Supplemental Material

Table S1. Baseline Characteristics of U.S. Adults Meeting the Definition for Hypertension and Recommended Antihypertensive Medication According to the 2017 ACC/AHA Guideline and the JNC8 Guideline Based on the 2013–2016 PINNACLE Data.

Characteristics	2017 ACC/AHA Guideline		JNC8 Guidelines		Difference (2017 ACC/AHA, But Not JNC8)	
	Hypertension (N = 5027961)	Recommended Antihypertensive Medication (N = 4266118)	Hypertension (N = 4521272)	Recommended Antihypertensive Medication (N = 3734134)	Hypertension (N = 506689)	Recommended Antihypertensive Medication (N = 531984)
History of Hypertension	75.4% (3793378/5027961)	78.3% (3339820/4266118)	83.9% (3793378/4521272)	80.5% (3006240/3734134)	0.0% (0/506689)	62.7% (333580/531984)
On Antihypertensive Medications	66.9% (3365371/5027961)	78.8% (3363807/4266118)	74.2% (3353197/4521272)	89.8% (3353197/3734134)	2.4% (12174/506689)	2.0% (10610/531984)
Number of BP Measurements Used						
Mean ± SD (N)	2.0±0.1 (5027961)	2.0±0.1 (4266118)	2.0±0.1 (4521272)	2.0±0.1 (3734134)	2.0±0.1 (506689)	2.0±0.1 (531984)
Median (Q1,Q3)	2.0 (2.0,2.0)	2.0 (2.0,2.0)	2.0 (2.0,2.0)	2.0 (2.0,2.0)	2.0 (2.0,2.0)	2.0 (2.0,2.0)
Range (Min,Max)	(2.0,6.0)	(2.0,6.0)	(2.0,6.0)	(2.0,6.0)	(2.0,6.0)	(2.0,5.0)
Ejection Fraction ≤40	9.9% (190324/1919712)	9.8% (172856/1758731)	9.6% (175670/1834413)	9.4% (150237/1596142)	17.2% (14654/85299)	13.9% (22619/162589)
Ejection Fraction ≤40 among those without hypertension and on antihypertensive meds	5.1% (12187/238602)	4.6% (10841/237256)	0.4% (933/227348)	0.4% (933/227348)	100.0% (11254/11254)	100.0% (9908/9908)

ACC=American College of Cardiology, AHA=American Heart Association; JNC7= Seventh Joint National Committee (JNC7); ASCVD= atherosclerotic cardiovascular disease; CVD= cardiovascular disease; SD=standard deviation; Q=quartile; min=minimum; max=maximum; US=United States, N=number

Table S2. Baseline Characteristics of U.S. Adults Meeting the Definition for Hypertension and Recommended Antihypertensive Medication According to the 2017 ACC/AHA Guideline and the JNC7 Guideline Based on the 2013–2016 PINNACLE Data.

Characteristics	2017 ACC/AHA Guideline		JNC7 Guidelines		Difference (2017 ACC/AHA, But Not JNC7)	
	Hypertension (N = 5027961)	Recommended Antihypertensive Medication (N = 4266118)	Hypertension (N = 4545976)	Recommended Antihypertensive Medication (N = 3983633)	Hypertension (N = 481985)	Recommended Antihypertensive Medication (N = 282485)
History of Hypertension	75.4% (3793378/5027961)	78.3% (3339820/4266118)	83.4% (3793378/4545976)	80.1% (3189874/3983633)	0.0% (0/481985)	53.1% (149946/282485)
On Antihypertensive Medications	66.9% (3365371/5027961)	78.8% (3363807/4266118)	73.8% (3353850/4545976)	84.2% (3355983/3983633)	2.4% (11521/481985)	2.8% (7824/282485)
Number of BP Measurements Used						
Mean ± SD (N)	2.0±0.1 (5027961)	2.0±0.1 (4266118)	2.0±0.1 (4545976)	2.0±0.1 (3983633)	2.0±0.1 (481985)	2.0±0.1 (282485)
Median (Q1,Q3)	2.0 (2.0,2.0)	2.0 (2.0,2.0)	2.0 (2.0,2.0)	2.0 (2.0,2.0)	2.0 (2.0,2.0)	2.0 (2.0,2.0)
Range (Min,Max)	(2.0,6.0)	(2.0,6.0)	(2.0,6.0)	(2.0,6.0)	(2.0,6.0)	(2.0,5.0)
Ejection Fraction ≤40	9.9% (190324/1919712)	9.8% (172856/1758731)	9.6% (176501/1838559)	9.5% (158348/1659307)	17.0% (13823/81153)	14.6% (14508/99424)
Ejection Fraction ≤40 among those without hypertension and on antihypertensive meds	5.1% (12187/238602)	4.6% (10841/237256)	0.7% (1541/227956)	1.5% (3547/229962)	100.0% (10646/10646)	100.0% (7294/7294)

