

Supplementary Online Content

Muntner P, Hardy ST, Fine LJ, et al. Trends in blood pressure control among US adults with hypertension, 1999-2000 to 2017-2018. *JAMA*. doi:10.1001/jama.2020.14545

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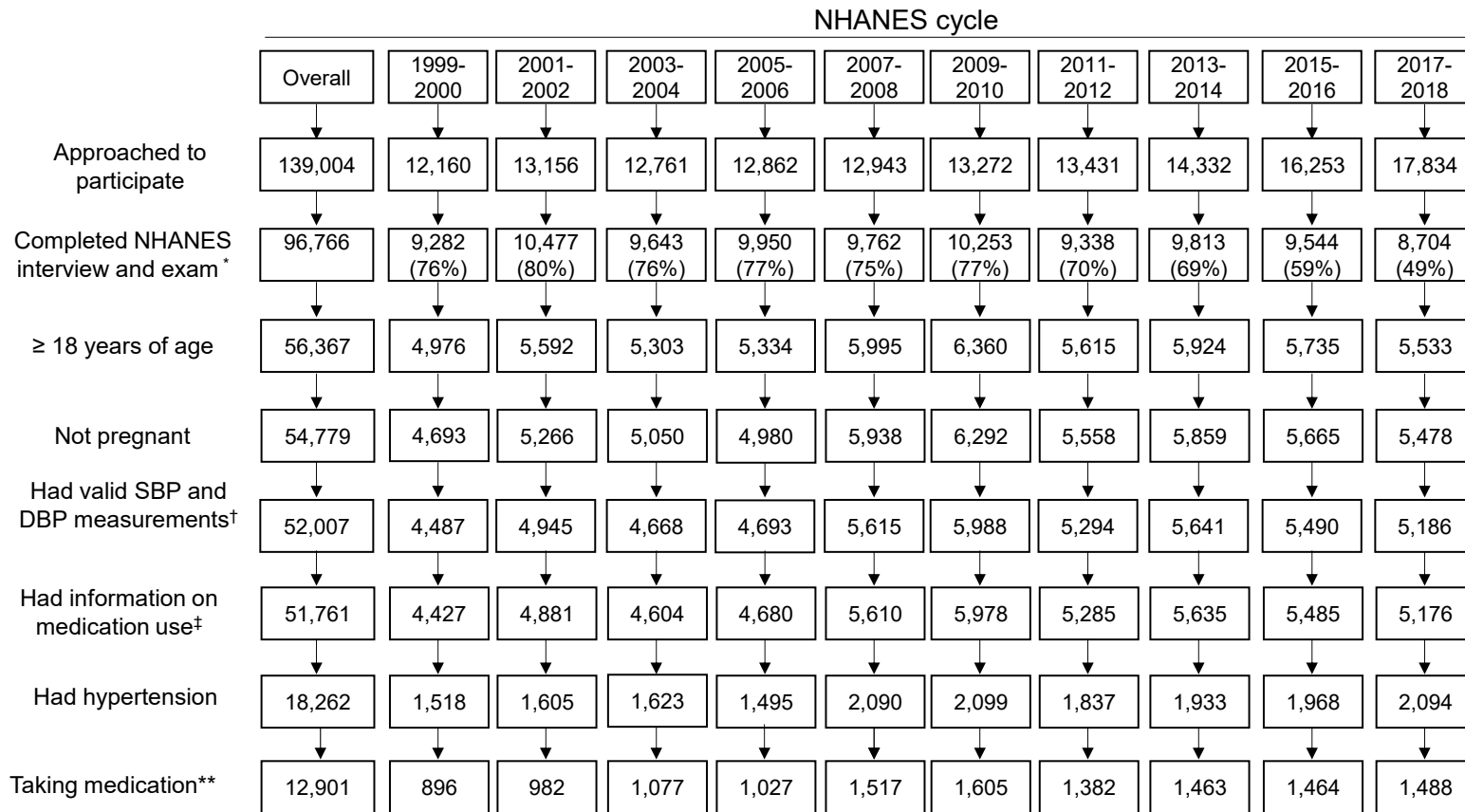
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eTable 6. Factors associated with hypertension awareness and taking antihypertensive medication among adults with hypertension in 2015-2018 in a complete case analysis

This supplementary material has been provided by the authors to give readers additional information about their work.

eFigure 1. Flowchart showing the number of NHANES participants included in the current analyses



NHANES: National Health and Nutrition Examination Survey; SBP: systolic blood pressure; DBP: diastolic blood pressure.

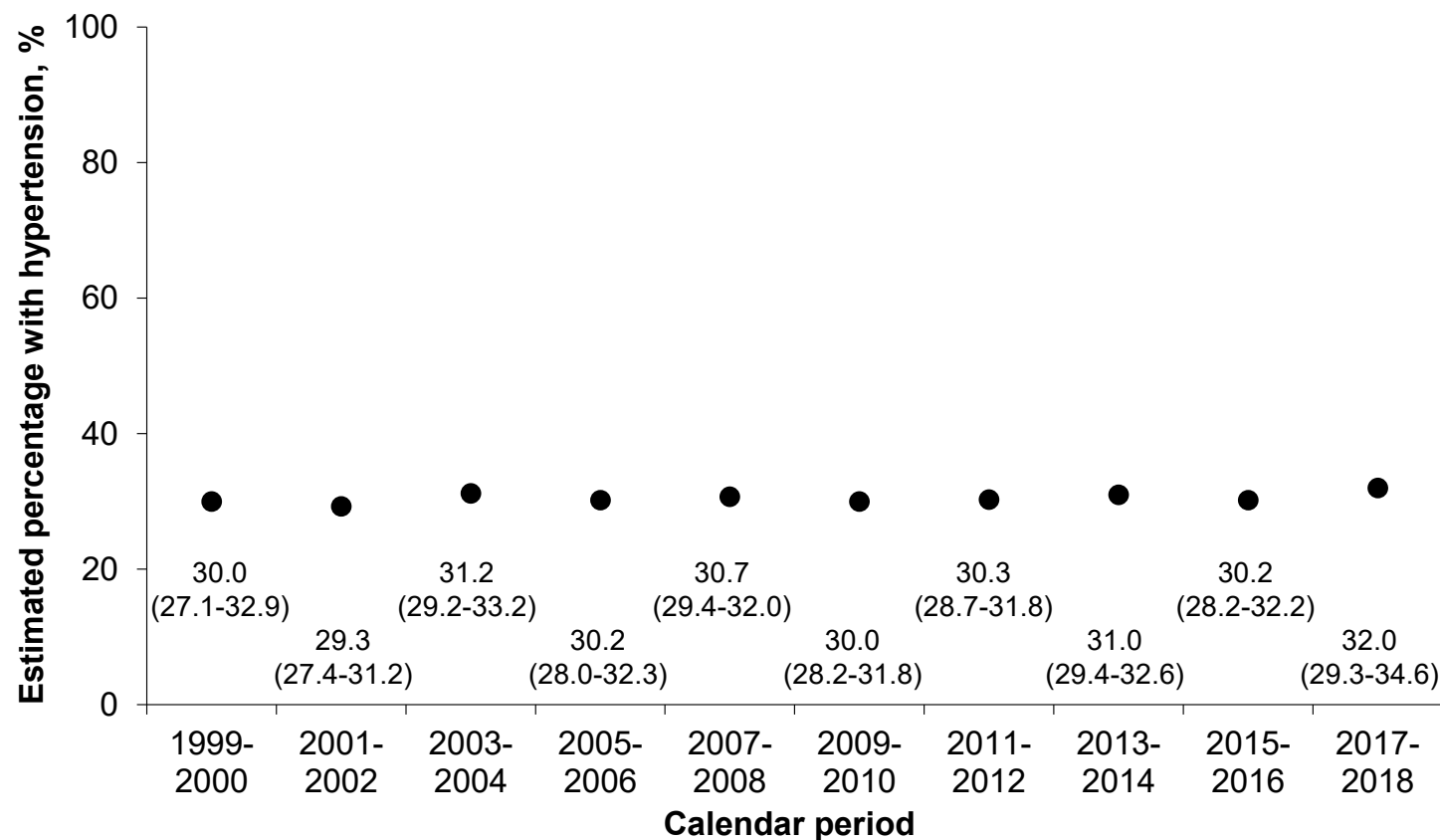
* The Completed NHANES interview and exam cells include number with the response rate in parentheses.

† Had at least one valid SBP and one DBP measurement.

‡ Had self-reported information on antihypertensive medication use.

