SUPPLEMENTAL MATERIAL

Potential cardiovascular disease events prevented with adoption of the 2017 American College of Cardiology/American Heart Association blood pressure guideline

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Supplementary methods

Cardiovascular disease risk estimates: The REasons for Geographic and Racial Differences in Stroke (REGARDS) Study

Requests to access the dataset from qualified researchers trained in human subject confidentiality protocols may be sent to the REGARDS study Executive Committee at regards@uab.edu. The REGARDS study was designed to determine reasons underlying the higher stroke mortality rate among residents of the Southeastern US compared to other US regions and among blacks compared with whites.[1] Coronary heart disease (CHD) events and heart failure hospitalizations are being identified and adjudicated in an ancillary study.[2] Computer-assisted telephone interviews were administered by trained staff and used to collect information on each participant's age, race, gender, cigarette smoking status, medical history (e.g., stroke, myocardial infarction [MI], coronary revascularization, diabetes, and dialysis therapy, falls), impaired mobility and use of insulin and oral hypoglycemic and antihypertensive medications. Serum total and high-density lipoprotein (HDL) cholesterol, triglycerides, glucose and creatinine were measured using the blood samples collected during the study visit.[3] Estimated glomerular filtration rate (eGFR) was calculated using age, race, gender, serum creatinine and the Chronic Kidney Disease Epidemiology equation.[4] Urinary albumin and creatinine were measured and used to calculate the albumin-to-creatinine ratio (ACR). History of cardiovascular disease (CVD) at baseline was defined as a history of stroke, MI, coronary revascularization, evidence of a previous MI on the study electrocardiogram, or use of one or more medications to treat heart failure (**Table S14**).[1] For participants without a history of CVD, the 10-year predicted CVD risk was calculated using the Pooled Cohort risk equations.[5] Diabetes was defined as a fasting glucose ≥126 mg/dL, non-fasting glucose ≥200 mg/dL for those who did not fast (n=4,099), or self-report of a prior diagnosis of diabetes with current use of insulin or oral hypoglycemic medication. Chronic kidney disease (CKD) was defined by a self-

report of being on dialysis, an eGFR <60 ml/min/1.73 m^2 or ACR ≥30 mg/g. Statin use was identified based on the medication inventory. Robust status was defined participants as not having a history of falls or impaired mobility at the first in-home visit.

Identification of stroke, CHD, and heart failure hospitalization events in REGARDS

Living REGARDS participants or proxy respondents are contacted every six months via telephone to identify suspected stroke, CHD (i.e., MI or CHD death) and heart failure hospitalization events which are subsequently reviewed using medical records. Stroke events are confirmed by a panel of neurologists following the World Health Organization definition.[6] Events not meeting this definition but characterized by symptoms lasting <24 hours with neuroimaging consistent with acute infarct or hemorrhage are also classified as strokes. MIs and heart failure hospitalizations are confirmed by trained clinicians following published guidelines.[7-9] When deaths are identified, trained clinicians determine the main underlying cause of death based on interviews with next-of-kin, medical records, death certificates and autopsy reports.[8, 10] CVD events were defined as a non-fatal or fatal stroke, non-fatal or fatal MI, CHD death, or heart failure hospitalization. CVD events and all-cause mortality were available through December 31, 2014 for the current analysis.

Population size estimates: National Health and Nutrition Examination Surveys (NHANES)

NHANES is conducted by the National Center for Health Statistics of the Centers for Disease Control and Prevention with the goal of monitoring the health status of the general US adult population. For each cycle, potential participants are identified through stratified, multistage probability sampling allowing nationally representative estimates of the noninstitutionalized US adult population. NHANES data were collected through the administration of standardized questionnaires and a medical evaluation at a mobile examination clinic as precisely

described.[11] Covariates included in this analysis and their method of ascertainment are described in **Table S15***.* There is no robustness measurement shared by both REGARDS and NHANES. Among NHANES participants, robust was defined by walking at least 0.8 m/s in the standard 20-foot walk test, a threshold based on the prior studies recommending this cut-point and because it aligned with more comprehensive assessments of frailty and discriminated between survival times. Prior research has shown that among the traditional components used to assess frailty, slow gait speed has the strongest prognostic ability.[11-14]

Quality Control of Blood-Pressure Measurement

Quality control for the BP measurements in REGARDS included calibration of the aneroid device by the manufacturer and monitoring of the readings for digit preference. In NHANES, quality control of blood-pressure measurement included quarterly recertification with retraining as needed, and annual retraining of all physicians. Certification required video test recognition of Korotkoff sounds and performing measurements on volunteers. Participants who responded affirmatively to both of the questions “Have you ever been told by a doctor or other healthcare professional that you had hypertension, also called high blood pressure?” and “Are you now taking prescribed medication for high blood pressure?” were considered to be taking antihypertensive medication.

Categorization based on blood pressure levels and guideline recommended antihypertensive treatment

For the main analysis, we only used the systolic blood pressure (SBP) level because the Bundy et al. meta-analysis provided hazard ratios in SBP categories only.[15] To our knowledge, no

other meta-analysis of blood pressure lowering randomized trials provides hazard ratios for cardiovascular disease events with incrementally lower diastolic blood pressure (DBP) achieved. In order to include treatment benefits for the small population segment with isolated diastolic hypertension (i.e., raised DBP but normal range SBP) and those with more severely raised DBP placing them in a higher hypertension stage than would their SBP, sensitivity analyses were conducted using the higher hypertension stage, whether based on SBP or DBP, to assign treatment effects of BP lowering (**Table S4**).

Subgroup analyses

We acknowledge that investigating subgroups may yield unstable estimates of population sizes given the sample size of NHANES 2011-2014. To address this limitation, in all subgroup analyses we collapsed the micro-strata of BP levels (i.e., groupings by 5 mmHg bins) within broad treatment groups and calculated the mean SBP within the collapsed groups. The mean SBP served as the baseline SBP from **Table S4** below to assign risk reductions for CVD events with treatment to goal BP.

Statistical analysis

We calculated characteristics of eligible NHANES and REGARDS participants separately, overall and among those taking and not taking antihypertensive medication (**Table S13**). NHANES sampling weights were used to calculate US population size estimates. These weights were recalibrated based on the proportion of participants missing data by age, gender, and race-ethnicity within each NHANES cycle. Recalibration of the sampling weights corrects for differences in missing data across age, gender and race-ethnicity strata and assumes that data within strata are missing at random.[16] We calculated 95% confidence intervals for US population size estimates using Taylor-series variance estimation.[17]

