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Prevalence, Treatment, and Control of Hypertension Among US Women of Reproductive Age by Race/Hispanic Origin

Nicole D. Ford[1], **Cheryl L. Robbins**[1], **Donald K. Hayes**[2], **Jean Y. Ko**[1,3], **Fleetwood Loustalot**[2,3]

[1]Division of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, Atlanta, Georgia, USA

[2]Division for Heart Disease and Stroke Prevention, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, Atlanta, Georgia, USA

[3]U.S. Public Health Service Commissioned Corps, Atlanta, Georgia, USA.

Abstract

BACKGROUND—To explore the prevalence, pharmacologic treatment, and control of hypertension among US nonpregnant women of reproductive age by race/Hispanic origin to identify potential gaps in care.

METHODS—We pooled data from the 2011 to March 2020 (prepandemic) National Health and Nutrition Examination Survey cycles. Our analytic sample included 4,590 nonpregnant women aged 20–44 years who had at least 1 examiner-measured blood pressure (BP) value. We estimated prevalences and 95% confidence intervals (CIs) of hypertension, pharmacologic treatment, and control based on the 2003 Joint Committee on High Blood Pressure (JNC 7) and the 2017 American College of Cardiology and the American Heart Association (ACC/AHA) guidelines. We evaluated differences by race/Hispanic origin using Rao–Scott chi-square tests.

RESULTS—Applying ACC/AHA guidelines, hypertension prevalence ranged from 14.0% (95% CI: 12.0, 15.9) among Hispanic women to 30.9% (95% CI: 27.8, 34.0) among non-Hispanic Black women. Among women with hypertension, non-Hispanic Black women had the highest eligibility for pharmacological treatment (65.5%, 95% CI: 60.4, 70.5); current use was highest among White women (61.8%, 95% CI: 53.8, 69.9). BP control ranged from 5.2% (95% CI: 1.1, 9.3) among women of another or multiple non-Hispanic races to 18.6% (95% CI: 12.1, 25.0) among Hispanic women.

CONCLUSIONS—These findings highlight the importance of monitoring hypertension, pharmacologic treatment, and control by race/Hispanic origin and addressing barriers to equitable hypertension care among women of reproductive age

Correspondence: Nicole D. Ford (yex9@cdc.gov).

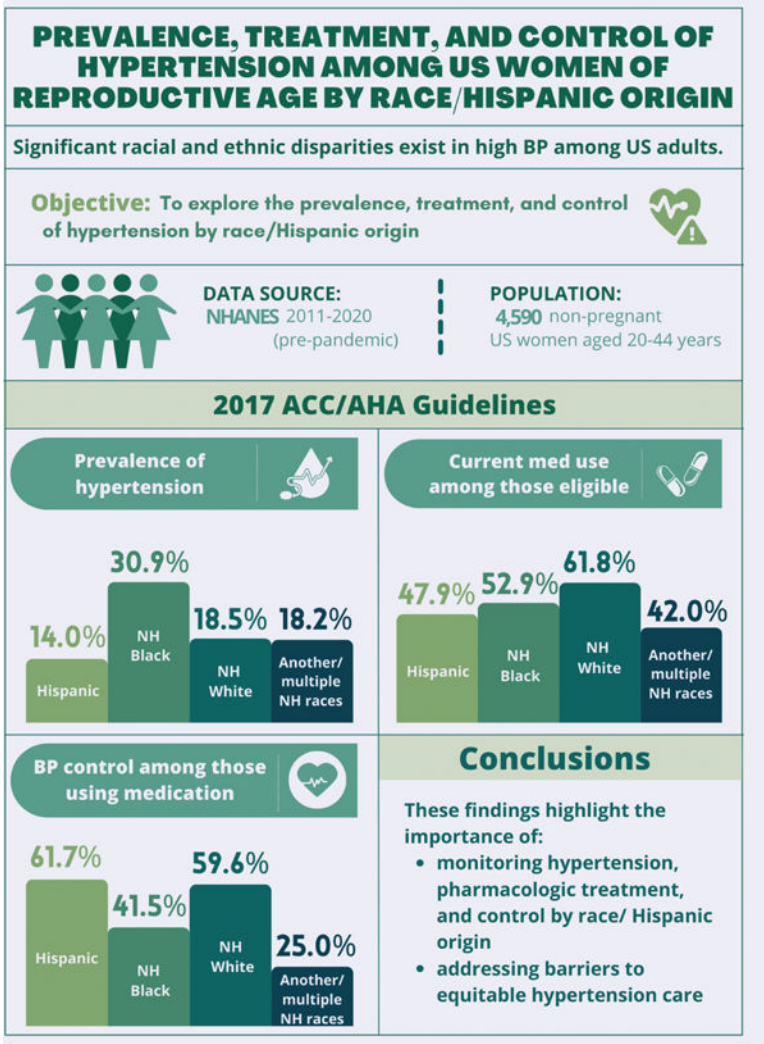
SUPPLEMENTARY MATERIAL

Supplementary data are available at *American Journal of Hypertension* online.