**Self-reported antihypertensive medication use.

eFigure 2. Age-adjusted estimated percentage of adults with hypertension



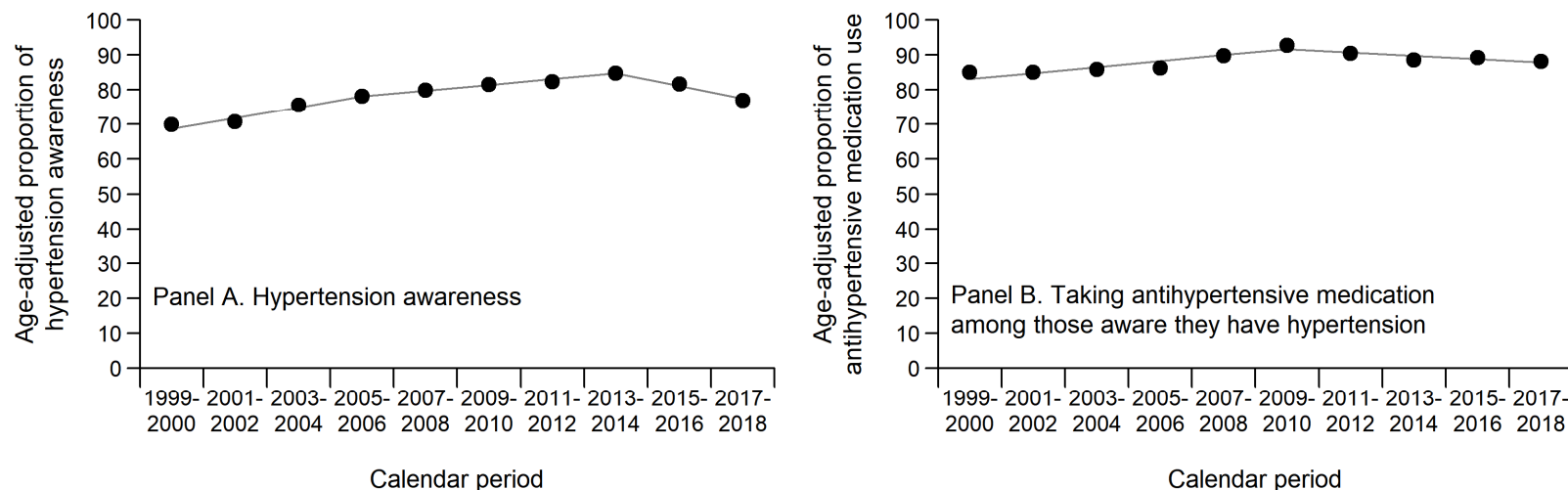
Each calendar period is independent.

Dots in the figure represent the estimated percentage of adults with hypertension. Numbers at the bottom of the figure are percentage of adults with hypertension with the 95% confidence interval provided in the parentheses.

Hypertension was defined by systolic blood pressure ≥ 140 mm Hg and/or diastolic blood pressure ≥ 90 mm Hg and/or antihypertensive medication use.

Age-adjustment was performed for all sub-groups except for the age sub-groups using direct standardization with the standard being US adults with hypertension across the entire time period, 1999-2018. Four age categories were used for standardization: 18 to 44 years (15.5%), 45 to 64 years (45.4%), 65 to 74 years (21.5%) and ≥ 75 years (17.7%).

eFigure 3. Age-adjusted estimated proportion of adults with hypertension who were aware they had hypertension (Panel A) and were taking antihypertensive medication among those who were aware (Panel B)



BP: blood pressure;

Each calendar period is independent.

The dots represent the observed age-adjusted proportion in each calendar period.

The line segments were generated using Joinpoint (National Cancer Institute, Rockville MD).

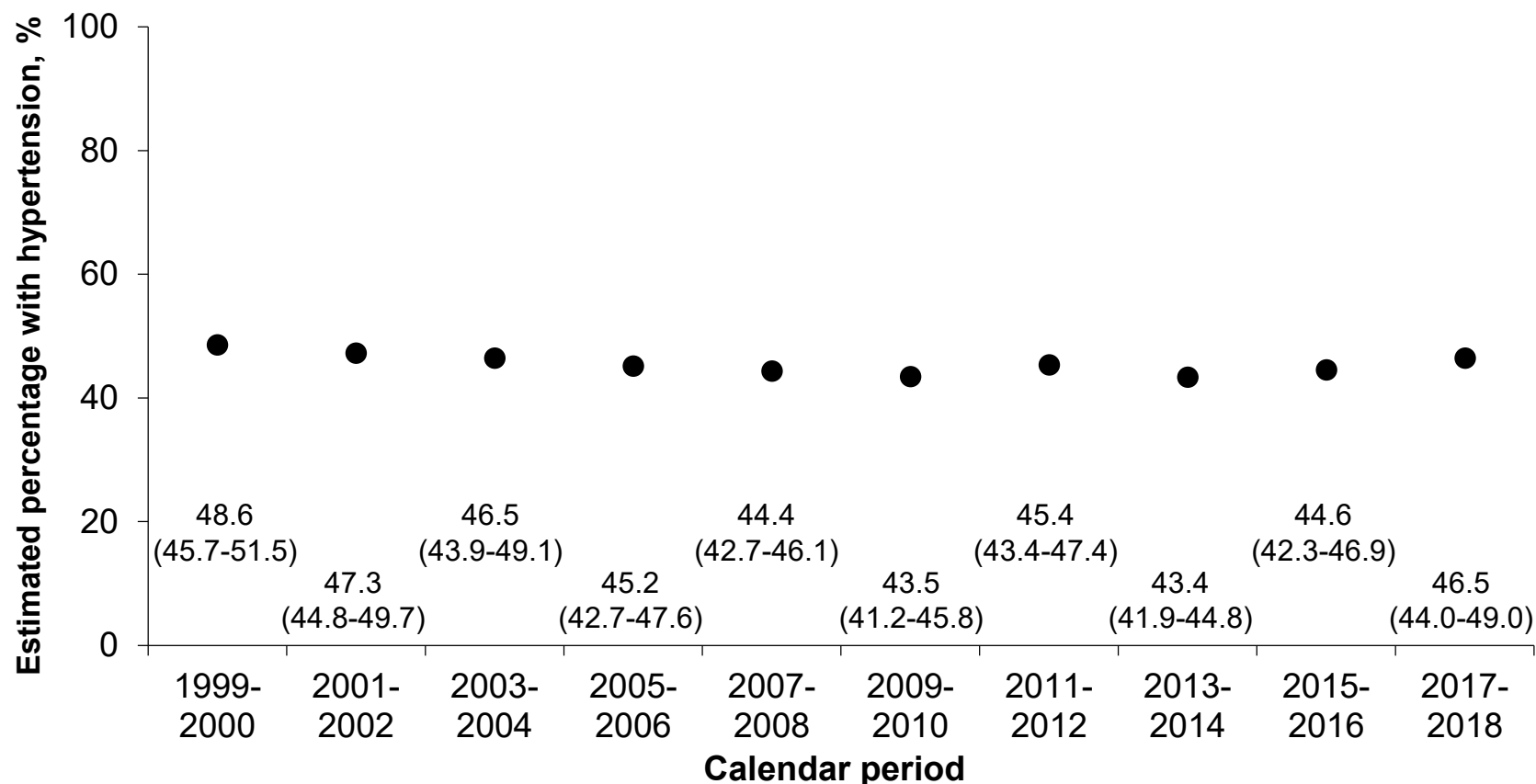
Age-adjustment was performed using direct standardization with the standard being US adults with hypertension across the entire time period, 1999-2018. Four age groups were used with direct standardization: 18 to 44 years (15.5%), 45 to 64 years (45.4%), 65 to 74 years (21.5%) and ≥ 75 years (17.7%).

Treatment was defined by self-reported antihypertensive medication use.

Hypertension awareness (Panel A): p-trend < 0.001 from 1999-2000 through 2005-2006, p-trend=0.001 from 2005-2006 through 2013-2014, and p-trend = 0.001 from 2013-2014 through 2017-2018.

Antihypertensive medication use (Panel B): p-trend = 0.010 from 1999-2000 through 2009-2010 and p-trend=0.005 from 2009-2010 through 2017-2018.

eFigure 4. Age-adjusted estimated percentage of US adults with hypertension defined using thresholds from the 2017 American College of Cardiology/American Heart Association blood pressure guideline



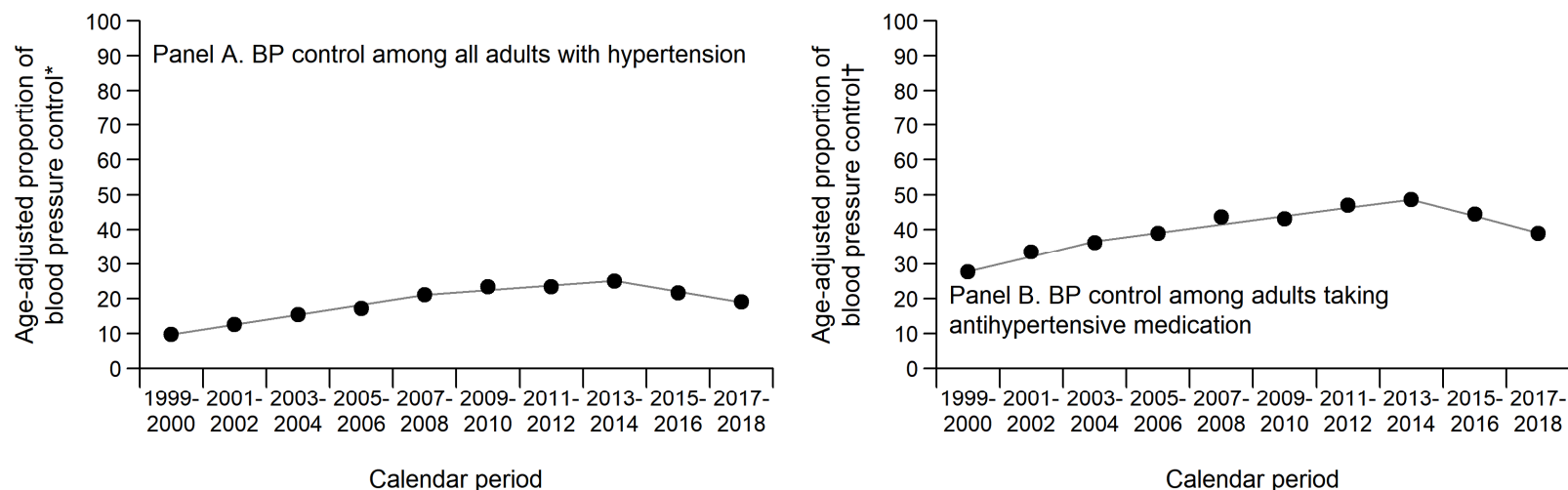
Each calendar period is independent.