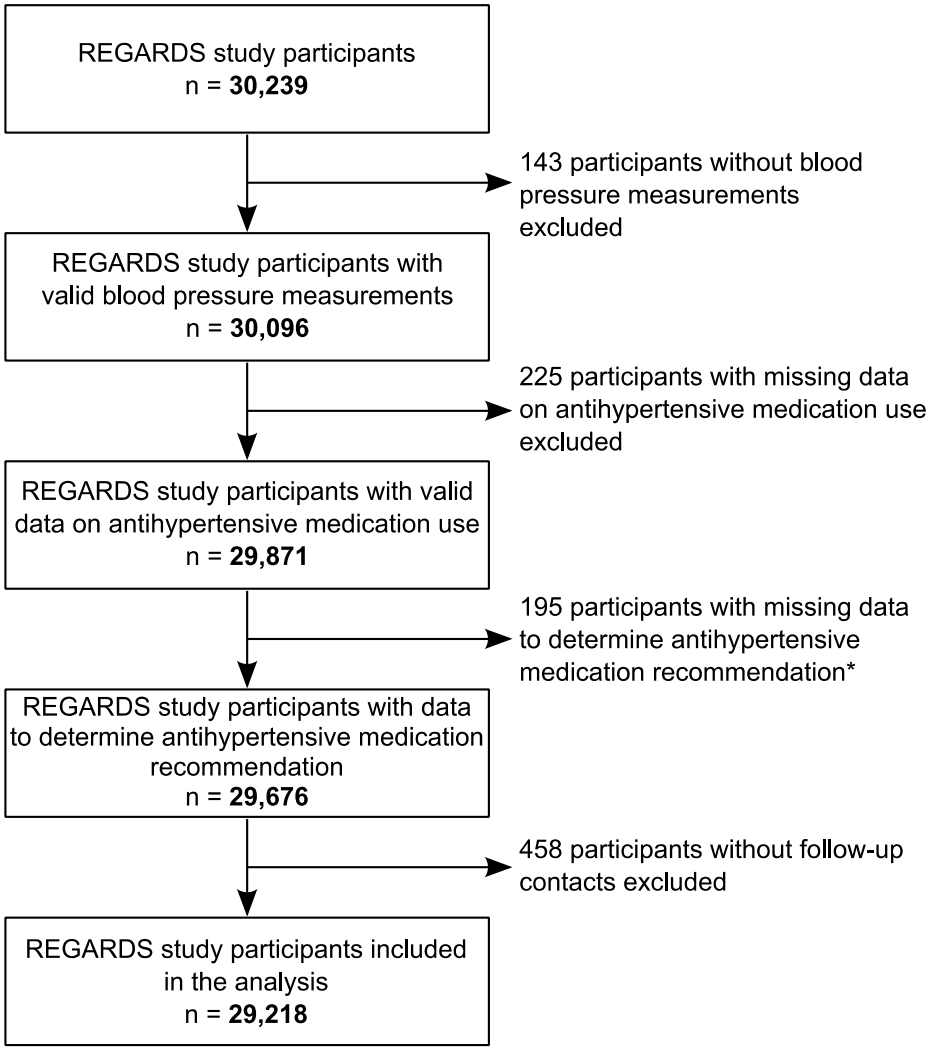
Using REGARDS data may result in an overestimation of the CVD risk in the US population as this study over-sampled blacks. Therefore, we reweighted the REGARDS population to match the US population on age, sex and race-ethnicity when calculating the 10-year risk of CVD events. As the REGARDS study only enrolled blacks and whites, we reweighed black and white REGARDS participants to match the distribution of blacks and non-blacks in the US population. This is equivalent to apply REGARDS ten-year CVD risk in white participants to the other race-ethnicity categories.

Treatment-related serious adverse events

Treatment-related serious adverse events (SAEs) were defined in SPRINT as events that were fatal or life-threatening, that resulted in clinically significant or persistent disability, that required or prolonged a hospitalization, or that were judged by the investigator to represent a clinically significant hazard or harm to the participant that might require medical or surgical intervention which were classified as possibly or definitely related to the Iintervention.[18] Treatment-related SAEs in ACCORD-BP were defined as any adverse experience that was significantly life threatening and/or resulted in permanent disability, hospitalization or prolongation of hospitalization and were considered by the investigators to be possibly, probably, or definitely related to antihypertensive medications.

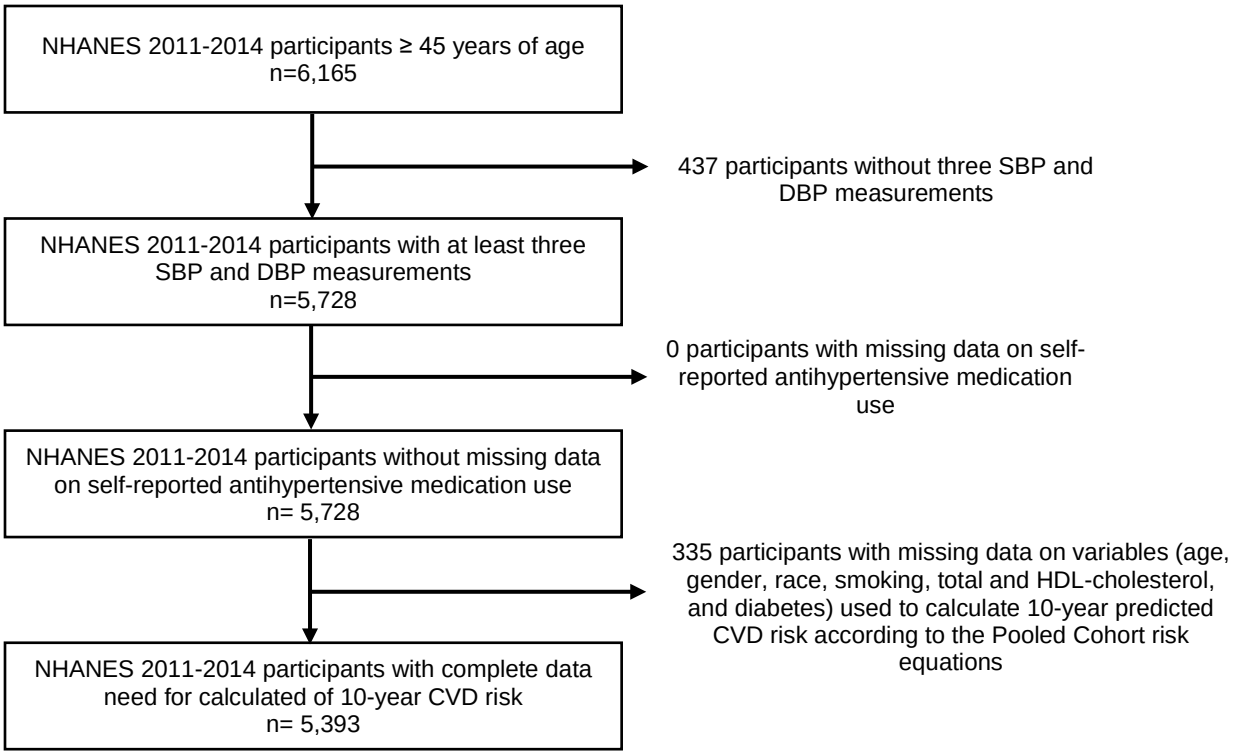
FIGURES

Figure S1. Flow-chart of REGARDS study participants included in the current analysis to generate sub-group specific CVD risks.



CVD: cardiovascular disease; REGARDS: REasons for Geographic and Racial Differences in Stroke.

Figure S2. Flow-chart of NHANES 2011-2014 study participants included in the current analysis to generate sub-group specific US adults population size estimates.



CVD: cardiovascular disease; DBP: diastolic blood pressure; HDL: high-density lipoprotein; NHANES: National Health and Nutrition Examination Surveys; SBP: systolic blood pressure.

Table S1. Groupings of NHANES and REGARDS study participants not taking (left column) and taking (right column) antihypertensive medication according to their recommendation for pharmacological treatment initiation and intensification for comparisons between JNC7 and 2017 ACC/AHA blood pressure guideline.