ACC=American College of Cardiology, AHA=American Heart Association; JNC7= Seventh Joint National Committee (JNC7); ASCVD= atherosclerotic cardiovascular disease; CVD= cardiovascular disease; SD=standard deviation; Q=quartile; min=minimum; max=maximum; US=United States, N=number

Table S3. Percentage of U.S. Adults Taking Antihypertensive Medication Who Meet BP Treatment Goal Per 2017 ACC/AHA Guideline, JNC7 Guideline and JNC8 Guideline Based on the 2013–2016 PINNACLE Data, Sensitivity Analysis.

Subgroups	2017 ACC/AHA Guideline	JNC7 Guideline	JNC7 Guideline, But Not the 2017 ACC/AHA Guideline	JNC8 Guideline	JNC8 Guideline, But Not the 2017 ACC/AHA Guideline
Overall (N = 2971934)	41.63% (41.58%, 41.69%)	64.41% (64.35%, 64.46%)	22.78% (22.73%, 22.82%)	79.77% (79.73%, 79.82%)	38.14% (38.08%, 38.20%)
Age group, yrs					
18-44 (N = 160497)	39.63% (39.39%, 39.87%)	67.77% (67.54%, 68.00%)	28.14% (27.92%, 28.36%)	73.75% (73.53%, 73.96%)	34.12% (33.88%, 34.35%)
45-54 (N = 315997)	37.50% (37.33%, 37.67%)	64.79% (64.62%, 64.96%)	27.29% (27.14%, 27.45%)	73.08% (72.93%, 73.24%)	35.59% (35.42%, 35.75%)
55-64 (N = 642559)	39.79% (39.67%, 39.91%)	64.14% (64.03%, 64.26%)	24.35% (24.25%, 24.46%)	77.69% (77.59%, 77.79%)	37.90% (37.78%, 38.02%)
65-74 (N = 908912)	41.74% (41.63%, 41.84%)	63.54% (63.44%, 63.64%)	21.80% (21.72%, 21.89%)	81.87% (81.79%, 81.95%)	40.13% (40.03%, 40.24%)
≥75 (N = 943969)	44.51% (44.41%, 44.61%)	64.73% (64.63%, 64.82%)	20.22% (20.14%, 20.30%)	82.43% (82.36%, 82.51%)	37.92% (37.83%, 38.02%)
Male (N = 1533143)	42.73% (42.65%, 42.80%)	65.40% (65.32%, 65.47%)	22.67% (22.60%, 22.74%)	80.38% (80.31%, 80.44%)	37.65% (37.57%, 37.73%)
Female (N = 1436305)	40.46% (40.38%, 40.54%)	63.35% (63.28%, 63.43%)	22.89% (22.82%, 22.96%)	79.12% (79.06%, 79.19%)	38.66% (38.58%, 38.74%)
Race					
White (N = 1875019)	42.78% (42.71%, 42.85%)	65.91% (65.85%, 65.98%)	23.13% (23.07%, 23.19%)	81.27% (81.22%, 81.33%)	38.49% (38.42%, 38.56%)
Black (N = 215758)	30.69% (30.49%, 30.88%)	51.27% (51.06%, 51.49%)	20.59% (20.42%, 20.76%)	67.91% (67.71%, 68.11%)	37.22% (37.02%, 37.43%)
Other (N = 14678)	41.42% (40.62%, 42.22%)	60.98% (60.19%, 61.77%)	19.57% (18.93%, 20.22%)	76.97% (76.28%, 77.64%)	35.55% (34.77%, 36.33%)
Hispanic (N = 128486)	39.32% (39.05%, 39.58%)	59.59% (59.32%, 59.86%)	20.27% (20.05%, 20.49%)	76.67% (76.44%, 76.90%)	37.35% (37.09%, 37.62%)
Non-Hispanic (N = 2843448)	41.74% (41.68%, 41.79%)	64.63% (64.57%, 64.68%)	22.89% (22.84%, 22.94%)	79.91% (79.87%, 79.96%)	38.18% (38.12%, 38.23%)
10-Year ASCVD Risk categories					
<5% (N = 9209)	42.87% (41.86%, 43.89%)	75.76% (74.87%, 76.64%)	32.89% (31.93%, 33.86%)	79.72% (78.88%, 80.53%)	36.84% (35.86%, 37.84%)
5% to <10% (N = 9412)	37.60% (36.62%, 38.59%)	68.61% (67.67%, 69.55%)	31.01% (30.08%, 31.96%)	78.22% (77.37%, 79.05%)	40.62% (39.62%, 41.62%)
10% to <20% (N = 13101)	35.55% (34.73%, 36.37%)	60.90% (60.06%, 61.74%)	25.36% (24.61%, 26.11%)	76.92% (76.19%, 77.64%)	41.37% (40.53%, 42.22%)
≥20% (N = 13771)	27.35% (26.61%, 28.11%)	43.42% (42.59%, 44.25%)	16.06% (15.45%, 16.69%)	67.77% (66.98%, 68.55%)	40.42% (39.60%, 41.24%)
History of CVD (N = 1705314)	44.68% (44.61%, 44.76%)	65.57% (65.50%, 65.64%)	20.89% (20.83%, 20.95%)	81.39% (81.33%, 81.45%)	36.71% (36.64%, 36.78%)