Dots in the figure represent the estimated percentage of US adults with hypertension. Numbers at the bottom of the figure are percentage of adults with hypertension with the 95% confidence interval provided in the parentheses.

Age-adjustment was performed for all sub-groups except for the age sub-groups using direct standardization with the standard being US adults with hypertension across the entire time period, 1999-2018. Four age categories were used for standardization: 18 to 44 years (15.5%), 45 to 64 years (45.4%), 65 to 74 years (21.5%) and ≥ 75 years (17.7%).

Hypertension was defined by systolic blood pressure ≥ 130 mm Hg and/or diastolic blood pressure ≥ 80 mm Hg and/or antihypertensive medication use.

eFigure 5. Age-adjusted estimated proportion of adults with controlled blood pressure in a sensitivity analysis with blood pressure thresholds from the 2017 American College of Cardiology/American Heart Association blood pressure guideline



BP: blood pressure.

The dots represent the age-adjusted estimated proportion with controlled blood pressure.

The line segments were generated using Joinpoint (National Cancer Institute, Rockville MD).

Age-adjustment was performed using direct standardization with the standard being all adults across the entire time period, 1999-2018. Four age categories were used for standardization: 18 to 44 years (15.5%), 45 to 64 years (45.4%), 65 to 74 years (21.5%) and ≥ 75 years (17.7%).

* Among all US adults with hypertension

† Among all US adults who reported taking antihypertensive medication.

Hypertension was defined by systolic blood pressure ≥ 130 mm Hg and/or diastolic blood pressure ≥ 80 mm Hg and/or antihypertensive medication use.

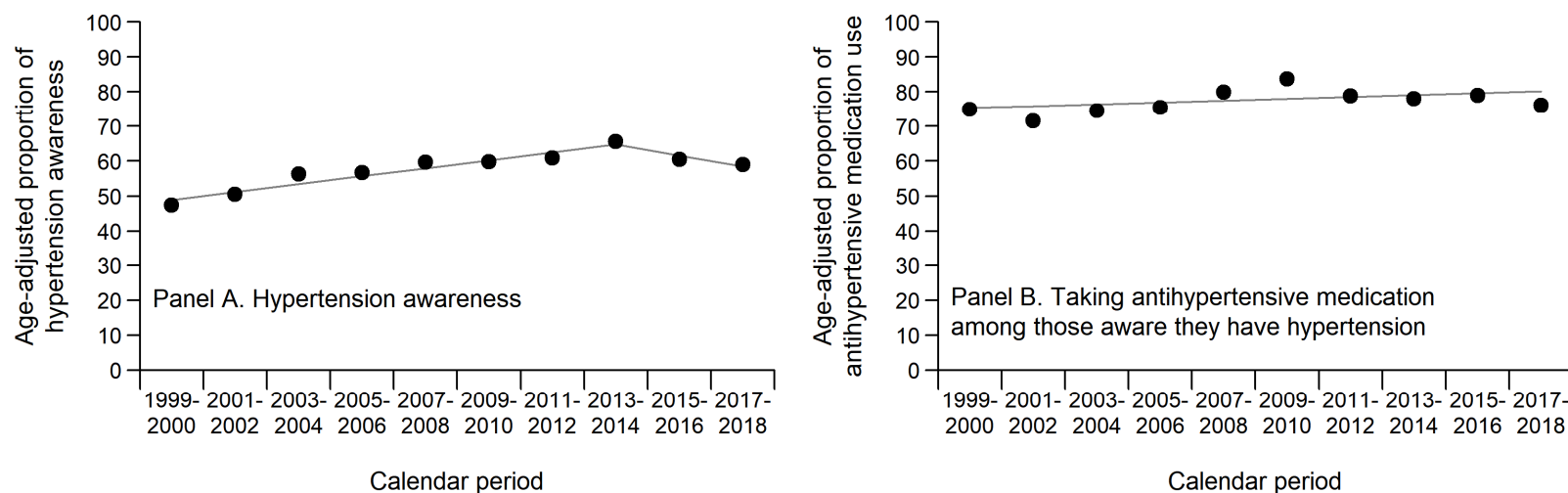
Treatment was defined by self-reported antihypertensive medication use.

Controlled blood pressure was defined as systolic blood pressure < 130 mm Hg and diastolic blood pressure < 80 mm Hg except for adults ≥ 65 years of age with low cardiovascular disease risk for whom controlled blood pressure was defined by systolic blood pressure < 130 mm Hg.

Blood pressure control among all adults with hypertension (Panel A): p-trend < 0.001 from 1999-2000 through 2007-2008; p-trend=0.08 from 2007-2008 through 2013-2014 and p-trend = 0.001 from 2013-2014 through 2017-2018.

Blood pressure control among all adults taking antihypertensive medication (Panel B): p-trend < 0.001 from 1999-2000 through 2003-2004; p-trend < 0.001 from 2003-2004 through 2013-2014 and p-trend < 0.001 from 2013-2014 through 2017-2018.

eFigure 6. Age-adjusted estimated proportion of US adults with hypertension, defined according to the 2017 American College of Cardiology/American Heart Association blood pressure guideline, who were aware they had hypertension (Panel A) and were taking antihypertensive medication among those who were aware (Panel B)



BP: blood pressure

Each calendar period is independent.

The dots represent the observed age-adjusted proportion in each calendar period.

The line segments were generated using Joinpoint (National Cancer Institute, Rockville MD).

Age-adjustment was performed using direct standardization with the standard being US adults with hypertension across the entire time period, 1999-2018. Four age groups were used with direct standardization: 18 to 44 years (15.5%), 45 to 64 years (45.4%), 65 to 74 years (21.5%) and ≥ 75 years (17.7%).

Treatment was defined by self-reported antihypertensive medication use.

Panel A: The age-adjusted estimated proportion of US adults with hypertension who reported being aware they had hypertension increased from 47.4% (95% CI 44.3%-50.6%) in 1999-2000 to 65.6% (95% CI 63.2%-68.1%) in 2013-2014 (p-trend < 0.001), and then declined to 59.0% (55.7%-62.4%) in 2017-2018 (p-trend = 0.005).

Panel B: Among US adults who reported being aware they had hypertension, the age-adjusted estimated proportion who reported taking antihypertensive medication increased from 74.9% (95% CI 70.3%-79.6%) in 1999-2000 to 76.1% (95% CI 71.8%-80.4%) in 2017-2018 (p-trend = 0.010).

eTable 1. Percentage of adults with controlled blood pressure among those with hypertension who reported taking antihypertensive medication, overall and in sub-groups from 1999-2000 to 2017-2018