DISCLOSURE

The authors declared no conflict of interest.

GRAPHICAL ABSTRACT



Keywords

blood pressure; chronic disease; disparities; hypertension; prevalence; women of reproductive age

High blood pressure (BP) can negatively affect a woman's health throughout her life course. Hypertension is a major risk factor for heart disease—the leading cause of death among US women[1]—and is associated with increased risk of diabetes, chronic kidney disease (CKD), and cognitive decline later in life.[2] During pregnancy, chronic hypertension can lead to poor maternal, fetal, and newborn health outcomes including stroke, postpartum hemorrhage, and stillbirth.[3]

Due to long-standing systemic health and social inequities,[4] significant racial and ethnic disparities exist in high BP prevalence, treatment, and control and its sequelae among US adults.[5] Specific to women of reproductive age, hypertensive disorders in pregnancy,

which include chronic hypertension, are among the leading causes of severe maternal morbidity[6] and pregnancy-related death.[7] Further, hypertension is more prevalent and less well controlled in some racial and ethnic groups, including non-Hispanic Black women.[8]

Previously published national-level surveillance reports have documented racial and ethnic differences in the prevalence of hypertension among women of reproductive age based on the Seventh Report of the 2003 Joint Committee on Prevention, Detection, Evaluation and Treatment of High Blood Pressure (JNC 7) guidelines.[5,9–12] In 2017, the American College of Cardiology (ACC) and the American Heart Association (AHA), in collaboration with numerous professional organizations, released updated high BP guidelines for adults aged 18 and older.[2] Relative to prior guidelines (e.g., JNC 7),[13] the ACC/AHA guideline lowered the threshold for hypertension diagnosis and extended treatment guidance. Although several papers classify hypertension according to both old and new guidelines,[14,15] data supporting them were collected prior to 2017; more recent data are needed to guide programs and interventions.

To address this surveillance gap, we explore the prevalence, treatment, and control of hypertension among US nonpregnant women of reproductive age by race/Hispanic origin using both AHA/ACC and JNC 7 guidelines.

METHODS

We used data from the National Health and Nutrition Examination Survey (NHANES), a nationally representative survey of the US noninstitutionalized civilian population. We pooled data from the 2011–2012, 2013–2014, 2015–2016, and the 2017–March 2020 prepandemic NHANES cycles to obtain statistically stable estimates for race/Hispanic origin groups. The 2019–2020 data collection was suspended in March 2020 due to the COVID-19 pandemic.[16] Because this data cycle was incomplete and not nationally representative, it was combined with the 2017–2018 data cycle to form a nationally representative sample of 2017–March 2020 prepandemic data.[17]

In total, there were 5,679 women aged 20–44 years. We excluded women who were pregnant at the time of the examination ($n = 279$) and those with unknown pregnancy status ($n = 455$). We additionally excluded 355 women who did not have ≥1 BP measurement, for a final analytic sample of 4,590 women.

Using an examiner-administered questionnaire during a home interview, interviewers collected data on age, sex, race/Hispanic origin, education, household income, health insurance, current use of BP-lowering and diabetes medication, and history of chronic conditions. BP reading, blood draw, and urine collection occurred at NHANES mobile examination sites. Mean brachial BP was measured using a Baumanometer calibrated mercury true gravity sphygmomanometer (2011–2018) or an Omron HEM-907XL (2017–2020), with appropriately sized cuffs.[18,19] After participants rested in a seated position, technicians took 3 BP measurements, each 30 seconds to 1 minute apart, depending on the protocol. Although the method used to measure BP changed during the study period, a validation study reported good agreement ($\kappa \geq 0.6$) and no difference in the prevalence of

hypertension between the auscultation and oscillometric protocols.[20] Glycated hemoglobin (HbA1c) was measured from whole blood using a Tosoh G7 or G8 Glycohemoglobin Analyzer. Serum creatinine was measured using a Beckman Unicel DxC800 Synchron (2011–2016) or a Roche Cobas 6000 (2017–2020).