ACC=American College of Cardiology, AHA=American Heart Association; JNC7= Seventh Joint National Committee (JNC7); ASCVD= atherosclerotic cardiovascular disease; CVD= cardiovascular disease; US=United States, N=number.

Table S4. Baseline Characteristics of U.S. Adults Taking Antihypertensive Medication Who Meet BP Treatment Goal Per ACC/AHA Guideline, JNC8 Expert Report and JNC7 Guideline Based on the 2013–2016 PINNACLE Data, Sensitivity Analysis.

Characteristics	ACC/AHA Guideline[1] (N = 1237263)	JNC8 Guideline[1] (N = 2370758)	Difference between ACC/AHA guideline and JNC8 report[1] (N = 1133495)	JNC7 Guideline[1] (N = 1914176)	Difference between ACC/AHA and JNC7 guidelines[1] (N = 676913)
Age (Years)					
Mean ± SD (N)	68.2±13.4 (1237263)	68.0±13.1 (2370758)	67.8±12.8 (1133495)	67.4±13.5 (1914176)	66.0±13.5 (676913)
Median (Q1,Q3)	69.0 (60.0,78.0)	69.0 (60.0,77.0)	69.0 (60.0,77.0)	68.0 (59.0,77.0)	67.0 (57.0,76.0)
Range (Min,Max)	(18.0,100.0)	(18.0,100.0)	(18.0,100.0)	(18.0,100.0)	(18.0,100.0)
18-44	5.1% (63607/1237263)	5.0% (118362/2370758)	4.8% (54755/1133495)	5.7% (108770/1914176)	6.7% (45163/676913)
45-54	9.6% (118491/1237263)	9.7% (230943/2370758)	9.9% (112452/1133495)	10.7% (204735/1914176)	12.7% (86244/676913)
55-64	20.7% (255679/1237263)	21.1% (499186/2370758)	21.5% (243507/1133495)	21.5% (412162/1914176)	23.1% (156483/676913)
65-74	30.7% (379337/1237263)	31.4% (744127/2370758)	32.2% (364790/1133495)	30.2% (577516/1914176)	29.3% (198179/676913)
≥75	34.0% (420149/1237263)	32.8% (778140/2370758)	31.6% (357991/1133495)	31.9% (610993/1914176)	28.2% (190844/676913)
Sex					
Male	53.0% (655057/1236237)	52.0% (1232284/2368750)	51.0% (577227/1132513)	52.4% (1002627/1912588)	51.4% (347570/676351)
Female	47.0% (581180/1236237)	48.0% (1136466/2368750)	49.0% (555286/1132513)	47.6% (909961/1912588)	48.6% (328781/676351)
Race					
White	64.8% (802134/1237263)	64.3% (1523880/2370758)	63.7% (721746/1133495)	64.6% (1235904/1914176)	64.1% (433770/676913)
Black	5.4% (66209/1237263)	6.2% (146519/2370758)	7.1% (80310/1133495)	5.8% (110628/1914176)	6.6% (44419/676913)
Other	0.5% (6079/1237263)	0.5% (11297/2370758)	0.5% (5218/1133495)	0.5% (8951/1914176)	0.4% (2872/676913)
Missing	29.3% (362841/1237263)	29.1% (689062/2370758)	28.8% (326221/1133495)	29.2% (558693/1914176)	28.9% (195852/676913)
History of Stroke/TIA	13.0% (161058/1237263)	12.8% (304160/2370758)	12.6% (143102/1133495)	12.5% (238572/1914176)	11.5% (77514/676913)