	Calendar period									
	1999-2000 (n=896)	2001-2002 (n=982)	2003-2004 (n=1,077)	2005-2006 (n=1,027)	2007-2008 (n=1,517)	2009-2010 (n=1,605)	2011-2012 (n=1,382)	2013-2014 (n=1,463)	2015-2016 (n=1,464)	2017-2018 (n=1,488)
Overall	53.4% (49.0-57.9)	58.6% (56.0-61.2)	62.1% (57.9-66.2)	65.5% (62.0-69.0)	68.3% (65.9-70.8)	69.7% (67.4-72.1)	70.3% (66.8-73.8)	72.2% (68.6-75.8)	66.8% (63.0-70.6)	64.8% (61.3-68.3)
Age, years										
18 to 44	66.1% (54.7-77.5)	70.8% (60.4-81.1)	81.7% (73.2-90.2)	77.2% (67.1-87.4)	83.7% (78.6-88.7)	65.5% (56.0-74.9)	83.3% (74.2-92.4)	81.0% (76.0-85.9)	70.9% (63.2-78.6)	73.3% (60.5-86.0)
45 to 64	60.6% (55.1-66.1)	63.3% (58.6-68.1)	63.9% (58.6-69.2)	68.8% (63.1-74.5)	69.8% (65.5-74.1)	73.4% (69.6-77.3)	74.6% (70.6-78.5)	75.2% (69.7-80.7)	74.0% (68.1-79.9)	69.1% (64.6-73.6)
65 to 74	50.0% (43.2-56.9)	49.8% (43.1-56.5)	58.7% (51.9-65.5)	58.8% (53.7-63.9)	66.1% (62.2-70.0)	71.5% (67.5-75.6)	68.6% (62.0-75.2)	70.6% (66.4-74.7)	64.4% (56.7-72.2)	64.3% (56.9-71.7)
≥ 75	28.1% (22.0-34.3)	46.5% (36.9-56.2)	44.1% (38.2-50.1)	55.0% (48.3-61.7)	53.9% (48.5-59.2)	61.7% (55.8-67.6)	49.9% (41.7-58.1)	58.5% (50.4-66.7)	47.7% (39.2-56.2)	46.9% (39.9-53.9)
Sex										
Female	49.6% (44.6-54.5)	57.5% (53.8-61.1)	59.4% (54.2-64.6)	63.8% (60.0-67.6)	67.5% (64.7-70.3)	71.4% (68.7-74.0)	70.2% (65.6-74.7)	72.4% (68.1-76.7)	67.9% (63.9-71.9)	63.0% (59.1-66.8)
Male	59.2% (51.3-67.1)	61.3% (55.8-66.8)	65.5% (60.6-70.3)	68.4% (62.7-74.1)	69.4% (66.2-72.6)	68.4% (64.5-72.3)	71.1% (67.1-75.1)	72.6% (67.5-77.8)	66.5% (61.1-71.8)	67.1% (62.5-71.8)
Race/ethnicity										
Non-Hispanic white	57.3% (51.9-62.8)	61.3% (57.2-65.4)	65.1% (60.6-69.6)	67.1% (62.9-71.2)	71.0% (68.3-73.7)	73.4% (70.7-76.1)	72.3% (68.5-76.2)	75.4% (70.4-80.4)	70.4% (65.6-75.2)	68.2% (63.5-72.9)
Non-Hispanic black	44.3% (37.1-51.5)	48.6% (45.7-51.6)	55.6% (49.0-62.2)	57.9% (51.9-63.9)	61.1% (56.7-65.6)	60.1% (56.0-64.1)	64.2% (58.9-69.4)	60.4% (54.4-66.5)	58.1% (53.0-63.2)	53.2% (47.5-58.9)
Non-Hispanic Asian	-	-	-	-	-	-	72.5% (62.3-82.6)	63.8% (57.2-70.5)	54.1% (43.8-64.4)	63.7% (58.9-68.5)
Hispanic	48.8% (39.3-58.3)	61.7% (51.0-72.4)	54.5% (40.9-68.1)	64.2% (57.1-71.4)	64.3% (57.7-70.9)	58.1% (52.3-64.1)	65.4% (59.5-71.2)	68.9% (61.8-75.9)	65.0% (58.8-71.2)	58.2% (48.7-67.7)
Education										
Less than high school	44.7% (34.8-54.6)	54.5% (48.5-60.5)	62.1% (56.3-68.0)	58.0% (50.7-65.4)	62.8% (56.4-69.2)	65.7% (61.1-70.2)	69.6% (62.1-77.2)	73.8% (67.6-80.1)	65.4% (56.5-74.4)	54.1% (47.7-60.5)
High school or some college	53.8% (47.5-60.2)	60.4% (55.4-65.4)	59.8% (53.4-66.2)	63.9% (59.7-68.2)	68.8% (66.3-71.3)	68.2% (65.1-71.2)	71.7% (68.7-74.7)	71.1% (67.4-74.8)	65.7% (60.6-70.8)	63.5% (58.5-68.4)
College graduate	70.3% (59.6-81.1)	57.0% (50.1-63.8)	67.7% (59.4-76.0)	75.3% (68.3-82.3)	72.2% (65.9-78.5)	77.3% (70.7-84.0)	69.2% (61.4-77.1)	72.7% (65.4-80.0)	70.3% (63.2-77.3)	73.9% (68.7-79.2)
Income										
< \$20,000	48.1% (39.5-56.7)	52.2% (44.8-59.7)	57.2% (48.1-66.3)	57.2% (50.9-63.5)	65.1% (57.7-72.4)	69.1% (62.2-75.9)	67.0% (61.6-72.5)	70.0% (59.4-80.6)	61.6% (55.3-67.8)	51.8% (39.5-64.1)
\$20,000 to \$44,999	58.3% (48.0-68.7)	64.3% (58.3-70.3)	61.7% (55.0-68.3)	62.3% (58.3-66.4)	67.9% (61.6-74.3)	65.0% (59.7-70.3)	72.8% (68.3-77.2)	71.0% (66.1-76.0)	66.7% (59.8-73.5)	60.2% (53.2-67.3)
\$45,000 to \$74,999	52.3%	58.6%	62.7%	68.3%	68.0%	73.0%	72.5%	70.0%	65.5%	67.5%

	Calendar period									
	1999-2000 (n=896)	2001-2002 (n=982)	2003-2004 (n=1,077)	2005-2006 (n=1,027)	2007-2008 (n=1,517)	2009-2010 (n=1,605)	2011-2012 (n=1,382)	2013-2014 (n=1,463)	2015-2016 (n=1,464)	2017-2018 (n=1,488)
	(38.3-66.2)	(50.3-67.0)	(52.6-72.9)	(61.3-75.3)	(61.8-74.2)	(66.7-79.2)	(67.2-77.8)	(62.6-77.4)	(56.7-74.4)	(59.6-75.3)
≥ \$75,000	59.2% (45.2-73.2)	58.1% (50.5-65.7)	63.4% (54.7-72.0)	71.8% (62.4-81.2)	69.9% (64.4-75.3)	73.6% (68.3-79.0)	70.6% (64.3-76.8)	75.6% (70.6-80.7)	73.4% (66.1-80.7)	71.0% (64.7-77.3)
Health insurance										
Private	56.1% (51.5-60.7)	61.7% (56.5-66.8)	67.2% (61.9-72.5)	65.8% (61.0-70.6)	69.3% (65.4-73.2)	71.4% (68.9-73.9)	70.8% (66.9-74.8)	74.5% (69.4-79.5)	69.8% (64.0-75.6)	68.6% (65.2-72.0)
Medicare	57.9% (49.9-66.0)	46.7% (36.1-57.4)	58.6% (52.9-64.3)	66.9% (57.6-76.1)	69.3% (61.3-77.3)	58.0% (51.2-64.8)	70.4% (61.2-79.7)	69.8% (63.2-76.3)	70.4% (60.0-80.7)	63.1% (54.0-72.2)
None	28.4% (23.8-33.0)	61.3% (39.4-83.3)	46.6% (33.6-59.5)	69.6% (55.4-83.8)	67.1% (54.9-79.2)	53.1% (44.1-62.1)	74.5% (64.9-84.1)	59.8% (49.7-69.8)	47.3% (32.6-62.0)	46.3% (32.7-59.8)
Medicaid	47.3% (26.0-68.6)	45.9% (35.1-56.6)	55.9% (41.0-70.9)	51.2% (38.4-63.9)	72.8% (57.6-88.0)	74.4% (65.3-83.4)	66.3% (55.0-77.6)	66.2% (50.6-81.8)	65.0% (53.2-76.8)	61.0% (50.0-72.0)
Other government	56.6% (39.6-73.6)	66.2% (53.4-79.0)	64.2% (49.1-79.4)	74.1% (64.4-83.7)	78.3% (68.3-88.3)	78.9% (67.9-89.8)	68.9% (57.9-79.9)	52.7% (44.0-61.4)	60.7% (46.4-75.0)	52.7% (42.4-63.0)
Usual healthcare facility										
No	35.5% (21.0-50.1)	63.0% (43.1-83.0)	54.9% (33.5-76.2)	58.1% (40.4-75.7)	51.7% (30.6-72.9)	65.4% (47.6-83.2)	66.8% (56.5-77.1)	51.8% (41.2-62.4)	76.8% (66.7-86.9)	52.1% (31.9-72.4)
Yes	53.6% (49.1-58.1)	58.1% (55.8-61.3)	62.7% (58.8-66.7)	65.4% (62.0-68.9)	68.6% (66.3-70.8)	69.9% (67.6-72.2)	70.4% (66.6-74.2)	72.7% (68.9-76.5)	66.7% (63.0-70.4)	65.3% (61.8-68.8)
Healthcare visit in past year										
No	49.6% (34.3-65.0)	30.8% (10.2-51.3)	60.3% (33.0-87.7)	53.7% (32.7-74.6)	41.9% (24.6-59.3)	68.9% (46.3-91.4)	61.2% (44.4-78.0)	46.6% (34.4-58.9)	38.8% (27.5-50.0)	50.4% (33.2-67.6)
Yes	53.4% (48.9-57.9)	59.1% (56.6-61.6)	62.2% (58.0-66.4)	65.8% (62.5-69.1)	68.6% (66.3-71.0)	69.8% (66.3-71.0)	70.7% (67.3-74.1)	72.4% (68.8-76.0)	67.3% (63.2-71.3)	64.9% (61.4-68.4)

Age-adjustment was performed for all sub-groups except for the age sub-groups using direct standardization with the standard being US adults with hypertension across the entire time period, 1999-2018. Four age categories were used for standardization: 18 to 44 years (15.5%), 45 to 64 years (45.4%), 65 to 74 years (21.5%) and ≥ 75 years (17.7%).

Controlled blood pressure was defined by systolic blood pressure < 140 mm Hg and diastolic blood pressure < 90 mm Hg.

Due to a small sample size, adults of race/ethnicity other than non-Hispanic white, non-Hispanic black, non-Hispanic Asian, or Hispanic are not reported separately.

eTable 2. Factors associated with controlled blood pressure among US adults in 2015-2018 in a complete case analysis