Mutually-exclusive groups to be analyzed	
Taking pharmacological antihypertensive medication	
No	**Yes**
1. SBP < 130 mm Hg (not recommended antihypertensive medication initiation by the 2017 ACC/AHA BP guidelines or JNC7) 2. SBP 130 to <140 mm Hg a. Not recommended antihypertensive medication initiation by the 2017 ACC/AHA GP guidelines or JNC7 a. Without diabetes, CKD, or history of CVD with a 10-year predicted risk for CVD < 10% who are < 65 years of age b. Recommended antihypertensive medication initiation by the 2017 ACC/AHA BP guideline but not the JNC7 a. Without diabetes or CKD who are either (1) ≥ 65 years of age or (2) with a history of CVD or a 10-year CVD predicted risk ≥ 10%. c. Recommended antihypertensive medication initiation by the 2017 ACC/AHA BP guideline and JNC7 a. Participants with diabetes or CKD 3. SBP ≥ 140 mm Hg (recommended antihypertensive medication initiation by the 2017 ACC/AHA BP and JNC7 guidelines)	1. SBP < 130 mm Hg (not recommended antihypertensive medication intensification by the 2017 ACC/AHA blood pressure or JNC7 guidelines) 2. SBP 130 to 140 mm Hg a. Recommended antihypertensive medication intensification by the 2017 ACC/AHA blood pressure guideline but not the JNC7 guideline a. Participants without diabetes or CKD b. Recommended antihypertensive medication intensification by the 2017 ACC/AHA blood pressure and JNC7 guidelines a. Participants with diabetes or CKD 3. SBP ≥ 140 mm Hg (recommended antihypertensive medication intensification by the 2017 ACC/AHA high blood pressure and JNC7 guidelines)

ACC: American College of Cardiology; AHA: American Heart Association; CKD: chronic kidney disease; CVD: cardiovascular disease; JNC7: Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure, NHANES: National Health and Nutrition Examination Surveys, REGARDS: REasons for Geographic and Racial Differences in Stroke, SPB: systolic blood pressure.

Table S2. Groupings of NHANES and REGARDS study participants not taking (left column) and taking (right column) antihypertensive medication according to their recommendation for pharmacological treatment initiation and intensification for comparisons between JNC8 Panel Member Report and 2017 ACC/AHA blood pressure guideline.

Mutually-exclusive groups to be analyzed	
Taking pharmacological antihypertensive medication	
No	**Yes**
1. SBP < 130 mm Hg (not recommended antihypertensive medication initiation by the 2017 ACC/AHA blood pressure or JNC8 panel member report) 2. SBP 130 to <140 a. Not recommended antihypertensive medication initiation by the 2017 ACC/AHA blood pressure or JNC8 panel member report i. Age <65 years and ii. Without diabetes, CKD, or clinical CVD and iii. 10-year predicted risk for CVD < 10% b. Recommended antihypertensive medication initiation by the 2017 ACC/AHA blood pressure guideline but not the JNC8 panel member report i. Age ≥65 years ii. Diabetes, CKD, or clinical CVD iii. 10-year CVD predicted risk ≥ 10% 3. SBP 140 to <150 mm Hg a. Recommended antihypertensive medication initiation by the 2017 ACC/AHA blood pressure and JNC8 panel member report i. Age < 60 years or Diabetes or CKD b. Recommended antihypertensive medication initiation by the 2017 ACC/AHA high blood pressure guideline but not the JNC8 panel report guideline i. ≥60 years of age without diabetes or CKD 4. SBP ≥ 150 mm Hg (recommended antihypertensive medication initiation by the 2017 ACC/AHA high blood pressure and JNC7 guidelines)	1. SBP < 130 (not recommended antihypertensive medication intensification by the 2017 ACC/AHA blood pressure guideline or JNC8 panel member report) 2. SBP of 130 to <140 mm Hg a. Recommended antihypertensive medication intensification by the 2017 ACC/AHA blood pressure guideline but not the JNC8 panel member report 3. SBP of 140 to <150 mm Hg a. Recommended antihypertensive medication intensification by the 2017 ACC/AHA BP guideline and the JNC8 panel report guideline i. <60 years or with diabetes or CKD b. Recommended antihypertensive medication intensification by the 2017 ACC/AHA BP guideline but not the JNC8 panel report guideline i. ≥60 years of age without diabetes or CKD 4. SBP ≥ 150 mm Hg (recommended antihypertensive medication intensification by the 2017 ACC/AHA blood pressure guidelines and JNC8 panel member report)

ACC: American College of Cardiology; AHA: American Heart Association; CKD: chronic kidney disease; CVD: cardiovascular disease; JNC8: Eighth Joint National Committee, NHANES: National Health and Nutrition Examination Surveys, REGARDS: REasons for Geographic and Racial Differences in Stroke, SPB: systolic blood pressure.

Table S3. Blood pressure levels used to recommend antihypertensive medication, and treatment goal according to the 2017 ACC/AHA guideline, the JNC7 guideline and the JNC8 panel member report.

	Guideline recommended SBP/DBP threshold for initiation of pharmacologic therapy, mm Hg		
	2017 ACC/AHA	**JNC7**	**JNC8 panel member report**
Systolic blood pressure, mm Hg			
General population	≥ 140	≥ 140	≥ 140
Diabetes or CKD	≥ 130	≥ 130	≥ 140
History of CVD or 10-year CVD risk ≥10%*	≥ 130	X	X
Age ≥ 65 years	≥ 130	≥ 140	X
≥60 years of age without diabetes or CKD	X	X	≥ 150
Diastolic blood pressure, mm Hg			
General population	≥ 90	≥ 90	≥ 90
Diabetes or CKD	≥ 80	≥ 80	
History of CVD or 10-year CVD risk ≥10%*	≥ 80		
	Guideline recommended treatment goal among those taking antihypertensive medication (i.e., threshold for treatment intensification)		
Systolic blood pressure, mm Hg			
General population	< 130	< 140	< 140
Diabetes or CKD	< 130	< 130	< 140
≥60 years of age without diabetes or CKD	< 130	< 140	< 150
Diastolic blood pressure, mm Hg			
General population	< 80	< 90	<90
Diabetes or CKD	< 80	< 80	

ACC: American College of Cardiology; AHA: American Heart Association; CKD: chronic kidney disease; JNC7: Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure, JNC8: Eighth Joint National Committee, NHANES: National Health and Nutrition Examination Surveys, REGARDS: REasons for Geographic and Racial Differences in Stroke, SPB: systolic blood pressure.

* The 10-year predicted CVD risk is calculated using the Pooled Cohort risk equations.[5]

Table S4. List of medications used to identify heart failure at baseline.

Medication	Additional requirements
Digoxin	No atrial fibrillation at baseline by self-report or based on the study electrocardiogram
Carvedilol	None
Spironolactone	None
Hydralazine in combination with isosorbide mono- or di-nitrate	None
Loop diuretic (i.e., furosemide, bumetanide, torsemide)	None
Angiotensin-converting enzyme inhibitor or angiotensin II receptor **blocker** in combination with a beta-blocker	SBP <140 mm Hg, DBP <90 mm Hg and self-reporting not taking medication to lower their blood pressure

DBP: diastolic blood pressure; SBP: systolic blood pressure.

Table S5. Hazard ratios for CVD events according to current SBP and SBP treatment goal used in calculations to project CVD events prevented with blood pressure guideline implementation.