Participants self-identified race/Hispanic origin with the following questions: “Do you consider yourself to be Hispanic, Latino, or of Spanish origin?” and “What race do you consider yourself to be? Please select one or more.” We categorized race/Hispanic origin as non-Hispanic Black (Black), non-Hispanic White (White), another or multiple non-Hispanic races (another or multiple races), and Hispanic. Another or multiple non-Hispanic races includes Asian, Native Hawaiian and other Pacific Islander, American Indian and Alaska Native, and people identifying with more than 1 race. Within this category, we disaggregated for hypertension prevalence estimates. Limited sample sizes did not allow us to disaggregate for other study outcomes.

We calculated the mean of up to 3 consecutive BP measurements. In total, 99% of women (n = 4,565) had 3 measurements; less than 1% had only 2 (n = 15) or 1 measurement (n = 10). We defined hypertension using 2 different definitions. Per the JNC 7 guideline, hypertension was defined as systolic BP (SBP) ≥140 mm Hg or diastolic BP (DBP) ≥90 mm Hg[13] or current use of pharmacologic treatment. Per the ACC/AHA guideline, hypertension was defined as SBP ≥130 mm Hg or DBP ≥80 mm Hg[2] or current use of pharmacologic treatment. Women answering “Yes” to both questions about BP medication (“Because of your high blood pressure/hypertension, have you ever been told to take prescribed medicine?” and “Are you currently taking medicine to lower your blood pressure?”) were categorized as currently using pharmacologic treatment.

Among those with hypertension, we estimated eligibility for and the current use of pharmacologic treatment per the JNC 7 and ACC/AHA guidelines, respectively. Treatment eligibility depends on comorbidities, including diabetes, CKD, and high risk of cardiovascular disease (CVD). Participants were classified as having diabetes if they had HbA1c ≥6.5%, reported using diabetes medication, or had been told by a doctor they had diabetes.[21] CKD was defined as estimated glomerular filtration rate <60 ml/min/1.73 m^2 or albumin/creatinine ratio >30.0 mg/g.[22] Because some biomarker data are only collected in a subset of the study population, we were unable to calculate a 10-year predicted CVD risk. As a proxy measure, high risk of CVD was determined based on self-reported history of congestive heart failure, coronary heart disease, or stroke. Participants with hypertension were considered eligible according to the JNC 7 guidelines if they reported current use of pharmacologic treatment, had SBP ≥130 mm Hg or DBP ≥80 mm Hg among those with diabetes or CKD, or, among all other women, had SBP ≥140 mm Hg or DBP ≥90 mm Hg.[13] Participants with hypertension were considered eligible according to the ACC/AHA guideline if they reported current use of pharmacologic treatment, had SBP ≥130 mm Hg or DBP ≥80 mm Hg among those with diabetes, CKD, or high risk of CVD, or among all other women, had or had SBP ≥140 mm Hg or DBP ≥90 mm Hg.[2]

We estimated BP control by each guideline among (i) all women with hypertension; and (ii) women with hypertension currently using pharmacologic treatment. BP control among those

with hypertension according to the JNC 7 guidelines was defined as SBP <130 mm Hg and DBP <80 mm Hg among women with diabetes or CKD and SBP <140 mm Hg and DBP <90 mm Hg among all other women.[13] BP control among those with hypertension according to the ACC/AHA guideline was defined as SBP <130 mm Hg and DBP <80 mm Hg.[2]

We estimated weighted prevalences and 95% confidence intervals (CIs) of hypertension, eligibility for and current use of pharmacologic treatment, and control for the overall study population and by race/Hispanic origin. We evaluated differences by race/Hispanic origin using Rao–Scott chisquare tests ($P < 0.05$). All analyses were conducted using SAS v.9.4 (Cary, NC), accounting for complex sampling design using NHANES strata and cluster variables and mobile examination center study weights. We calculated survey weights accounting for varying lengths of each data cycle in accordance with NHANES analytic guidance.[16]

The data underlying this article are publicly available online from NHANES at https://www.cdc.gov/nchs/nhanes.