	Among all US adults with hypertension		Among US adults taking antihypertensive medication	
	Prevalence ratio (95% CI) Model 1 (n=4,062)	Prevalence ratio (95% CI) Model 2 (n=3,532)	Prevalence ratio (95% CI) Model 1 (n=2,952)	Prevalence ratio (95% CI) Model 2 (n=2,584)
Age, years				
18 to 44	1 (ref)	1 (ref)	1 (ref)	1 (ref)
45 to 64	1.32 (1.14 – 1.52)	1.18 (1.02 – 1.37)	0.98 (0.88 – 1.09)	0.95 (0.87 – 1.05)
65 to 74	1.34 (1.14 – 1.58)	1.12 (0.94 – 1.34)	0.87 (0.76 – 0.99)	0.85 (0.75 – 0.96)
≥ 75	0.96 (0.80 – 1.16)	0.83 (0.66 – 1.04)	0.64 (0.55 – 0.73)	0.64 (0.55 – 0.76)
Sex				
Female	1 (ref)	1 (ref)	1 (ref)	1 (ref)
Male	0.93 (0.84 – 1.03)	0.97 (0.88 – 1.07)	1.02 (0.96 – 1.09)	1.01 (0.94 – 1.08)
Race-ethnicity				
Non-Hispanic white	1 (ref)	1 (ref)	1 (ref)	1 (ref)
Non-Hispanic black	0.85 (0.77 – 0.94)	0.88 (0.80 – 0.97)	0.80 (0.75 – 0.86)	0.82 (0.77 – 0.88)
Non-Hispanic Asian	0.86 (0.74 – 0.99)	0.88 (0.86 – 1.02)	0.88 (0.78 – 0.99)	0.88 (0.76 – 1.01)
Hispanic	0.83 (0.71 – 0.97)	0.94 (0.81 – 1.09)	0.89 (0.80 – 0.99)	0.93 (0.82 – 1.05)
Education				
Less than high school	1 (ref)	1 (ref)	1 (ref)	1 (ref)
High school or some college	1.08 (0.92 – 1.27)	0.96 (0.79 – 1.16)	1.03 (0.90 – 1.18)	0.96 (0.82 – 1.13)
College graduate	1.13 (0.97 – 1.32)	0.92 (0.75 – 1.14)	1.17 (1.05 – 1.30)	1.04 (0.89 – 1.21)
Income				
< \$20,000	1 (ref)	1 (ref)	1 (ref)	1 (ref)
\$20,000 to \$44,999	1.12 (0.93 – 1.35)	1.12 (0.93 – 1.35)	1.08 (0.93 – 1.25)	1.08 (0.93 – 1.25)
\$45,000 to \$74,999	1.23 (1.02 – 1.47)	1.18 (0.96 – 1.45)	1.12 (0.97 – 1.31)	1.09 (0.91 – 1.30)
≥ \$75,000	1.24 (1.05 – 1.46)	1.18 (0.93 – 1.49)	1.23 (1.08 – 1.40)	1.17 (0.99 – 1.39)
Health insurance				
Private	1.83 (1.43 – 2.34)	1.37 (1.02 – 1.83)	1.40 (1.08 – 1.82)	1.30 (0.97 – 1.74)
Medicare	1.89 (1.47 – 2.42)	1.40 (1.02 – 1.93)	1.33 (1.02 – 1.79)	1.24 (0.92 – 1.67)
None	1 (ref)	1 (ref)	1 (ref)	1 (ref)
Medicaid	1.70 (1.22 – 2.37)	1.29 (0.90 – 1.87)	1.35 (1.02 – 1.79)	1.35 (1.01 – 1.80)
Other government	1.80 (1.42 – 2.29)	1.26 (0.94 – 1.69)	1.28 (1.01 – 1.61)	1.19 (0.92 – 1.54)
Usual healthcare facility	2.25 (1.67 – 3.04)	1.52 (1.11 – 2.09)	1.04 (0.84 – 1.28)	1.00 (0.83 – 1.22)
Healthcare visit in past year	6.48 (3.55 – 11.8)	4.91 (2.56 – 9.41)	1.28 (0.89 – 1.83)	1.26 (0.82 – 1.93)

CI: confidence interval.

A complete case analysis was performed. No participants were missing information on age, race/ethnicity, or sex. The percentage of participants with missing data was 9.6% for income, 1.8% for education, 1.2% for health insurance, 1.2% for having a usual source of care, and <0.1% for receiving healthcare in the past year.

Model 1 includes adjustment for age in the categories (18 to 44, 45 to 64, 65 to 74 and ≥ 75 years), sex, and race-ethnicity.

Model 2 includes adjustment for all variables listed in the table simultaneously.

eTable 3. Percentage of adults with hypertension who reported being aware they have hypertension, overall, and in sub-groups from 1999-2000 to 2017-2018

	Calendar period									
	1999-2000 (n=1,518)	2001-2002 (n=1,605)	2003-2004 (n=1,623)	2005-2006 (n=1,495)	2007-2008 (n=2,090)	2009-2010 (n=2,099)	2011-2012 (n=1,837)	2013-2014 (n=1,933)	2015-2016 (n=1,968)	2017-2018 (n=2,094)
Overall	69.9% (65.9-73.8)	70.7% (67.9-73.6)	75.6% (72.2-79.0)	78.1% (75.3-81.0)	79.9% (77.8-82.0)	81.5% (78.7-84.3)	82.4% (79.0-85.7)	84.7% (82.3-87.1)	81.6% (79.3-83.9)	77.0% (73.5-80.6)
Age, years										
18 to 44	59.5% (46.3-72.6)	57.4% (49.3-65.5)	67.4% (60.0-74.9)	58.8% (52.0-65.7)	69.8% (59.0-80.5)	64.9% (56.0-73.8)	67.7% (58.1-77.2)	77.0% (73.5-80.4)	72.0% (65.6-78.5)	62.4% (54.9-70.0)
45 to 64	74.9% (68.4-1.4)	72.2% (67.8-76.7)	75.0% (69.3-80.7)	81.0% (77.1-84.9)	80.4% (77.7-83.0)	84.0% (80.6-87.3)	82.9% (78.1-87.7)	84.3% (81.1-87.5)	82.2% (78.9-85.5)	76.7% (70.5-82.9)
65 to 74	69.4% (64.2-74.6)	75.6% (72.2-79.0)	83.6% (80.2-87.0)	86.6% (82.0-91.1)	83.4% (79.3-87.4)	85.9% (80.7-91.1)	87.6% (83.1-92.2)	88.5% (85.6-91.4)	85.2% (78.8-91.6)	85.5% (80.3-90.3)
≥ 75	66.5% (62.9-70.1)	72.8% (68.4-77.2)	74.3% (69.0-79.7)	77.4% (71.8-83.0)	83.4% (79.8-87.0)	84.5% (79.8-89.2)	87.6% (83.7-91.5)	87.8% (82.3-93.3)	84.0% (80.1-88.0)	80.4% (75.4-85.4)
Sex										
Female	71.9% (66.5-77.1)	75.3% (69.3-81.3)	74.4% (69.5-79.2)	83.4% (79.9-86.9)	83.1% (81.1-85.1)	84.4% (81.4-87.3)	84.8% (80.3-89.3)	88.0% (85.4-90.6)	84.8% (81.3-88.3)	77.4% (72.4-82.5)
Male	67.2% (62.5-71.8)	66.7% (64.3-69.2)	77.3% (72.6-82.0)	75.3% (72.2-78.5)	77.1% (73.2-81.1)	79.2% (76.4-82.1)	80.0% (76.8-83.3)	82.0% (78.4-85.5)	79.0% (75.8-82.2)	77.0% (73.1-81.0)
Race/ethnicity										
Non-Hispanic white	70.4% (66.8-73.9)	69.6% (65.3-73.9)	75.3% (71.0-79.7)	77.7% (74.8-80.6)	80.8% (78.1-83.5)	80.8% (76.8-84.8)	82.3% (77.4-87.2)	85.8% (82.5-89.1)	82.1% (78.3-85.9)	76.8% (71.6-82.1)
Non-Hispanic black	76.9% (71.3-82.5)	79.5% (75.1-83.9)	77.3% (71.4-83.1)	82.8% (79.4-86.1)	83.5% (79.6-87.3)	87.0% (82.8-91.1)	85.3% (83.1-87.4)	86.3% (82.9-89.7)	84.9% (82.8-86.9)	81.9% (78.3-85.5)
Non-Hispanic Asian	-	-	-	-	-	-	70.9% (65.0-76.7)	75.7% (68.6-82.7)	74.8% (67.2-82.5)	76.7% (69.7-83.7)
Hispanic	66.3% (53.6-79.1)	65.6% (58.5-72.6)	74.6% (67.8-81.4)	72.4% (61.3-83.5)	71.7% (67.1-76.2)	77.8% (74.1-81.5)	81.1% (77.7-84.7)	79.0% (75.4-82.6)	77.4% (72.0-82.8)	72.1% (67.4-76.8)
Education										
Less than high school	73.9% (69.3-78.5)	72.7% (68.3-77.2)	72.5% (68.2-76.7)	75.5% (69.2-81.8)	78.9% (74.8-82.9)	82.0% (78.4-85.6)	83.8% (79.4-88.3)	84.1% (79.8-88.3)	81.7% (77.8-85.5)	76.4% (71.7-81.1)
High school or some college	69.7% (65.2-74.2)	72.1% (68.2-76.1)	76.7% (72.2-81.3)	78.5% (74.3-82.6)	78.9% (76.4-81.4)	82.5% (79.4-85.6)	81.2% (76.6-85.8)	86.4% (83.3-89.5)	82.5% (78.8-86.2)	79.3% (75.0-83.6)
College graduate	64.3% (52.0-76.6)	63.7% (57.4-70.0)	75.8% (68.2-83.5)	77.9% (70.6-85.3)	83.2% (77.8-88.6)	78.1% (73.1-83.2)	83.1% (78.5-87.7)	80.5% (77.1-83.9)	79.3% (74.6-84.0)	71.8% (65.2-78.3)
Income										
< \$20,000	77.1% (72.8-81.4)	78.9% (74.2-83.6)	74.4% (69.2-79.7)	78.1% (70.9-85.5)	81.4% (78.3-84.5)	83.6% (79.0-88.1)	87.4% (84.4-90.4)	85.5% (80.4-90.6)	83.4% (79.2-87.6)	74.3% (65.4-83.1)
\$20,000 to \$44,999	67.5%	69.9%	75.9%	76.7%	78.3%	82.2%	82.0%	86.9%	84.2%	78.2%