	SBP Goal		
	<130 mm Hg	**<140 mm Hg**	**<150 mm Hg**
Current SBP, mm Hg	**HR (95% CI)**	**HR (95% CI)**	**HR (95% CI)**
<130	1.0	1.0	1.0
130 to <135	0.87 (0.77-0.99)	1.0	1.0
135 to <140	0.83 (0.71-1.01)	1.0	1.0
140 to <145	0.71 (0.61-0.86)	0.85 (0.71-1.03)	1.0
145 to <150	0.67 (0.53-0.87)	0.81 (0.68-0.96)	1.0
150 to <155	0.56 (0.43-0.76)	0.68 (0.51-0.90)	0.83 (0.60-1.00)
155 to <160	0.51 (0.40-0.65)	0.60 (0.47-0.78)	0.75 (0.56-1.00)
≥160	0.44 (0.33-0.61)	0.53 (0.39-0.73)	0.66 (0.47-0.94)

Hazard ratios were derived from a network meta-analysis published by Bundy et al.[15] Major CVD events in Bundy et al[15] includes CHD, stroke, heart failure, and CVD deaths.

CHD: coronary heart disease, CI: confidence interval, CVD: cardiovascular disease, HR: hazard ratio, SBP: systolic blood pressure.

Table S6. Hazard ratios for CVD events according to current blood pressure levels and blood pressure treatment goal used in calculations to project CVD events prevented with blood pressure guideline implementation.

	SBP/DBP Goal, mm Hg		
	<130/80	**<140/90**	**<150/90**
Current SBP/DBP, mm Hg	**HR (95% CI)**	**HR (95% CI)**	**HR (95% CI)**
SBP <130 and DBP <80	1.0	1.0	1.0
SBP 130 to <135 or DBP 80 to <85	0.87 (0.77-0.99)	1.0	1.0
SBP 135 to <140 or DBP 85 to <90	0.83 (0.71-1.01)	1.0	1.0
SBP 140 to <145 or DBP 90 to <92.5	0.71 (0.61-0.86)	0.85 (0.71-1.03)	1.0
SBP 145 to <150 or DBP 92.5 to <95	0.67 (0.53-0.87)	0.81 (0.68-0.96)	1.0
SBP 150 to <155 or DBP 95 to <97.5	0.56 (0.43-0.76)	0.68 (0.51-0.90)	0.83 (0.60-1.00)
SBP 155 to <160 or DBP 97.5 to <100	0.51 (0.40-0.65)	0.60 (0.47-0.78)	0.75 (0.56-1.00)
SBP ≥160 or DBP ≥100	0.44 (0.33-0.61)	0.53 (0.39-0.73)	0.66 (0.47-0.94)

Hazard ratios were derived from a network meta-analysis published by Bundy et al[15] based on SBP categories. Major CVD events in Bundy et al[15] includes CHD, stroke, heart failure, and CVD deaths. DBP categories were created based on expert opinion to match SBP categories defined by Bundy et al.

CHD: coronary heart disease, CI: confidence interval, CVD: cardiovascular disease, DBP: diastolic blood pressure, HR: hazard ratio, SBP: systolic blood pressure.

Participants whose SBP and DBP correspond to two separate blood pressure categories were assigned to the higher blood pressure group (e.g., participants with SBP/DBP of 135/94 mm Hg were assigned to the SBP 145 to <150 or DBP 92.5 to <95 mm Hg category).

Table S7. Calculations for pooled estimate of treatment-related SAEs in ACCORD-BP and SPRINT.[18, 19]

	Intensive SBP Control Arm					Standard SBP Control Arm			
Study	**No. of SAE Events**	**No. At Risk**	**Person-years at risk**	**SAE Events per 1,000 per years**		**No. of SAE Events**	**No. At Risk**	**Person-years at risk**	**SAE Events per 1,000 per years**
ACCORD-BP	77	2,362	11,810	6.5		30	2371	11,855	2.5
SPRINT	220	4,678	15,250	14.4		118	4683	15,267	7.7
Pooled Together	297	7,040	27,060	10.9		148	7054	27,122	5.5

SAE= Serious Adverse Event, SPRINT= Systolic Blood Pressure Intervention Trial (ACCORD-BP)= The Action to Control Cardiovascular Risk in Diabetes Blood Pressure Trial.

SAEs were defined in SPRINT as an event that was fatal or life-threatening, that resulted in clinically significant or persistent disability, that required or prolonged a hospitalization, or that was judged by the investigator to represent a clinically significant hazard or harm to the participant that might require medical or surgical intervention to prevent one of the other events listed above that was classified as definitely or probably related to the intervention.

SAEs were defined in ACCORD-BP as life-threatening, cause permanent disability, or necessitate hospitalization that are attributed to blood-pressure medications.

Table S8. Characteristics of REGARDS and NHANES 2011-2014 study participants overall and among those taking and not taking antihypertensive medication

	NHANES 2011-2014			REGARDS		
Characteristics at visit 1	**Overall (n=5,393)**	**Taking antihypertensive medication (n=2,333)**	**Not taking antihypertensive medication (n=3,060)**	**Overall (n=29,218)**	**Taking antihypertensive medication (n=15,179)**	**Not taking antihypertensive medication (n=14,039)**
Age group, years						
45 – 49	17.2	8.3	23.0	1,460 (5.0)	434 (2.9)	1,026 (7.3)
50 – 59	34.4	26.2	39.7	7,604 (26.0)	3,351 (22.1)	4,253 (30.3)
60 – 69	26.0	30.7	23.0	10,997 (37.6)	5,984 (39.4)	5,013 (35.7)
70 – 79	14.3	21.4	9.6	7,064 (24.2)	4,176 (27.5)	2,888 (20.6)
≥80	8.1	13.4	4.7	2,093 (7.2)	1,234 (8.1)	859 (6.1)
Female sex	53.2	54.4	52.3	16,064 (55.0)	8,670 (57.1)	7,394 (52.7)
White	74.0	73.3	74.5	17,197 (58.9)	7,519 (49.5)	9,678 (68.9)
Black	10.4	14.0	8.1	12,021 (41.1)	7,660 (50.5)	4,361 (31.1)
Hispanic	9.4	7.8	10.5	-	-	-
Other race	6.1	4.9	6.9	-	-	-
Current smoker	16.8	14.2	18.5	4,221 (14.5)	2,060 (13.6)	2,161 (15.4)
BMI, kg/m^2	29.3 (0.19)	31.0 (0.26)	28.2 (0.21)	29.3 (6.2)	30.6 (6.4)	27.9 (5.6)
SBP, mm Hg	126.8 (0.46)	131.3 (0.72)	123.8 (0.57)	127.6 (16.7)	131.4 (16.7)	123.5 (15.7)
DBP, mm Hg	71.6 (0.27)	70.5 (0.40)	72.4 (0.28)	76.5 (9.7)	77.6 (9.9)	75.2 (9.4)
Total cholesterol, mg/dL	197.9 (0.74)	189.5 (1.28)	203 (1.01)	192.0 (40.1)	187.3 (40.0)	197.0 (39.6)
HDL cholesterol, mg/dL	54.4 (0.38)	52.0 (0.56)	56.1 (0.45)	51.8 (16.2)	50.6 (15.9)	53.1 (16.5)
History of CVD	13.3	23.7	6.5	7,966 (27.3)	5,565 (36.7)	2,401 (17.1)
10-year ASCVD risk, %*	11.3 (0.27)	17.2 (0.50)	0.2 (0.26)	14.3 (12.5)	18.2 (13.5)	11.1 (10.6)
Statin use	32.3	51.5	19.7	9,230 (31.7)	6,234 (41.1)	2,996 (21.4)
Diabetes	17.5	27.8	10.8	6,226 (22.0)	4,559 (31.0)	1,667 (12.2)
Chronic Kidney Disease	21.8	34.2	13.7	6,381 (22.0)	4,496 (29.9)	1,885 (13.5)
eGFR, mL/min/1.73 m^2	81.9 (0.39)	75.6 (0.64)	86.0 (0.37)	84.9 (20.3)	81.4 (22.2)	88.7 (17.2)
eGFR <60	13.4	23.1	7.0	3,206 (11.4)	2,463 (16.9)	743 (5.5)
ACR, mg/g, GM (95% CI)	10.0 (9.6, 10.5)	13.2 (12.3, 14.2)	8.4 (8.1, 8.7)	10.5 (10.4, 10.7)	13.2 (12.9, 13.5)	8.3 (8.1, 8.4)
ACR ≥ 30, mg/g	12.4	18.3	8.2	4,268 (15.3)	2,912 (20.2)	1,356 (10.1)