RESULTS

Overall, the weighted distribution of participants included 56.5% (95 CI: 52.9, 60.7) who were White, 3.4% (95% CI: 31.5, 38.1) with a college education or higher, and 79.8% (95% CI: 78.0, 81.6) who were covered by health insurance or a health care plan (Table 1). Weighted mean age was 32.0 (SE 0.2) years.

Applying the JNC 7 guidelines, 9.0% (95% CI: 8.1, 9.9) of women had hypertension, all of whom were eligible for pharmacologic treatment (Figure 1; Supplementary Table S1 online). Sixty-five percent (64.8%, 95% CI: 60.1, 69.5) of women with hypertension reported currently using BP-lowering medication. Forty-seven percent (47.1%, 95% CI: 42.4, 51.9) of women with hypertension had BP control compared with 3 quarters (72.7%, 95% CI: 67.4, 78.1) of those using medication.

Applying the ACC/AHA guidelines, 19.3% (95% CI: 17.7, 20.9) of women would meet the criteria for hypertension. Of those with hypertension, half (54.5%, 95% CI: 50.3, 58.7) would be eligible for pharmacologic treatment, and 55.5% (95% CI: 51.5, 59.9) of those eligible were treated. Overall, of women with hypertension, 16.1% (95% CI: 13.4, 18.8) would achieve BP control compared with 53.1% (95% CI 46.4, 59.7) of those using medication.

Applying the JNC 7 guidelines, prevalence of hypertension, pharmacologic treatment, and overall BP control varied by race/Hispanic origin (Figure 2; Supplementary Table S2 online). Hypertension prevalence ranged from 7.1% (95% CI: 5.8, 8.4) among Hispanic women to 18.3% (95% CI: 16.0, 20.7) among Black women, all of whom were eligible for pharmacologic treatment. White women had the highest prevalence of pharmacological treatment; 72.4% (95% CI: 64.3, 80.4) of eligible White women reported currently using BP-lowering medication. Overall BP control ranged from 36.1% (95% CI: 29.0, 43.3) among Black women to 54.9% (95% CI: 46.3, 63.6) among White women.

Applying the ACC/AHA criteria, prevalence of hypertension, eligibility for pharmacologic treatment, use of pharmacologic treatment among those eligible, and BP control varied by race/Hispanic origin (Figure 3; Supplementary Table S2 online). Hypertension prevalence ranged from 14.0% (95% CI: 12.0, 15.9) among Hispanic women to 30.9% (95% CI: 27.8, 34.0) among Black women. Black women had the highest eligibility for pharmacological treatment (65.5%, 95% CI: 60.4, 70.5), but current use was highest among White women (61.8%, 95% CI: 53.8, 69.9). Overall BP control was low, ranging from 5.2% (95% CI: 1.1, 9.3) among women of another or multiple race(s) to 18.6% (95% CI: 12.1, 25.0) among Hispanic women. Among those treated, control ranged from 25.0% (95% CI: 3.9, 46.1) among women of another or multiple race(s) to 61.7% (95% CI: 47.9, 75.5) among Hispanic women.

Among women of another or multiple race(s), 5.5% (95% CI: 3.5, 7.5) of Asian women had hypertension per JNC 7 guidelines, and 14.6% (95% CI: 11.1, 18.2) had hypertension per ACC/AHA guidelines. Among Native Hawaiian and other Pacific Islander and American Indian and Alaska Native women, and women identifying with more than 1 race, 10.3% (95% CI: 5.3, 15.3) had hypertension per JNC 7 guidelines, and 24.4% (95% CI: 15.9, 32.8) had hypertension per ACC/AHA guidelines.

DISCUSSION

In a nationally representative sample using data from 2011 to March 2020 and applying the most recent national guidelines (ACC/AHA), 19.3% nonpregnant women of reproductive age had hypertension—more than double the prevalence using the criteria in the JNC 7 guidelines. Although the prevalence of hypertension was twice as high under the new definition, only 54.5% of these women would be recommended for pharmacologic treatment based on the ACC/AHA guideline, compared with 100% based on JNC 7. Among those eligible under ACC/AHA guidelines, 55.5% of women reported currently using BP-lowering medication; however, only 1 in 6 women with hypertension (ACC/AHA) achieved BP control. Lower levels of control were anticipated because the study period spanned multiple national hypertension guidelines and the newer guidance uses lower control thresholds. Importantly, overall estimates obscure substantial variation by race/Hispanic origin in hypertension prevalence, eligibility for pharmacologic treatment (ACC/AHA only), use of pharmacologic treatment, and control. By either definition, prevalence of hypertension among Black women was approximately double the overall prevalence, and control was lowest among Black women and women of another or multiple race(s). We also found variation in hypertension prevalence among women of another or multiple races; for example, Asian women had half the prevalence of hypertension compared with other women in this category. This suggests an opportunity to reduce health disparities in hypertension among women of reproductive age by addressing barriers to health care access, treatment, and effective follow-up and monitoring.[23]