	Calendar period									
	1999-2000 (n=1,518)	2001-2002 (n=1,605)	2003-2004 (n=1,623)	2005-2006 (n=1,495)	2007-2008 (n=2,090)	2009-2010 (n=2,099)	2011-2012 (n=1,837)	2013-2014 (n=1,933)	2015-2016 (n=1,968)	2017-2018 (n=2,094)
	(60.4-74.7)	(63.6-76.2)	(71.4-80.4)	(72.6-80.8)	(74.2-82.5)	(77.4-86.9)	(77.2-86.8)	(83.3-90.4)	(80.8-87.5)	(74.9-81.5)
\$45,000 to \$74,999	70.7% (61.2-80.2)	65.2% (58.9-71.5)	76.8% (70.2-83.4)	74.4% (70.0-78.8)	80.3% (76.4-84.3)	83.6% (78.9-88.4)	80.7% (71.8-89.6)	87.6% (83.8-91.5)	80.2% (73.2-87.3)	81.7% (75.6-87.9)
≥ \$75,000	67.2% (56.9-77.5)	70.2% (63.5-77.0)	75.8% (69.3-82.2)	80.8% (73.5-88.0)	79.0% (72.8-85.3)	79.2% (74.2-84.3)	79.9% (75.2-84.7)	80.6% (79.4-86.2)	80.9% (76.3-85.5)	76.7% (70.6-82.8)
Health insurance										
Private	70.3% (65.7-74.9)	71.3% (66.5-76.1)	76.5% (73.0-79.9)	79.4% (76.0-82.9)	81.2% (78.4-83.9)	82.5% (79.1-85.8)	81.3% (76.3-86.4)	86.1% (83.6-88.7)	80.0% (76.6-83.4)	75.3% (70.1-80.4)
Medicare	71.6% (59.6-83.6)	76.9% (69.9-83.8)	89.4% (86.9-91.8)	87.8% (83.0-92.6)	90.5% (88.0-93.0)	85.1% (77.0-93.2)	91.6% (87.1-96.0)	91.9% (88.5-95.2)	88.0% (81.0-95.0)	84.4% (79.0-89.8)
None	63.9% (43.8-84.1)	55.3% (42.6-67.9)	68.4% (57.3-79.5)	67.1% (52.8-81.3)	66.6% (59.6-79.6)	78.9% (73.1-84.8)	72.2% (61.8-82.5)	75.9% (67.8-84.0)	71.7% (61.0-82.3)	73.3% (63.6-83.1)
Medicaid	64.5% (57.0-72.0)	74.6% (59.5-89.6)	65.6% (40.1-90.1)	95.1% (88.9-101.4)	90.8% (87.1-94.6)	84.1% (75.9-92.3)	93.6% (88.3-99.0)	85.0% (76.2-93.9)	83.4% (75.9-90.9)	78.0% (67.6-88.0)
Other government	68.5% (56.6-80.4)	73.2% (61.2-85.3)	81.5% (75.6-87.4)	75.4% (64.5-86.4)	90.0% (81.1-98.8)	81.8% (73.3-90.3)	83.7% (75.8-91.5)	72.0% (61.8-82.2)	83.3% (76.9-89.6)	86.9% (81.3-92.5)
Usual healthcare facility										
No	46.1% (35.5-56.7)	30.6% (18.9-42.3)	49.5% (33.5-65.6)	48.4% (36.1-60.7)	43.8% (33.2-54.4)	46.1% (35.0-57.3)	50.6% (41.2-60.1)	59.0% (47.3-70.7)	58.4% (47.4-69.4)	60.4% (52.2-68.5)
Yes	71.8% (67.2-76.3)	73.1% (70.4-75.8)	77.1% (73.0-81.1)	80.4% (77.3-83.6)	82.5% (80.3-84.6)	84.0% (80.7-87.2)	83.9% (80.7-87.2)	86.7% (84.2-89.1)	84.0% (81.6-86.4)	78.5% (74.5-82.6)
Healthcare visit in past year										
No	37.0% (22.8-51.2)	30.7% (23.8-37.6)	35.0% (20.8-49.3)	33.7% (24.3-43.2)	34.0% (26.2-41.8)	35.7% (26.9-44.6)	50.1% (37.2-63.0)	61.1% (50.1-72.0)	48.9% (40.2-57.7)	42.9% (32.7-53.1)
Yes	73.0% (68.3-77.7)	75.9% (73.3-78.4)	78.2% (74.2-82.2)	81.8% (78.7-84.9)	83.3% (81.1-85.6)	84.6% (81.3-87.9)	85.1% (81.9-88.4)	86.5% (83.8-89.2)	84.9% (82.9-86.8)	79.9% (76.0-83.7)

Age-adjustment was performed for all sub-groups except for the age sub-groups using direct standardization, with the standard being adults with hypertension across the entire time period, 1999-2018. Four age categories were used for standardization: 18 to 44 years (15.5%), 45 to 64 years (45.4%), 65 to 74 years (21.5%) and ≥ 75 years (17.7%).

Hypertension awareness was defined by answering yes to the question “Have you ever been told by a doctor or other health professional that you had hypertension, also called high blood pressure?”

Due to a small sample size, adults of race/ethnicity other than non-Hispanic white, non-Hispanic black, non-Hispanic Asian, or Hispanic are not reported separately.

eTable 4. Percentage of adults who reported taking antihypertensive medication among those reported being aware that they have hypertension, overall and in sub-groups from 1999-2000 to 2017-2018

	Calendar period									
	1999-2000 (n=1,049)	2001-2002 (n=1,140)	2003-2004 (n=1,230)	2005-2006 (n=1,166)	2007-2008 (n=1,664)	2009-2010 (n=1,739)	2011-2012 (n=1,520)	2013-2014 (n=1,634)	2015-2016 (n=1,620)	2017-2018 (n=1,648)
Overall	85.0% (81.0-89.1)	85.1% (82.4-87.8)	85.8% (82.3-89.3)	86.2% (83.2-89.1)	89.7% (87.4-92.1)	92.7% (91.0-94.4)	90.5% (88.6-92.4)	88.5% (85.6-91.3)	89.2% (87.2-91.1)	88.2% (85.5-90.9)
Age, years										
18 to 44	67.2% (54.9-79.5)	73.6% (66.0-81.2)	77.7% (67.8-87.7)	64.1% (54.3-73.7)	77.8% (70.9-84.8)	83.6% (76.8-90.4)	74.9% (66.8-83.1)	71.5% (63.7-79.3)	78.3% (71.7-84.9)	72.9% (62.8-83.0)
45 to 64	88.1% (85.1-91.1)	84.8% (81.3-88.3)	82.4% (77.8-86.9)	86.7% (83.6-89.7)	88.4% (83.9-92.9)	92.7% (90.0-95.3)	91.0% (87.7-94.2)	89.9% (86.1-93.7)	88.2% (84.3-92.2)	87.2% (83.3-91.1)
65 to 74	89.2% (83.8-94.6)	89.9% (85.1-94.7)	95.6% (92.9-98.2)	95.6% (93.5-97.7)	96.1% (94.2-98.0)	96.3% (93.6-98.9)	96.2% (92.8-99.6)	94.8% (91.4-98.1)	93.8% (92.3-95.4)	94.4% (90.0-98.8)
≥ 75	87.6% (80.2-94.9)	90.1% (84.8-95.5)	89.9% (86.2-93.6)	92.8% (88.7-96.9)	95.7% (93.6-97.8)	96.4% (94.4-98.4)	96.0% (92.9-99.0)	92.2% (88.7-95.7)	95.4% (93.5-97.3)	96.7% (94.0-99.3)
Sex										
Female	86.9% (83.1-90.7)	86.4% (82.6-90.2)	87.5% (83.7-91.2)	88.6% (84.5-92.7)	91.6% (89.2-93.9)	94.8% (92.4-97.1)	94.0% (92.5-95.4)	90.6% (87.2-94.1)	92.7% (90.7-94.7)	90.8% (88.0-93.5)
Male	84.8% (80.3-89.2)	83.4% (79.5-87.2)	84.5% (79.1-89.8)	84.3% (80.3-88.2)	87.9% (84.7-90.9)	90.9% (88.8-93.0)	86.7% (83.6-90.0)	86.2% (82.6-89.8)	86.2% (82.5-89.9)	86.6% (82.2-91.0)
Race/ethnicity										
Non-Hispanic white	86.7% (82.7-90.7)	84.5% (80.9-88.2)	85.6% (82.1-89.1)	86.5% (82.5-90.5)	90.0% (86.9-93.0)	93.8% (92.1-95.5)	92.0% (90.3-93.6)	88.9% (84.7-93.1)	89.4% (86.9-91.9)	87.3% (82.3-92.2)
Non-Hispanic black	86.8% (83.9-89.7)	86.6% (83.4-89.9)	88.8% (85.0-91.7)	90.3% (88.1-92.5)	88.7% (85.8-91.7)	91.3% (88.1-94.6)	89.9% (86.9-92.9)	88.9% (84.5-93.3)	90.7% (86.0-91.8)	88.9% (86.0-91.8)
Non-Hispanic Asian	-	-	-	-	-	-	86.1% (79.0-93.1)	82.8% (78.6-87.1)	91.0% (83.9-98.0)	89.4% (84.8-94.0)
Hispanic	76.1% (67.6-84.7)	82.7% (73.4-91.9)	81.4% (72.9-89.9)	70.1% (59.0-81.1)	90.8% (86.0-95.5)	88.1% (83.8-92.3)	88.3% (83.3-93.2)	87.3% (83.3-91.3)	88.6% (85.8-91.5)	89.6% (86.1-93.0)
Education										
Less than high school	83.3% (76.1-90.5)	85.6% (81.3-89.9)	84.2% (76.8-91.6)	79.9% (75.7-84.1)	87.4% (81.6-93.3)	91.7% (89.6-93.7)	87.4% (81.6-93.3)	89.5% (84.7-94.2)	85.3% (80.8-89.8)	86.4% (78.2-94.7)
High school or some college	85.0% (79.9-90.0)	85.5% (81.8-89.2)	85.4% (81.5-89.2)	87.8% (84.0-91.5)	90.4% (87.9-92.9)	92.0% (89.8-94.3)	89.8% (87.2-92.4)	88.7% (85.3-92.1)	90.8% (89.2-92.4)	88.0% (85.0-90.9)
College graduate	89.0% (83.3-94.7)	82.6% (77.4-87.8)	89.0% (83.4-94.7)	86.8% (81.1-92.5)	90.5% (86.6-94.4)	96.2% (92.9-99.5)	94.2% (92.4-96.0)	87.3% (82.1-92.5)	88.1% (82.6-93.7)	89.0% (83.4-94.6)
Income										
< \$20,000	86.1% (79.8-92.4)	83.0% (77.7-88.3)	89.7% (85.0-94.5)	86.6% (81.9-91.3)	91.0% (85.9-96.0)	87.9% (83.3-92.4)	91.1% (88.4-93.9)	89.1% (84.1-94.1)	87.1% (82.1-92.1)	88.3% (83.0-93.6)
\$20,000 to \$44,999	82.4%	85.9%	82.6%	88.5%	90.1%	92.4%	88.8%	85.8%	89.1%	85.6%