Numbers in the table are proportions or mean (standard error) for NHANES and n (percentage) or mean (standard deviation) for REGARDS, unless otherwise indicated. ACR= albumin-to-creatinine ratio, CI= confidence interval, CVD= atherosclerotic cardiovascular disease, BMI=body mass index, SBP =systolic blood pressure, DBP= diastolic blood pressure, HDL= high-density lipoprotein, LDL= low-density lipoprotein. GM=geometric mean.

* Among those without a history of CVD.

Table S9. Covariates included in the current analysis and the method of ascertainment in the National Health and Nutrition Examination Survey, 2011-2014 and the REasons for Geographic And Racial Differences in Stroke study.		
Variable	**Ascertainment in NHANES 2011-2014**	**Ascertainment in REGARDS**
Age	Self-report	Self-report
Race-ethnicity	Self-report	Self-report
Gender	Self-report	Self-report
Cigarette smoking	Self-report	Self-report
History of coronary heart disease	Self-report	Self-report or evidence of a previous MI on the study electrocardiogram
History of myocardial infarction	Self-report	Self-report or evidence of a previous MI on the study electrocardiogram
History of stroke	Self-report	Self-report
Antihypertensive medication use	Self-report	Self-report
Glucose lowering medication use	Self-report	Self-report
Statin Use	Pill bottle review during the NHANES examination	Medication inventory
Diabetes mellitus	Fasting serum glucose ≥ 126 mg/dL, non-fasting serum glucose ≥ 200 mg/dL, hemoglobin A1c ≥ 6.5% or self-report of a history of diabetes with concurrent glucose lowering medication use	Fasting glucose ≥126 mg/dL, non-fasting glucose ≥200 mg/dL for those who did not fast (n=4,099), or self-report of a prior diagnosis of diabetes with current use of insulin or oral hypoglycemic medication
Reduced eGFR	eGFR < 60 ml/min/1.73 m^2 calculated using measured serum creatinine and the Chronic Kidney Disease Epidemiology Collaboration equation	eGFR < 60 ml/min/1.73 m^2 calculated using measured serum creatinine and the Chronic Kidney Disease Epidemiology Collaboration equation
Albuminuria	Urinary albumin-to creatinine ratio ≥ 30 mg/g	Urinary albumin-to creatinine ratio ≥ 30 mg/g

NHANES – National Health and Nutrition Examination Survey
eGFR – Estimated glomerular filtration rate
MI – Myocardial Infarction

Table S10. Detailed listing of treatment-related SAEs reported in SPRINT (top panel) and ACCORD-BP (bottom panel).[18, 19]			
SPRINT			
Treatment-related SAE	**Intensive Arm (n=4,678)** **no. of patients (%)**	**Standard Arm (n=4,683)** **no. of patients (%)**	**P Value**
Overall	220 (4.7)	118 (2.5)	0.001
Conditions of Interest			
Hypotension	83 (1.8)	37 (0.8)	<0.001
Syncope	64 (1.4)	28 (0.6)	0.006
Bradycardia	34 (0.7)	24 (0.5)	0.44
Electrolyte abnormality	69 (1.5)	48 (1.0	0.05
Injurious fall	19 (0.4)	13 (0.3)	0.21
Acute Kidney Injury or Acute Renal Failure	88 (1.9)	34 (0.7)	<0.001
ACCORD-BP			
Treatment-related SAE	**Intensive Arm (n=2,362)** **no. of patients (%)**	**Standard Arm (n=2,371)** **no. of patients (%)**	**P Value**
Overall	77 (3.3)	30 (1.27)	<0.001
Conditions of Interest			
Hypotension	17 (0.7)	1 (0.04)	<0.001
Syncope	12 (0.5)	5 (0.21)	0.10
Bradycardia or arrhythmia	12 (0.5)	3 (0.13)	0.02
Hyperkalemia	9 (0.4)	1 (0.04)	0.01
Angioedema	6 (0.3)	4 (0.17)	0.55
Renal failure	5 (0.2)	1 (0.04)	0.12

SAE= Serious Adverse Event, SPRINT= Systolic Blood Pressure Intervention Trial (ACCORD-BP)= The Action to Control Cardiovascular Risk in Diabetes Blood Pressure Trial.

SAEs were defined in SPRINT as an event that was fatal or life-threatening, that resulted in clinically significant or persistent disability, that required or prolonged a hospitalization, or that was judged by the investigator to represent a clinically significant hazard or harm to the participant that might require medical or surgical intervention to prevent one of the other events listed above that was classified as definitely or probably related to the intervention.

SAEs were defined in ACCORD-BP as life-threatening, cause permanent disability, or necessitate hospitalization that are attributed to blood-pressure medications.

Table S11. Calculations showing that given an average medication adherence of typical of BP lowering trial of about 75%, the lower bounds of our uncertainty ranges imply an effect size reflecting medication adherence as low as 28%.[20]

Current SBP, mmHg	Hazard ratio for treatment to goal of SBP <130 mmHg			β coefficients (natural log of the hazard ratios for treatment to goal)			Assume HR of PE reflects 75% adherence: Calculate β_{total} β_{PE}= 0.75* β_{total} β_{total} = β_{PE}/0.75	Calculate percent medication adherence using the Upper Confidence limit of the hazard ratio Since β_{UCL}= x * β_{total} UCL adherence = x = β_{UCL} / β_{total}
	PE	LCL	UCL	PE	LCL	UCL	β_{total}	Medication Adherence
130 to <135	0.87	0.77	0.99	-0.139	-0.261	-0.010	-0.186	5.4%
135 to <140	0.83	0.71	1.01	-0.186	-0.342	0.010	-0.248	-4.0%
140 to <145	0.71	0.61	0.86	-0.342	-0.494	-0.151	-0.457	33.0%
145 to <150	0.67	0.53	0.87	-0.400	-0.635	-0.139	-0.534	26.1%
150 to <155	0.56	0.43	0.76	-0.580	-0.844	-0.274	-0.773	35.5%
155 to <160	0.51	0.4	0.65	-0.673	-0.916	-0.431	-0.898	48.0%
≥160	0.44	0.33	0.61	-0.821	-1.109	-0.494	-1.095	45.2%
							Average	**27.0%**

PE=Point estimate, LCL=lower confidence limit, UCL=upper confidence limit

Table S12. Projected number of US adults recommended and not recommended pharmacological antihypertensive treatment, treatment-related SAEs expected under *current SBP levels*, and treatment-related SAEs potentially incurred in the next ten years in adults aged ≥ 45 years by achieving and maintaining 2017 ACC/AHA and JNC7 Guideline-Recommended SBP Goals.