It is known that hypertension prevalence nationally among women of reproductive age varies by race/ethnicity, data source, age group, and thresholds used to define hypertension.[5,8–12,14,15] Our findings were consistent with several other studies. As previously demonstrated, compared with the JNC 7, the prevalence of hypertension in

our analyses is twice as high when applying the ACC/AHA criteria.[14,15] Disparities in hypertension prevalence by race/Hispanic origin found when applying the JNC 7 definitions persisted when applying the ACC/AHA criteria; Black women are disproportionately affected. Racial/ethnic disparities in our analyses are consistent with findings from Topel *et al.*[14] and with a study of US nonpregnant women aged 18–44 years showing self-reported hypertension prevalences ranging from 8% in non-Hispanic women of Other races to 18% in non-Hispanic Black women.[10]

Irrespective of age and gender, hypertension control is important throughout the life course. The ACC/AHA hypertension guidelines recommend hypertension control through lifestyle approaches and pharmacotherapy, as medical indicated.[2] Clinical guidelines specific to women of reproductive age focus on pregnancy and the postpartum period, including recommendations for managing chronic hypertension during pregnancy,[3] and pregnancy-related hypertension (i.e., gestational hypertension, preeclampsia, eclampsia).[24]

Evidence-based interventions can reduce the negative effects of hypertension. Treatment plans vary based on BP and comorbid conditions such as diabetes, but all recognize the benefit of lifestyle modifications on BP.[2] By either guideline, roughly 5 in 10 women eligible for pharmacologic treatment were untreated. Physicians could be hesitant to prescribe medication to women that might be lifelong,[23] and women may face multiple barriers to initiate and sustain pharmacologic treatment, such as limited access to health care services, lack of or inadequate health insurance, cost barriers, and side effects, among others.[25] Women ineligible for pharmacologic treatment should aim to lower BP through lifestyle modifications.[2] For example, the Dietary Approaches to Stop Hypertension (DASH) diet was found to have effects on reducing BP similar to those of single drug therapy.[26]

Improving hypertension control is critical for preventing CVD. A large-scale analysis of randomized trials found that a 5-mm Hg reduction in SBP reduced the risk of major cardiovascular events by 10%.[27] Most patients require ≥2 antihypertensive medications to achieve control.[23] Clinical inertia may explain failure to prescribe and titrate medication for patients who have not achieved BP control.[28] Implementing a comprehensive treatment protocol is a key strategy to help overcome clinical inertia.[23] A Centers for Disease Control-proposed protocol organizes hypertension care and addresses elements such as accurate BP measurement, medication initiation and intensification guidance, lifestyle modification referral pathways, and supportive strategies for medication adherence, using a team-based care approach.[29]

Racial/ethnic disparities in prevalence of hypertension among women of reproductive age are well documented[10,14]; our study also documents inequities in treatment and control. Interpersonal, institutional, and structural racism may influence the prevalence of hypertension via stress exposure and creating barriers to care and social contexts that foster healthy behaviors.[30] At an individual level, perceived racial discrimination is positively associated with hypertension status[31] and a biomarker of chronic psychosocial stress (elevated hair cortisol).[32] Stress is also associated with lower nonpharmacological adherence and poorer BP control in Black women with hypertension.[33] Stressors may become biologically embodied as suggested by the “weathering” hypothesis, which proposes

that Black women experience earlier deterioration of health because of the cumulative impact of exposure to psychosocial, economic, and environmental stressors.[34]

At the institutional level, both explicit and implicit bias by health care workers can affect women of color through clinical decision-making and communication. For example, studies have found that Black patients may be less likely to receive necessary treatment compared with White patients.[35] Measures of clinician implicit race bias are associated with markers of poor visit communication and low ratings of care, especially among Black patients.[36] An analysis of Black adults with hypertension found that high vs. low patient–clinician communication and shared decision-making were positively associated with adherence to pharmacologic treatment.[37] Multilevel quality improvement projects implemented with an equity lens have demonstrated reductions in disparities in treatment and control of hypertension.[38,39]