	Calendar period									
	1999-2000 (n=1,049)	2001-2002 (n=1,140)	2003-2004 (n=1,230)	2005-2006 (n=1,166)	2007-2008 (n=1,664)	2009-2010 (n=1,739)	2011-2012 (n=1,520)	2013-2014 (n=1,634)	2015-2016 (n=1,620)	2017-2018 (n=1,648)
	(74.8-90.1)	(81.3-90.4)	(77.8-87.4)	(84.4-92.7)	(86.5-93.8)	(89.5-95.2)	(85.2-92.5)	(80.7-91.0)	(85.6-92.6)	(81.9-89.4)
\$45,000 to \$74,999	88.1% (79.9-96.2)	86.7% (79.8-93.7)	81.7% (75.5-87.9)	84.6% (79.3-90.0)	88.2% (85.3-91.0)	94.6% (90.4-98.8)	92.3% (87.6-97.0)	87.1% (82.1-92.2)	94.3% (90.8-97.7)	90.0% (86.0-93.8)
≥ \$75,000	87.5% (81.3-93.7)	85.1% (78.4-91.8)	93.6% (89.8-97.3)	86.9% (80.4-93.4)	91.1% (86.9-95.3)	96.0% (94.2-97.8)	89.9% (87.1-92.7)	90.9% (86.5-95.3)	87.9% (83.4-92.4)	89.6% (86.0-93.3)
Health insurance										
Private	62.5% (56.8-68.3)	63.1% (58.2-68.0)	66.4% (61.9-70.8)	70.6% (67.3-73.9)	73.0% (70.1-75.9)	78.0% (73.8-82.3)	75.2% (70.3-80.2)	77.0% (73.0-80.9)	72.3% (68.5-76.2)	68.9% (64.4-73.5)
Medicare	67.6% (55.5-79.7)	67.4% (60.0-74.9)	81.1% (74.4-87.8)	78.7% (70.8-86.6)	85.1% (81.3-89.0)	84.1% (76.1-92.1)	85.0% (77.1-93.0)	88.2% (84.3-92.1)	85.4% (77.8-93.0)	75.5% (69.5-81.5)
None	48.2% (27.9-68.5)	29.2% (20.5-37.9)	37.8% (25.6-50.1)	49.2% (36.0-62.5)	54.2% (47.3-61.0)	62.9% (54.6-71.2)	57.7% (44.4-71.0)	63.5% (53.6-73.4)	59.4% (48.2-70.6)	51.8% (41.8-61.7)
Medicaid	54.7% (45.8-63.7)	68.2% (51.5-84.8)	60.3% (34.6-86.1)	87.5% (81.1-93.8)	88.2% (83.7-92.7)	76.2% (65.6-86.8)	90.3% (85.4-95.2)	77.3% (67.9-86.7)	71.5% (63.2-79.7)	65.5% (54.1-76.8)
Other government	47.6% (37.4-57.9)	69.9% (59.0-80.8)	74.2% (67.3-81.2)	68.6% (56.5-80.7)	86.5% (76.5-96.6)	75.9% (68.0-83.8)	76.6% (69.2-84.1)	66.5% (57.4-75.5)	73.9% (66.7-81.0)	82.2% (76.5-87.9)
Usual healthcare facility										
No	34.5% (10.3-58.7)	44.0% (25.3-62.7)	52.4% (38.3-66.6)	50.6% (33.0-68.2)	58.6% (38.5-78.7)	63.4% (50.0-76.7)	48.1% (35.5-60.8)	64.1% (50.0-78.3)	71.4% (61.4-81.5)	61.3% (51.0-71.5)
Yes	87.0% (83.5-90.5)	86.4% (83.9-89.0)	87.4% (84.1-90.7)	88.0% (84.8-91.2)	90.9% (88.9-92.9)	93.9% (92.3-95.5)	93.1% (90.9-95.2)	89.7% (86.9-92.4)	90.6% (88.7-92.4)	91.2% (88.9-93.6)
Healthcare visit in past year										
No	25.9% (9.6-42.2)	39.9% (18.2-61.6)	41.6% (18.6-64.6)	35.1% (21.0-49.1)	42.2% (20.5-64.0)	49.6% (31.4-67.8)	54.8% (44.2-65.4)	31.9% (21.0-42.8)	52.9% (37.3-68.5)	37.2% (25.3-49.1)
Yes	87.5% (83.6-91.3)	87.3% (84.3-90.3)	86.9% (84.0-89.8)	88.3% (85.8-90.8)	91.1% (88.7-93.6)	94.1% (92.4-95.7)	93.1% (91.2-95.1)	90.7% (88.0-93.4)	91.4% (89.7-93.0)	90.2% (87.7-92.7)

Age-adjustment was performed for all sub-groups except for the age sub-groups using direct standardization with the standard being adults with hypertension across the entire time period, 1999-2018. Four age categories were used for standardization: 18 to 44 years (15.5%), 45 to 64 years (45.4%), 65 to 74 years (21.5%) and ≥ 75 years (17.7%).

Hypertension treatment was defined by answering yes to the question “are you now taking prescribed medicine?” after the question “Because of your high blood pressure/hypertension, have you ever been told to take prescribed medicine”

Due to a small sample size, adults of race/ethnicity other than non-Hispanic white, non-Hispanic black, non-Hispanic Asian, or Hispanic are not reported separately.

eTable 5. Factors associated with hypertension awareness and taking antihypertensive medication among US adults with hypertension in 2015-2018

		Hypertension awareness		Taking antihypertensive medication†		
	Prevalence (95% CI) (n=4,062)	Prevalence ratio (95% CI) Model 1 (n=4,062)	Prevalence ratio (95% CI) Model 2 (n=4,062)	Prevalence (95% CI) (n=3,268)	Prevalence ratio (95% CI) Model 1 (n=3,268)	Prevalence ratio (95% CI) Model 2 (n=3,268)
Age, years						
18 to 44	67.3 (62.0 - 72.5)	1 (ref)	1 (ref)	75.8 (69.8 - 81.9)	1 (ref)	1 (ref)
45 to 64	79.3 (75.5 - 83.1)	1.17 (1.08, 1.28)	1.12 (1.03, 1.22)	87.7 (84.8 - 90.6)	1.15 (1.06, 1.25)	1.10 (1.02, 1.18)
65 to 74	85.4 (81.1 - 89.7)	1.26 (1.15, 1.38)	1.16 (1.05, 1.27)	94.1 (91.7 - 96.5)	1.23 (1.14, 1.33)	1.13 (1.06, 1.22)
≥ 75	82.1 (78.7 - 85.5)	1.21 (1.12, 1.31)	1.10 (1.01, 1.19)	96.0 (94.4 - 97.7)	1.25 (1.16, 1.36)	1.15 (1.07, 1.24)
Sex						
Female	81.1 (77.9 - 84.4)	1 (ref)	1 (ref)	91.8 (90.0 - 93.7)	1 (ref)	1 (ref)
Male	78.0 (75.3 - 80.7)	0.97 (0.92, 1.02)	0.99 (0.94, 1.04)	86.4 (83.4 - 89.4)	0.95 (0.92, 0.99)	0.96 (0.93, 1.00)
Race-ethnicity						
Non-Hispanic white	79.4 (76.0 - 82.7)	1 (ref)	1 (ref)	88.5 (85.8 - 91.1)	1 (ref)	1 (ref)
Non-Hispanic black	83.3 (81.2 - 85.4)	1.05 (0.99, 1.11)	1.04 (0.99, 1.10)	89.8 (88.1 - 91.5)	1.01 (0.98, 1.05)	1.02 (0.98, 1.05)
Non-Hispanic Asian	76.1 (70.5 - 81.7)	0.96 (0.89, 1.04)	0.98 (0.90, 1.07)	89.8 (85.7 - 94.0)	1.02 (0.96, 1.08)	1.05 (0.99, 1.12)
Hispanic	74.6 (70.7 - 78.4)	0.93 (0.87, 0.99)	0.95 (0.89, 1.01)	89.0 (86.6 - 91.3)	1.00 (0.96, 1.05)	1.04 (0.99, 1.08)
Education						
Less than high school	79.4 (76.2 - 82.5)	1 (ref)	1 (ref)	85.6 (81.1 - 90.2)	1 (ref)	1 (ref)
High school or some college	80.7 (77.7 - 83.7)	0.99 (0.94, 1.05)	0.98 (0.92, 1.04)	89.4 (87.6 - 91.2)	1.05 (0.99, 1.10)	1.01 (0.97, 1.06)
College graduate	75.3 (70.9 - 79.7)	0.93 (0.87, 0.99)	0.91 (0.85, 0.97)	88.6 (84.5 - 92.7)	1.04 (0.98, 1.10)	0.99 (0.94, 1.05)
Income						
< \$20,000	79.0 (73.7 - 84.2)	1 (ref)	1 (ref)	87.6 (83.9-91.3)	1 (ref)	1 (ref)
\$20,000 to \$44,999	81.2 (78.7 - 83.7)	1.03 (0.95, 1.10)	1.04 (0.97, 1.12)	87.4 (84.7-90.0)	1.00 (0.96, 1.05)	0.99 (0.95, 1.04)
\$45,000 to \$74,999	81.1 (76.1 -86.0)	1.02 (0.94, 1.11)	1.04 (0.95, 1.13)	92.2 (89.5-94.9)	1.05 (1.01, 1.10)	1.02 (0.97, 1.06)
≥ \$75,000	78.5 (74.3 - 82.8)	0.98 (0.91, 1.05)	1.01 (0.94, 1.08)	88.8 (85.7-92.0)	1.01 (0.97, 1.07)	0.98 (0.93, 1.03)
Health insurance						
Private	77.6 (74.4 - 80.9)	1.03 (0.93, 1.15)	0.92 (0.82, 1.04)	90.6 (88.6 - 92.5)	1.26 (1.13, 1.41)	1.12 (1.02, 1.22)
Medicare	87.2 (73.2 - 91.3)	1.12 (1.01, 1.24)	0.99 (0.89, 1.11)	93.5 (89.6 - 97.3)	1.26 (1.13, 1.41)	1.13 (1.03, 1.23)
None	73.5 (65.8 - 81.2)	1 (ref)	1 (ref)	75.2 (67.6 - 82.7)	1 (ref)	1 (ref)
Medicaid	79.9 (72.7 - 87.1)	1.04 (0.88, 1.23)	0.92 (0.77, 1.07)	84.5 (76.7 - 92.3)	1.21 (1.05, 1.41)	1.07 (0.95, 1.20)
Other government	84.4 (79.4 - 89.3)	1.11 (0.99, 1.25)	0.98 (0.86, 1.12)	91.0 (86.3 - 95.8)	1.25 (1.09, 1.42)	1.11 (0.99, 1.25)
Usual healthcare facility						