	US Adults, millions (95% CI)	Treatment-related SAEs expected with current SBP levels, millions (95% CI)	Projected additional treatment-related SAEs expected with achieving guideline-recommended SBP goals, millions (UR)		Difference (UR)
			JNC7	2017 ACC/AHA	
Currently not taking antihypertensive medication					
SBP <130 mm Hg					
Antihypertensive medications not recommended by 2017 ACC/AHA or JNC7	51.3 (44.5-58.1)	0	-	-	-
SBP 130 to <140 mm Hg					
Antihypertensive medications not recommended by 2017 ACC/AHA or JNC7	5.2 (3.6-6.7)	0	-	-	-
Antihypertensive medications recommended by the 2017 ACC/AHA but not by JNC7	3.5 (2.4-4.6)	0	-	0.4 (0.3-0.5)	0.4 (0.3-0.5)
Antihypertensive medications recommended by the 2017 ACC/AHA and by JNC7	3.0 (1.6-4.4)	0	0.3 (0.2-0.5)	0.3 (0.2-0.5)	0
SBP ≥140 mm Hg					
Antihypertensive medications recommended by the 2017 ACC/AHA and by JNC7	11.4 (7.2-15.6)	0	0.8 (0.5-01.2)	1.2 (0.8-01.7)	0.4 (0.3-0.5)
Total	74.3 (59.3-89.4)	0	1.2 (0.7-1.6)	2.0 (1.2-2.7)	0.8 (0.5-1.0)
Currently taking antihypertensive medication					
SBP <130 mm Hg					
Treatment intensification not recommended by the 2017 ACC/AHA or JNC7	24.7 (20.9-28.5)	1.3 (1.1-1.6)	-	-	-
SBP 130 to <140 mm Hg					
Treatment intensification recommended by the 2017 ACC/AHA but not JNC7	5.2 (3.8-6.6)	0.3 (0.2-0.4)	-	0.3 (0.2-0.4)	0.3 (0.2-0.4)
Treatment intensification recommended by the 2017 ACC/AHA and JNC7	5.0 (3.9-6.1)	0.3 (0.2-0.3)	0.3 (0.2-0.3)	0.3 (0.2-0.3)	0
SBP ≥140 mm Hg					
Treatment intensification recommended by the 2017 ACC/AHA and by JNC7	13.8 (9.3-18.3)	0.8 (0.5-1.0)	0.6 (0.4-0.8)	0.8 (0.5-1.0)	0.2 (0.1-0.2)
Total	48.7 (37.9-59.5)	2.7 (2.1-3.2)	0.9 (0.6-01.1)	1.3 (0.9-1.7)	0.4 (0.3-0.6)

Overall (Taking and not taking Antihypertensive Medication)					
Total	123.1 (97.2-148.9)	2.7 (2.1-3.2)	2.0 (1.3-2.8)	3.3 (2.2-4.4)	1.2 (0.8-1.6)

ACC: American College of Cardiology; AHA: American Heart Association; CI: confidence interval; CVD: cardiovascular disease; JNC7: Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure; SBP: systolic blood pressure. In this table, recommendations for antihypertensive medication by the 2017 ACC/AHA high blood pressure guideline but not JNC7 include adults without diabetes or CKD (1) age ≥65 years with SBP 130-139 mm Hg and, or (2) with SBP 130-139/80-89 mm Hg with a history of CVD or a 10-year predicted CVD risk ≥10% on the Pooled Cohort risk equations. Recommendations for antihypertensive medication by the 2017 ACC/AHA high blood pressure guideline and JNC7 include (1) SBP 130-139/80-89 mm Hg with diabetes or CKD, and (2) SBP ≥140/80 mm Hg. Recommendation for intensification of antihypertensive medication by the 2017 ACC/AHA high blood pressure guideline but not by JNC7 includes SBP 130-139 mm Hg without diabetes or CKD. Recommendations for intensification of antihypertensive medication by the 2017 ACC/AHA high blood pressure guideline and JNC7 include (1) SBP 130 to <140 mm Hg with diabetes or CKD, and (2) SBP ≥140 mm Hg.

UR: Uncertainty range. The uncertainty range represents the upper and lower bound from the analyses of extremes sensitivity analysis where the number of cardiovascular disease events prevented is recalculated using the upper and lower confidence bounds of both treatment effect size magnitude in the trials meta-analysis[15] and REGARDS ten-year cardiovascular event rate.[21-23] The lower bound is calculated using the upper bound of the hazard ratio and the lower bound of the REGARDS ten-year cardiovascular event rate. The upper bound is calculated using the lower bound of the hazard ratio and the upper bound of the REGARDS ten-year cardiovascular event rate.

Table S13. Projected number of US adults recommended and not recommended pharmacological antihypertensive treatment, treatment-related SAEs expected under *current SBP levels*, and treatment-related SAEs potentially incurred in the next ten years in adults aged ≥ 45 years by Achieving and Maintaining 2017 ACC/AHA and JNC8 Panel Members Guideline-Recommended SBP Goals.

	US Adults, millions (95% CI)	Treatment-related SAEs expected with current SBP levels, millions (95% CI)	Projected additional treatment-related SAEs expected with achieving guideline-recommended SBP goals, millions (UR)		Difference (UR)
			JNC8	2017 ACC/AHA	
Currently not taking antihypertensive medication					
SBP <130 mm Hg	51.3 (44.5-58.1)	0	-	-	-
SBP 130 to <140 mm Hg					
Antihypertensive medications not recommended by 2017 ACC/AHA or JNC8 PM	5.2 (3.6-6.7)	0	-	-	-
Antihypertensive medications recommended by the 2017 ACC/AHA but not by JNC8 PM	6.5 (4.6-8.4)	0	-	0.7 (0.5-0.9)	0.7 (0.5-0.9)
SBP 140 to <150 mm Hg					
Antihypertensive medications recommended by the 2017 ACC/AHA and by JNC8 PM	4.5 (3.3-5.7)	0	0.2 (0.2-0.3)	0.5 (0.4-0.6)	0.2 (0.2-0.3)
Antihypertensive medications recommended by the 2017 ACC/AHA but not by JNC8 PM	1.8 (1.-2.6)	0	-	0.2 (0.1-0.3)	0.2 (0.1-0.3)
SBP ≥ 150 mm Hg					
Antihypertensive medications recommended by the 2017 ACC/AHA and by JNC8 PM	5.1 (2.9-7.3)	0	0.3 (0.2-0.4)	0.6 (0.3-0.8)	0.3 (0.2-0.4)
Total	74.3 (59.9-88.8)	0	0.5 (0.3-0.7)	2.0 (01.3-2.6)	01.4 (1.0-1.9)
Currently taking antihypertensive medication					
SBP <130 mm Hg	24.7 (20.9-28.5)	1.3 (1.1-1.6)	0	0	0
SBP 130 to <140 mm Hg					
Treatment intensification recommended by the 2017 ACC/AHA but not JNC8 PM	10.2 (8.3-12.2)	0.6 (0.5-0.7)	0	0.6 (0.5-0.7)	0.6 (0.5-0.7)
SBP 140 to <150 mm Hg					
Treatment intensification recommended by the 2017 ACC/AHA and JNC8 PM	3.9 (2.9-4.9)	0.2 (0.2-0.3)	0.1 (0.1-0.1)	0.2 (0.2-0.3)	0.1 (0.1-0.1)
Treatment intensification recommended by the 2017 ACC/AHA but not JNC8 PM	2.4 (1.3-3.4)	0.1 (0.1-0.2)	0	0.1 (0.1-0.2)	0.1 (0.1-0.2)
SBP ≥150 mm Hg					
Treatment intensification recommended by the 2017 ACC/AHA and JNC8 PM	7.5 (5.1-9.9)	0.4 (0.3-0.5)	0.2 (0.1-0.3)	0.4 (0.3-0.5)	0.2 (0.1-0.3)
Total	48.7 (38.5-58.9)	2.7 (2.1-3.2)	0.3 (0.2-0.4)	1.3 (1.0-1.7)	1.0 (0.7-01.3)