Structural and social determinants of health, such as education, income, type of employment, access to health care, and neighborhood characteristics, are influenced by structural racism and institutional policies and practices.[40] For example, racialized housing policies such as redlining created disparities in exposure to environmental stressors known to increase BP, including air pollution[41] and road traffic noise.[42] Disparate experience with these structural and social determinants is a contributing factor to social disadvantage, which impacts the health of people across the life span.[43] Risk factors for hypertension, such as obesity, disproportionately affect Black and Hispanic individuals[44]; obesity is in turn influenced by neighborhood characteristics such as food deserts and levels of food insecurity that limit access to fresh, whole foods.[45] Environmental barriers such as safety concerns and lack of sidewalks can make physical activity challenging.[46] The US Surgeon General's Call to Action to Control Hypertension emphasizes the need to promote environments that support heart-healthy lifestyles as a cornerstone of hypertension control.[23]

Individuals working on hypertension control programs can take disparities into account when assessing performance and strategies. For example, those evaluating a hypertension control program in Kaiser Permanente Northern California found that while control increased overall from 68% to 74% over 24 months, racial disparities in control were not reduced.[47] But using a population care management and team-based approach specifically designed to address disparities, Kaiser Permanente Gardena Medical Offices over 32 months improved hypertension control in both Black and White patients (from 76.6% to 81.4% and from 82.9% to 84.2%, respectively), thereby reducing the Black–White control gap from 6.3% to 2.8%.[48] The program included culturally tailored communication tools to build trust and improve culturally responsive care.[48]

Two strengths of our analyses were using data from a nationally representative sample with examiner-measured BP and classifying hypertension prevalence, treatment, and control according to both the JNC 7 and the ACC/AHA guidelines. Our analyses had at least 4 limitations. (i) Because the study period spanned multiple national hypertension guidelines, we were unable to assess women's awareness of their hypertension status. (ii) Due to limited sample size, we were unable to disaggregate the category of another or multiple non-Hispanic race(s) apart from estimating hypertension prevalence. (iii) We did not assess

outcomes by recent attendance at a health care visit. (iv) Demographic changes over time, such as increases in insurance coverage, may have affected results (e.g., screening, treatment, and control).

In a nationally representative sample, 1 in 5 nonpregnant women of reproductive age would have hypertension applying the 2017 ACC/AHA criterion, more than double the prevalence using the criteria in the JNC 7 guidelines. Among those eligible, approximately half reported currently using pharmacologic treatment, and roughly 1 in 6 women with hypertension met optimal BP targets (ACC/AHA). We found substantial variation in hypertension prevalence, eligibility for and use of pharmacologic treatment, and BP control by race/Hispanic origin, with Black women having a disproportionate burden. Innovative approaches are needed to improve hypertension prevalence and control, with a focus on reducing race/Hispanic origin disparities using evidence-based approaches.[49]

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Acknowledgments

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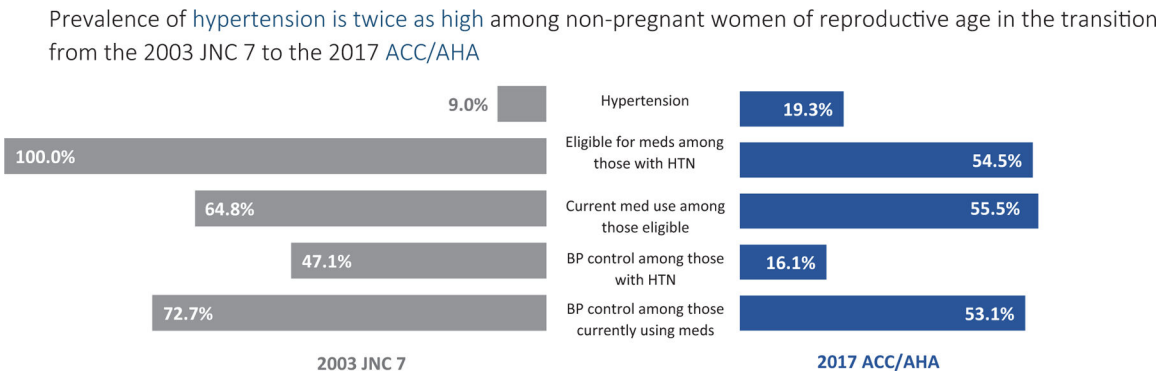

Figure 1.