No	59.5 (52.3 - 66.8)	1 (ref)	1 (ref)	66.2 (58.6 - 73.9)	1 (ref)	1 (ref)
Yes	81.2 (78.8 - 83.7)	1.38 (1.21, 1.57)	1.17 (1.04, 1.31)	90.9 (89.4 - 92.4)	1.55 (1.35, 1.79)	1.33 (1.16, 1.54)
Healthcare visit in past year						
No	43.3 (33.7 - 53.0)	1 (ref)	1 (ref)	45.6 (34.9 - 56.3)	1 (ref)	1 (ref)
Yes	82.2 (79.9 - 84.5)	1.97 (1.63, 2.37)	1.90 (1.56, 2.31)	90.8 (89.3 - 92.4)	2.40 (1.81, 3.18)	2.13 (1.59, 2.85)

CI: confidence interval; PR: prevalence ratio.

Prevalence estimates were age-adjusted for all sub-groups except for the age sub-groups using direct standardization, with the standard being US adults with hypertension across the entire time period, 1999-2018. Four age categories were used for standardization: 18 to 44 years (15.5%), 45 to 64 years (45.4%), 65 to 74 years (21.5%) and ≥ 75 years (17.7%).

A complete case analysis was performed. No participants were missing information on age, race/ethnicity, or sex. The percentage of participants with missing data was 9.6% for income, 1.8% for education, 1.2% for health insurance, 1.2% for having a usual source of care, and $<0.1\%$ for receiving healthcare in the past year.

Model 1 includes adjustment for age in the categories (18 to 44, 45 to 64, 65 to 74 and ≥ 75 years), sex, and race-ethnicity.

Model 2 includes adjustment for all variables listed in the table simultaneously.

† The prevalence ratios for antihypertensive medication use were estimated among US adults who were aware that they had hypertension.

eTable 6. Factors associated with hypertension awareness and taking antihypertensive medication among adults with hypertension in 2015-2018 in a complete case analysis

	Hypertension awareness		Taking antihypertensive medication†	
	Prevalence ratio (95% CI) Model 1 (n=4,062)	Prevalence ratio (95% CI) Model 2 (n=3,532)	Prevalence ratio (95% CI) Model 1 (n=3,268)	Prevalence ratio (95% CI) Model 2 (n=2,855)
Age, years				
18 to 44	1 (ref)	1 (ref)	1 (ref)	1 (ref)
45 to 64	1.17 (1.07 – 1.28)	1.12 (1.05 – 1.27)	1.15 (1.06 – 1.25)	1.12 (1.03 – 1.22)
65 to 74	1.26 (1.15 – 1.38)	1.16 (1.05 – 1.27)	1.23 (1.14 – 1.33)	1.15 (1.06 – 1.25)
≥ 75	1.21 (1.11 – 1.32)	1.10 (1.00 – 1.21)	1.25 (1.15 – 1.36)	1.18 (1.08 – 1.28)
Sex				
Female	1 (ref)	1 (ref)	1 (ref)	1 (ref)
Male	0.97 (0.92 – 1.02)	0.98 (0.93 – 1.04)	0.95 (0.91 – 0.99)	0.97 (0.94 – 1.00)
Race-ethnicity				
Non-Hispanic white	1 (ref)	1 (ref)	1 (ref)	1 (ref)
Non-Hispanic black	1.05 (0.99 – 1.11)	1.03 (0.97 – 1.10)	1.01 (0.97 – 1.05)	1.02 (0.97 – 1.06)
Non-Hispanic Asian	0.96 (0.88 – 1.04)	0.96 (0.88 – 1.06)	1.02 (0.96 – 1.05)	1.06 (0.99 – 1.13)
Hispanic	0.93 (0.87 – 1.00)	0.95 (0.89 – 1.02)	1.00 (0.96 – 1.08)	1.03 (0.99 – 1.08)
Education				
Less than high school	1 (ref)	1 (ref)	1 (ref)	1 (ref)
High school or some college	0.99 (0.94 – 1.05)	0.97 (0.91 – 1.04)	1.05 (0.99 – 1.11)	1.01 (0.96 – 1.07)
College graduate	0.93 (0.87 – 0.99)	0.90 (0.83 – 0.97)	1.04 (0.98 – 1.11)	0.99 (0.92 – 1.06)
Income				
< \$20,000	1 (ref)	1 (ref)	1 (ref)	1 (ref)
\$20,000 to \$44,999	1.02 (0.95 – 1.11)	1.04 (0.96 – 1.12)	1.00 (0.96 – 1.05)	0.99 (0.94 – 1.04)
\$45,000 to \$74,999	1.02 (0.94 – 1.11)	1.04 (0.95 – 1.14)	1.05 (1.01 – 1.10)	1.02 (0.97 – 1.07)
≥ \$75,000	0.99 (0.92 – 1.07)	1.02 (0.94 – 1.11)	1.02 (0.97 – 1.06)	0.98 (0.92 – 1.04)
Health insurance				
Private	1.03 (0.92 – 1.16)	0.95 (0.82 – 1.10)	1.26 (1.12 – 1.42)	1.09 (1.01 – 1.17)
Medicare	1.12 (1.00 – 1.25)	1.03 (0.90 – 1.17)	1.26 (1.13 – 1.42)	1.09 (1.01 – 1.18)
None	1 (ref)	1 (ref)	1 (ref)	1 (ref)
Medicaid	1.04 (0.88 – 1.24)	0.93 (0.77 – 1.12)	1.21 (1.04 – 1.42)	1.02 (0.90 – 1.16)
Other government	1.13 (1.00 – 1.28)	1.01 (0.86 – 1.17)	1.24 (1.08 – 1.43)	1.06 (0.92 – 1.20)
Usual healthcare facility	1.38 (1.21 – 1.58)	1.18 (1.04 – 1.34)	1.55 (1.34 – 1.80)	1.31 (1.10 – 1.56)
No	1.97 (1.62 – 2.39)	1.77 (1.41 – 2.24)	2.40 (1.79 – 3.21)	2.06 (1.50 – 2.81)

Yes	1.38 (1.21, 1.57)	1.17 (1.04, 1.31)	1.55 (1.35, 1.79)	1.34 (1.16, 1.55)
Healthcare visit in past year				
No	1 (ref)	1 (ref)	1 (ref)	1 (ref)
Yes	1.97 (1.63, 2.37)	1.90 (1.56, 2.31)	2.40 (1.81, 3.18)	2.13 (1.59, 2.85)

CI: confidence interval; PR: prevalence ratio.

Prevalence estimates were age-adjusted for all sub-groups except for the age sub-groups using direct standardization, with the standard being US adults with hypertension across the entire time period, 1999-2018. Four age categories were used for standardization: 18 to 44 years (15.5%), 45 to 64 years (45.4%), 65 to 74 years (21.5%) and ≥ 75 years (17.7%).

A complete case analysis was performed. No participants were missing information on age, race/ethnicity, or sex. The percentage of participants with missing data was 9.6% for income, 1.8% for education, 1.2% for health insurance, 1.2% for having a usual source of care, and $<0.1\%$ for receiving healthcare in the past year.

Model 1 includes adjustment for age in the categories (18 to 44, 45 to 64, 65 to 74 and ≥ 75 years), sex, and race-ethnicity.

Model 2 includes adjustment for all variables listed in the table simultaneously.

† The prevalence ratios for antihypertensive medication use were estimated among US adults who were aware that they had hypertension.