Overall (Taking and not taking Antihypertensive Medication)					
Total	123.1 (98.4-147.7)	2.7 (2.1-3.2)	0.8 (0.6-1.1)	3.3 (2.3-4.3)	2.4 (1.7-3.2)

ACC: American College of Cardiology; AHA: American Heart Association; CI: confidence interval; CVD: cardiovascular disease; JNC8 PM: 2014 evidence-based guideline for the management of high blood pressure in adults: report from the panel members appointed to the Eighth Joint National Committee (JNC 8); SBP: systolic blood pressure. In this table, recommendations for antihypertensive medication by the 2017 ACC/AHA high blood pressure guideline but not JNC7 include adults without diabetes or CKD (1) age ≥65 years with SBP 130-139 mm Hg and, or (2) with SBP 130-139/80-89 mm Hg with a history of CVD or a 10-year predicted CVD risk ≥10% on the Pooled Cohort risk equations. Recommendations for antihypertensive medication by the 2017 ACC/AHA high blood pressure guideline and JNC7 include (1) SBP 130-139/80-89 mm Hg with diabetes or CKD, and (2) SBP ≥140/80 mm Hg. Recommendation for intensification of antihypertensive medication by the 2017 ACC/AHA high blood pressure guideline but not by JNC7 includes SBP 130-139 mm Hg without diabetes or CKD. Recommendations for intensification of antihypertensive medication by the 2017 ACC high blood pressure guideline and JNC7 include (1) SBP 130 to <140 mm Hg with diabetes or CKD, and (2) SBP ≥140 mm Hg.
UR: Uncertainty rage. The uncertainty range represents the upper and lower bound from the analysis of extremes sensitivity analysis where the number of cardiovascular disease events prevented is recalculated using the upper and lower confidence bounds of both treatment effect size magnitude in the trials meta-analysis[15] and REGARDS ten-year cardiovascular event rate.[21-23] The lower bound is calculated using the upper bound of the hazard ratio and the lower bound of the REGARDS ten-year cardiovascular event rate. The upper bound is calculated using the lower bound of the hazard ratio and the upper bound of the REGARDS ten-year cardiovascular event rate.

Table S14. Projected number of US adults recommended and not recommended pharmacological antihypertensive treatment, CVD events expected under current BP levels, and CVD potentially prevented in the next 10 years in adults aged ≥ 45 years by achieving and maintaining 2017 ACC/AHA and JNC7 Guideline-Recommended BP Goals. Sensitivity analysis defining BP lowering effects based on SBP and DBP levels.

	US Adults, millions (95% CI)	CVD events expected with current BP levels, millions (95% CI)	Projected CVD events prevented with achieving guideline-recommended BP goals, millions (UR)		Difference (UR)
			JNC7	2017 ACC/AHA	
Currently not taking antihypertensive medication					
SBP <130 mm Hg and DBP <80 mm Hg					
Antihypertensive medications not recommended by 2017 ACC/AHA or JNC7	44.6 (38.9-50.3)	3.0 (2.8-3.3)	-	-	-
SBP 130 to <140 mm Hg or DBP 80 to <90 mm Hg					
Antihypertensive medications not recommended by 2017 ACC/AHA or JNC7	9.5 (6.9-12.1)	0.3 (0.2-0.4)	-	-	-
Antihypertensive medications recommended by the 2017 ACC/AHA but not by JNC7	3.9 (2.7-5.2)	0.6 (0.5-0.7)	-	0.1 (0.0-0.2)	0.1 (0.0-0.2)
Antihypertensive medications recommended by the 2017 ACC/AHA and by JNC7	3.8 (2.4-5.1)	0.8 (0.6-0.9)	0.1 (0.0-0.2)	0.1 (0.0-0.2)	0
SBP ≥140 mm Hg or DBP ≥ 90 mm Hg					
Antihypertensive medications recommended by the 2017 ACC/AHA and by JNC7	11.4 (7.0-15.8)	2.1 (1.4-2.9)	0.7 (0.2-1.4)	0.9 (0.3-1.5)	0.1 (0.1-0.1)
Total	73.2 (57.9-88.4)	6.8 (5.5-8.2)	0.8 (0.2-1.6)	1.1 (0.3-1.9)	0.2 (0.1-0.3)
Currently taking antihypertensive medication					
SBP <130 mm Hg and DBP <80 mm Hg					
Treatment intensification not recommended by the 2017 ACC/AHA or JNC7 BP Guideline	22.3 (18.6-26.0)	3.8 (3.5-4.1)	-	-	-
SBP 130 to <140 mm Hg or DBP 80 to <90 mm Hg					
Treatment intensification recommended by the 2017 ACC/AHA but not JNC7	6.2 (4.7-7.7)	0.8 (0.6-0.9)	-	0.1 (0.0-0.2)	0.1 (0.0-0.2)
Treatment intensification recommended by the 2017 ACC/AHA and JNC7	5.1 (4.0-6.2)	1.4 (1.2-1.5)	0.2 (0.0-0.4)	0.2 (0.0-0.4)	0
SBP ≥140 mm Hg or DBP ≥ 90 mm Hg					
Treatment intensification recommended by the 2017 ACC/AHA and by JNC7	13.8 (9.4-18.2)	3.7 (2.9-4.4)	1.5 (0.7-2.3)	1.6 (0.8-2.5)	0.1 (0.1-0.1)
Total	47.4 (36.6-58.2)	9.6 (8.2-11.0)	1.7 (0.7-2.7)	1.9 (0.8-3.1)	0.2 (0.1-0.4)
Overall (Taking and not taking Antihypertensive Medication)					
Total	120.6 (94.6-146.6)	16.2 (13.7-18.8)	2.5 (0.9-4.4)	3.0 (1.1-4.8)	0.5 (0.2-0.7)

ACC: American College of Cardiology; AHA: American Heart Association; BP: blood pressure; CKD: chronic kidney disease; CVD: cardiovascular disease; DBP: diastolic blood pressure; JNC7: Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure; SBP: systolic blood pressure.

