placeholder

Byron C. Jaeger, PhD,1

1Department of Biostatistics and Data Science, Wake Forest School of Medicine, Winston-Salem, NC.

Table 1. Characteristics of US adults by blood pressure levels and antihypertensive medication use based on the 2013-2020 National Health and Nutrition Examination Survey.

|  | **SBP/DBP categories in mm Hg among US adults not taking antihypertensive medication\*** | | | | **Taking antihypertensive medication (n = 2,579)** |
| --- | --- | --- | --- | --- | --- |
|  | **<120/80 (n = 3,528)** | **120-129/<80 (n = 1,321)** | **130-139/80-89 (n = 1,536)** | **≥140/90 (n = 1,104)** |
| % (95% CI) of US population | 38.8 (37.4, 40.3) | 13.8 (12.7, 15.0) | 14.9 (13.8, 16.1) | 9.61 (8.68, 10.6) | 22.9 (21.6, 24.2) |
| Characteristics† | | | | | |
| Age, years | 45.0 (44.3, 45.7) | 50.1 (49.3, 50.9) | 50.2 (49.3, 51.0) | 54.8 (54.0, 55.6) | 59.5 (58.9, 60.1) |
| Male gender, % | 42.7 | 60.2 | 57.7 | 61.2 | 45.6 |
| Race/ethnicity, % | | | | | |
| Non-Hispanic White | 66.5 | 65.9 | 65.2 | 61.6 | 68.5 |
| Non-Hispanic Black | 6.59 | 8.12 | 10.1 | 12.9 | 12.7 |
| Non-Hispanic Asian | 6.73 | 4.90 | 6.33 | 6.25 | 5.25 |
| Hispanic | 16.7 | 18.1 | 15.6 | 15.4 | 10.6 |
| Other | 3.52 | 3.01 | 2.75 | 3.83 | 2.94 |
| Cigarette smoking, % | 16.7 | 18.3 | 17.8 | 19.7 | 16.5 |
| Total cholesterol, mg/dL | 194 (193, 196) | 200 (197, 203) | 204 (201, 207) | 209 (206, 213) | 195 (193, 197) |
| HDL cholesterol, mg/dL | 55.9 (55.1, 56.7) | 53.4 (52.2, 54.5) | 53.8 (52.7, 54.9) | 54.0 (52.5, 55.5) | 52.9 (52.1, 53.6) |
| Non-HDL cholesterol, mg/dL | 138 (137, 140) | 146 (144, 149) | 150 (147, 153) | 155 (152, 159) | 142 (140, 144) |
| Statin use, % | 7.68 | 11.0 | 10.4 | 11.0 | 39.5 |
| HbA1c, % | 5.42 (5.39, 5.45) | 5.62 (5.55, 5.68) | 5.69 (5.62, 5.77) | 5.75 (5.66, 5.83) | 5.97 (5.91, 6.02) |
| Diabetes, % | 3.90 | 7.23 | 8.16 | 10.4 | 23.6 |
| eGFR, ml/min/1.73 m2 | 99.1 (98.1, 100) | 95.3 (94.2, 96.4) | 95.8 (94.6, 97.0) | 92.4 (90.8, 93.9) | 86.0 (85.0, 87.0) |
| eGFR < 60 ml/min/1.73 m2, % | 1.28 | 1.90 | 1.26 | 4.46 | 10.5 |
| Albumin-to-creatinine ratio, mg/g | 12.1 (10.4, 13.8) | 13.0 (8.80, 17.3) | 22.7 (16.2, 29.2) | 43.7 (29.2, 58.2) | 44.0 (29.2, 58.9) |
| Albumin-to-creatinine ratio > 30 mg/g | 4.76 | 4.54 | 7.92 | 13.2 | 13.1 |
| Systolic blood pressure, mm Hg | 110 (110, 110) | 124 (124, 125) | 129 (129, 130) | 149 (148, 150) | 131 (130, 132) |
| Diastolic blood pressure, mm Hg | 67.2 (66.8, 67.6) | 71.2 (70.7, 71.6) | 79.4 (78.9, 80.0) | 84.1 (82.9, 85.2) | 73.1 (72.5, 73.8) |
| †Population characteristics in the table are percentage or mean (95% confidence interval). | | | | | |
| \*US adults were grouped into the higher category of systolic and diastolic blood pressure. For example, if a person had systolic blood pressure of 146 mm Hg and diastolic blood pressure of 82 mm Hg, they were grouped into the ≥140/90 mm Hg category. | | | | | |
| ACR – albumin to creatinine ratio; DBP – diastolic blood pressure; eGFR – estimated glomerular filtration rate. HDL – high density lipoprotein; SBP – systolic blood pressure | | | | | |