Hypertension prevalence, pharmacologic treatment, and blood pressure control using 2003 JNC 7 and 2017 AHA/ACC criteria among women of reproductive age, 20–44 years, National Health and Nutrition Examination Survey, 2011–March 2020. Abbreviations: ACC/AHA, American College of Cardiologists/American Heart Association; BP, blood pressure; HTN, hypertension; JNC 7, Seventh Report of the 2003 Joint Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure.

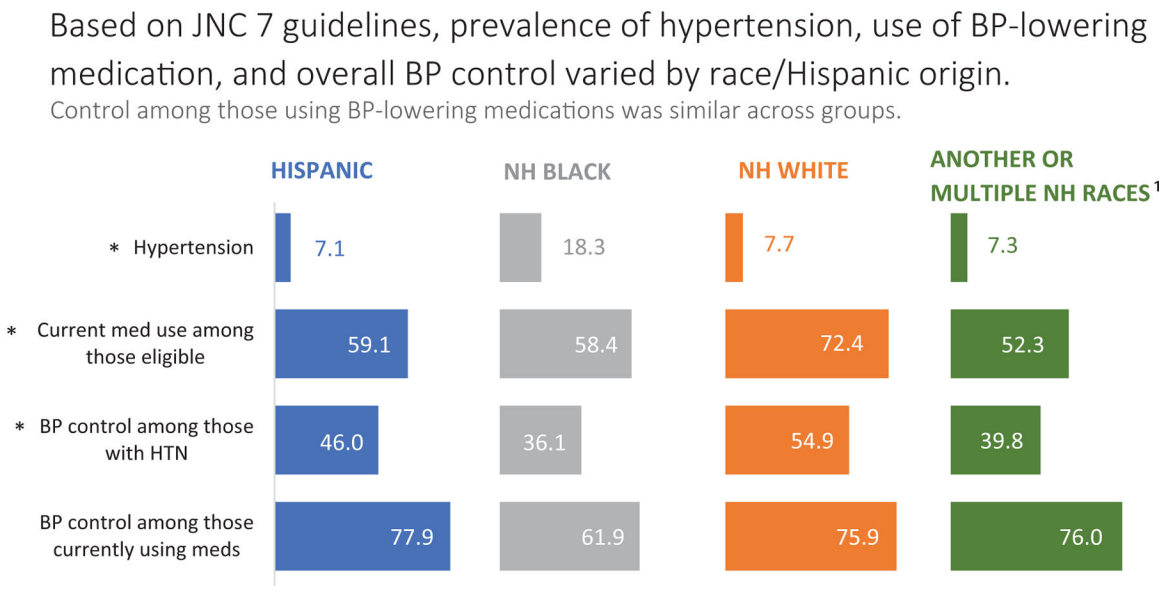

Figure 2.

Hypertension prevalence, pharmacologic treatment, and blood pressure control using 2003 JNC 7 guidelines among women of reproductive age, 20–44 years, by race/Hispanic origin, National Health and Nutrition Examination Survey, 2011–March 2020. All women with hypertension per JNC 7 were eligible for guideline-recommended pharmacologic treatment. *$P < 0.05$. P values calculated for Rao–Scott chi-square tests. [1]Prevalence of hypertension was 5.5% among non-Hispanic Asian women and 10.3% among non-Hispanic Native Hawaiian and other Pacific Islander and American Indian and Alaska Native women, and women identifying with more than 1 race. Abbreviations: BP, blood pressure; HTN, hypertension; JNC 7, Seventh Report of the 2003 Joint Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure; NH, non-Hispanic.