Recommendations for antihypertensive medication by the 2017 ACC/AHA high blood pressure guideline but not JNC7 include adults without diabetes or CKD (1) age ≥65 years with SBP 130-139 mm Hg and, or (2) with SBP/DBP 130-139/80-89 mm Hg with a history of CVD or a 10-year predicted CVD risk ≥10% on the Pooled Cohort risk equations. Recommendations for antihypertensive medication by the 2017 ACC/AHA high blood pressure guideline and JNC7 include (1) SBP/DBP 130-139/80-89 mm Hg with diabetes or CKD, and (2) SBP/DBP ≥140/80 mm Hg. Recommendation for intensification of antihypertensive medication by the 2017 ACC/AHA high blood pressure guideline but not by JNC7 includes SBP 130-139 mm Hg without diabetes or CKD. Recommendations for intensification of antihypertensive medication by the 2017 ACC/AHA high blood pressure guideline and JNC7 include (1) SBP/DBP 130-139/80-89 mm Hg with diabetes or CKD, and (2) SBP/DBP ≥140/80 mm Hg.

UR: Uncertainty range. The uncertainty interval represents the upper and lower bound from the analysis of extremes sensitivity analysis where the number of cardiovascular disease events prevented is recalculated using the upper and lower confidence bounds of both treatment effect size magnitude in the trials meta-analysis [15] and REGARDS ten-year cardiovascular event rate.[21-23] The lower bound is calculated using the upper bound of the hazard ratio and the lower bound of the REGARDS ten-year cardiovascular event rate. The upper bound is calculated using the lower bound of the hazard ratio and the upper bound of the REGARDS ten-year cardiovascular event rate.

Table S15. Projected number of US adults recommended and not recommended pharmacological antihypertensive treatment, CVD events expected under *current BP levels*, and projected CVD adverted in the next 10 years in adults aged ≥ 45 by Achieving and Maintaining 2017 ACC/AHA and JNC7 Guideline-Recommended SBP Goals. Sensitivity analysis defining BP lowering effects based on SBP and DBP levels.

Blood Pressure Levels and Guideline Recommendation for Antihypertensive Medication Initiation or Intensification	US Adults, millions (95% CI)	CVD events expected with current BP levels, millions, (95% CI)	Projected CVD events prevented with achieving guideline-recommended BP goals, millions (UR)		Difference (UR)
			JNC8	2017 ACC/AHA	
Currently not taking antihypertensive medication					
SBP <130 mm Hg and DBP <80 mm Hg	44.6 (38.9-50.3)	3.0 (2.8-3.3)	-	-	-
SBP 130 to <140 mm Hg or DBP 80 to < 90 mm Hg					
Antihypertensive medications not recommended by 2017 ACC/AHA or JNC8	9.5 (6.9-12.1)	0.3 (0.2-0.4)	-	-	-
Antihypertensive medications recommended by the 2017 ACC/AHA but not by JNC8	7.7 (5.7-9.7)	1.3 (1.1-1.4)	-	0.2 (0.0-0.4)	0.2 (0.0-0.4)
SBP 140 to <150 mm Hg or DBP 90 to <95 mm Hg					
Antihypertensive medications recommended by the 2017 ACC/AHA and by JNC8	5.2 (3.9-6.5)	0.8 (0.6-1.0)	0.1 (0.0-0.3)	0.2 (0.1-0.4)	0.1 (0.1-0.1)
Antihypertensive medications recommended by the 2017 ACC/AHA but not by JNC8	1.8 (1.0-2.6)	0.3 (0.2-0.5)	-	0.1 (0.0-0.2)	0.1 (0.0-0.2)
SBP ≥ 150 mm Hg or DBP ≥ 95 mm Hg					
Antihypertensive medications recommended by the 2017 ACC/AHA and by JNC8	5.1 (2.9-7.3)	1.0 (0.6-1.4)	0.3 (0.1-0.7)	0.5 (0.2-0.9)	0.1 (0.1-0.1)
Total	73.9 (59.3-88.4)	6.8 (5.5-8.2)	0.5 (0.1-1.0)	1.1 (0.3-1.9)	0.5 (0.2-0.8)
Currently taking antihypertensive medication					
SBP <130 mm Hg and DBP <80 mm Hg	22.3 (18.6-26.0)	3.8 (3.5-4.1)	-	-	-
SBP 130 to <140 mm Hg or DBP 80 to < 90 mm Hg					
Treatment intensification recommended by the 2017 ACC/AHA but not JNC8	11.3 (9.1-13.5)	2.0 (1.8-2.3)	-	0.3 (0.0-0.6)	0.3 (0.0-0.6)
SBP 140 to <150 mm Hg or DBP 90 to <95 mm Hg					
Treatment intensification recommended by the 2017 ACC/AHA and JNC8	4.3 (3.2-5.4)	1.0 (0.9-1.2)	0.2 (0.0-0.4)	0.3 (0.1-0.5)	0.1 (0.1-0.2)
Treatment intensification recommended by the 2017 ACC/AHA but not JNC8	2.1 (1.2-3.1)	0.4 (0.3-0.5)	-	0.1 (0.0-0.2)	0.1 (0.0-0.2)
SBP ≥150 mm Hg or DBP ≥ 95 mm Hg					
Treatment intensification recommended by the 2017 ACC/AHA and JNC8	7.5 (5.1-9.9)	2.2 (1.7-2.6)	0.8 (0.3-1.4)	1.1 (0.6-1.7)	0.3 (0.2-0.4)
Total	47.6 (37.3-57.8)	9.4 (8.2-10.7)	1.0 (0.3-1.8)	1.9 (0.8-3.1)	0.8 (0.4-1.2)
Overall (Taking and not taking Antihypertensive Medication)					
Total	121.4	16.2	1.5	3.0	1.4

	(96.6-146.3)	(13.7-18.8)	(0.4-2.8)	(1.1-4.8)	(0.7-2.0)

ACC: American College of Cardiology; AHA: American Heart Association; BP: blood pressure; CKD: chronic kidney disease; CVD: cardiovascular disease; DBP: diastolic blood pressure; JNC8: Eight Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure; SBP: systolic blood pressure.

Recommendations for antihypertensive medication by the 2017 ACC/AHA high blood pressure guideline but not JNC7 include adults without diabetes or CKD (1) age ≥65 years with SBP 130-139 mm Hg and, or (2) with SBP/DBP 130-139/80-89 mm Hg with a history of CVD or a 10-year predicted CVD risk ≥10% on the Pooled Cohort risk equations. Recommendations for antihypertensive medication by the 2017 ACC/AHA high blood pressure guideline and JNC7 include (1) SBP/DBP 130-139/80-89 mm Hg with diabetes or CKD, and (2) SBP/DBP ≥140/80 mm Hg. Recommendation for intensification of antihypertensive medication by the 2017 ACC/AHA high blood pressure guideline but not by JNC7 includes SBP 130-139 mm Hg without diabetes or CKD. Recommendations for intensification of antihypertensive medication by the 2017 ACC/AHA high blood pressure guideline and JNC7 include (1) SBP/DBP 130-139/80-89 mm Hg with diabetes or CKD, and (2) SBP/DBP ≥140/80 mm Hg.

UR: Uncertainty range. The uncertainty interval represents the upper and lower bound from the analysis of extremes sensitivity analysis where the number of cardiovascular disease events prevented is recalculated using the upper and lower confidence bounds of both treatment effect size magnitude in the trials meta-analysis [15] and REGARDS ten-year cardiovascular event rate.[21-23] The lower bound is calculated using the upper bound of the hazard ratio and the lower bound of the REGARDS ten-year cardiovascular event rate. The upper bound is calculated using the lower bound of the hazard ratio and the upper bound of the REGARDS ten-year cardiovascular event rate.

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