History of Stroke	10.1% (124908/1237263)	9.9% (235121/2370758)	9.7% (110213/1133495)	9.7% (184720/1914176)	8.8% (59812/676913)
History of TIA	4.1% (50509/1237263)	4.0% (95730/2370758)	4.0% (45221/1133495)	3.9% (74309/1914176)	3.5% (23800/676913)
Coronary Artery Disease	50.5% (625204/1237263)	47.8% (1133258/2370758)	44.8% (508054/1133495)	47.6% (910715/1914176)	42.2% (285511/676913)
History of MI	13.5% (166872/1237263)	12.0% (285585/2370758)	10.5% (118713/1133495)	12.4% (237735/1914176)	10.5% (70863/676913)
History of PCI	18.0% (222978/1237263)	16.9% (399473/2370758)	15.6% (176495/1133495)	16.8% (322516/1914176)	14.7% (99538/676913)
History of CABG	9.6% (119289/1237263)	8.7% (206440/2370758)	7.7% (87151/1133495)	8.6% (164408/1914176)	6.7% (45119/676913)
Diabetes	24.5% (303663/1237263)	22.2% (525846/2370758)	19.6% (222183/1133495)	15.9% (303663/1914176)	0.0% (0/676913)
Chronic Kidney Disease	4.9% (60307/1237263)	4.2% (99773/2370758)	3.5% (39466/1133495)	3.2% (60307/1914176)	0.0% (0/676913)
Heart Failure	22.2% (274241/1237263)	19.4% (460751/2370758)	16.5% (186510/1133495)	19.8% (378683/1914176)	15.4% (104442/676913)
10-Year Predicted CVD Risk (%)					
Mean ± SD (N)	13.5±10.8 (15911)	14.7±11.4 (34113)	15.8±11.8 (18202)	12.9±10.2 (27393)	12.0±9.1 (11482)
Median (Q1,Q3)	10.8 (5.0,19.3)	11.9 (5.8,21.1)	13.0 (6.5,22.6)	10.3 (4.9,18.5)	9.6 (4.8,17.4)
Range (Min,Max)	(0.1,80.7)	(0.1,80.7)	(0.1,72.2)	(0.1,80.7)	(0.1,63.1)

<5%	24.8% (3948/15911)	21.5% (7341/34113)	18.6% (3393/18202)	25.5% (6977/27393)	26.4% (3029/11482)
5% to <10%	22.2% (3539/15911)	21.6% (7362/34113)	21.0% (3823/18202)	23.6% (6458/27393)	25.4% (2919/11482)
10% to <20%	29.3% (4657/15911)	29.5% (10077/34113)	29.8% (5420/18202)	29.1% (7979/27393)	28.9% (3322/11482)
≥20%	23.7% (3767/15911)	27.4% (9333/34113)	30.6% (5566/18202)	21.8% (5979/27393)	19.3% (2212/11482)
History of CVD	61.6% (761986/1237263)	58.5% (1387969/2370758)	55.2% (625983/1133495)	58.4% (1118226/1914176)	52.6% (356240/676913)

ACC=American College of Cardiology, AHA=American Heart Association; JNC7= Seventh Joint National Committee (JNC7); ASCVD= atherosclerotic cardiovascular disease; CVD= cardiovascular disease; SD=standard deviation; Q=quartile; min=minimum; max=maximum; TIA=transient ischemic attack; MI=myocardial infarction; PCI=percutaneous coronary intervention; CABG=coronary artery bypass graft; US=United States, N=number.