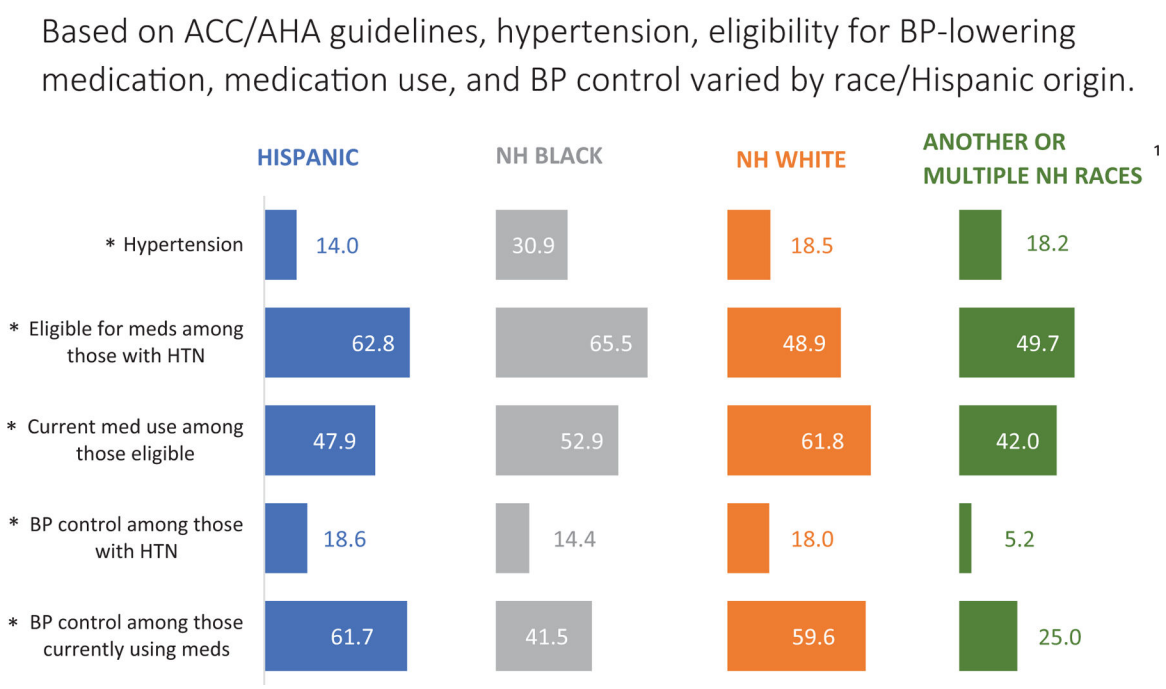

Figure 3.

Hypertension prevalence, pharmacologic treatment, and blood pressure control using 2017 AHA/ACC guidelines among women of reproductive age, 20–44 years, by race/Hispanic origin, National Health and Nutrition Examination Survey, 2011–March 2020. *$P < 0.05$. P values calculated for Rao–Scott chi-square tests. [1]Prevalence of hypertension was 14.6% among non-Hispanic Asian women and 24.4% among non-Hispanic Native Hawaiian and other Pacific Islander and American Indian and Alaska Native women, and women identifying with more than 1 race. Abbreviations: ACC, American College of Cardiologists; AHA, American Heart Association; BP, blood pressure; HTN, hypertension; NH, non-Hispanic.

Table 1.

Select sociodemographic characteristics of US nonpregnant women of reproductive age[a]

Characteristic	*n*	Mean (SE) or % (95% CI)
Age (y)	4,590	32.0 (0.2)
Age category (y)		
20–24	863	20.3(18.0, 22.7)
25–34	1,791	39.4 (37.0, 41.7)
35–44	1,936	40.3 (38.0, 42.7)
Race/Hispanic origin		
Hispanic	1,160	19.4 (16.6, 22.1)
NH Black	1,101	13.5 (11.2, 15.8)
NH White	1,491	56.8 (52.9, 60.7)
Another or multiple NH races[b]	838	10.4 (9.0, 11.7)
Education		
Less than high school, GED, or equivalent	680	11.0 (9.6, 12.3)
High school diploma, GED, or equivalent	857	18.5 (16.5, 20.6)
Some college or AA degree	1,710	35.7 (33.5, 37.9)
College or above	1,341	34.8 (31.5, 38.1)
Poverty–income ratio		
<130%	1,583	28.7 (26.5, 31.0)
≥130%	2,647	71.3 (69.0, 73.5)
Health insurance or health care plan[c]		
Yes	3,472	79.8 (78.0, 81.6)
No	1,109	20.0 (18.2, 21.8)

Abbreviations: AA, associate degree; CI, confidence interval; GED, General Educational Development; NH, non-Hispanic.

[a]Data are from the National Health and Nutrition Examination Survey, 2011–March 2020, women aged 20–44 years (n= 4,590). *N*s are unweighted. Values are mean (SE) or % (95% CI). Estimates are weighted and account for complex design.

[b]Another or multiple non-Hispanic races includes non-Hispanic Asian, Native Hawaiian and other Pacific Islander, American Indian and Alaska Native, and people identifying with more than 1 race.

[c]Health insurance or health care plan: n = 9 refused/don't know.