aging (NIA), National Institutes of Health, Department of Health and Human Service. The content is solely the responsibility of the authors and does not necessarily represent the official views of the NINDS or the NIA. Representatives of the NINDS were involved in the review of the manuscript but were not directly involved in the collection, management, analysis or interpretation of the data.

*Give information separately for cases and controls in case-control studies and, if applicable, for exposed and unexposed groups in cohort and cross-sectional studies.

Note: An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at http://www.plosmedicine.org/, Annals of Internal Medicine at http://www.annals.org/, and Epidemiology at http://www.epidem.com/). Information on the STROBE Initiative is available at www.strobe-statement.org.

AHA Journals Racial and Ethnic Disparities Reporting Guidelines			
Section/Topic	**Item No.**	**Recommendation**	**Provide page # in text / Confirm that this was "done throughout" / N/A**
Introduction			
	1a	Discuss a framework (e.g., conceptual model) for studying race and/or ethnicity in this context	Page 5
	1b	Discuss social and structural forms of racism and/or bias	NA
Methods			
Categorization of race/ethnicity	2a	Describe categorization of race and ethnicity (e.g., selfidentification)	Page 7 and Table I in the online data supplement
	2b	If race and ethnicity are codified by others, be specific in conveying how the categories were attributed	NA
	2c	Describe potential limitations of existing data sources	Page 16
Terminology	3a	Capitalize race and ethnicity terms and use as adjectives rather than nouns (e.g., "Black patients," not "blacks", "White patients," not "whites", etc.)	Done throughout
	3b	Describe specific racial and ethnic makeup of smaller population groups; when possible avoid "non-White" or "Other"	NA
	3c	Use accurate terminology: Hispanic and Latino/a/-x are ethnicities; the term "White" is preferred over Caucasian	Done throughout
Analyses			
	4a	Provide context and analytical use of race/ethnicity as a covariate in risk-adjustment models	NA
Results			
	5a	Avoid statements of causal inference or culpability (e.g., "Black adults did not respond to x medication." Instead, "Among Black adults, x medication was less effective")	Done throughout
Discussion			
	6a	Describe the relevant structural and social factors that influence the study question	Page 15
	6b	Avoid using genetics in isolation to explain social constructs	NA