Table 2. Distribution of 10-year predicted risk by blood pressure levels and antihypertensive medication use based on the 2013-2020 National Health and Nutrition Examination Survey.

|  | **SBP/DBP categories in mm Hg among US adults not taking antihypertensive medication** | | | | **Taking antihypertensive medication** |
| --- | --- | --- | --- | --- | --- |
| **Distribution characteristic** | **<120/80** | **120-129/<80** | **130-139/80-89** | **≥140/90** |
| Pooled cohort equations - ASCVD | | | | | |
| Mean (95% CI) | 2.55 (2.31, 2.78) | 5.48 (4.99, 5.97) | 5.73 (5.20, 6.26) | 10.5 (9.76, 11.3) | 13.8 (13.1, 14.4) |
| <5% | 85.3 | 64.4 | 62.7 | 35.0 | 26.8 |
| 5% to <10% | 9.60 | 18.8 | 20.5 | 25.6 | 22.3 |
| 10% to <15% | 3.18 | 6.58 | 8.25 | 14.6 | 16.0 |
| ≥ 15% | 1.97 | 10.2 | 8.63 | 24.7 | 34.8 |
| PREVENT base equation - ASCVD | | | | | |
| Mean (95% CI) | 1.50 (1.39, 1.61) | 2.91 (2.69, 3.12) | 3.01 (2.80, 3.23) | 5.42 (5.11, 5.73) | 6.68 (6.42, 6.93) |
| <5% | 94.9 | 82.1 | 83.0 | 56.5 | 44.0 |
| 5% to <10% | 4.14 | 15.1 | 13.2 | 29.7 | 35.1 |
| 10% to <15% | 0.93 | 2.37 | 3.36 | 10.7 | 15.0 |
| ≥ 15% | 0.06 | 0.46 | 0.39 | 3.12 | 5.82 |
| PREVENT base equation - Total CVD | | | | | |
| Mean (95% CI) | 2.37 (2.18, 2.55) | 4.50 (4.16, 4.83) | 4.65 (4.30, 5.00) | 8.42 (7.92, 8.92) | 11.5 (11.0, 11.9) |
| <5% | 87.4 | 69.2 | 67.7 | 37.1 | 24.4 |
| 5% to <10% | 9.04 | 17.6 | 21.5 | 31.3 | 26.0 |
| 10% to <15% | 1.95 | 9.35 | 6.96 | 15.8 | 21.0 |
| ≥ 15% | 1.62 | 3.88 | 3.81 | 15.8 | 28.6 |

Table 3. Cross-categorization of 10-year predicted risk by the PREVENT and pooled cohort equations based on the 2013-2020 National Health and Nutrition Examination Survey.

|  | | **SBP/DBP categories in mm Hg among US adults not taking antihypertensive medication** | | | | **Taking antihypertensive medication** |
| --- | --- | --- | --- | --- | --- | --- |
| **PCE** | **PREVENT** | **<120/80** | **120-129/<80** | **130-139/80-89** | **≥140/90** |
| PREVENT base equation - ASCVD | | | | | | |
| < 10% | < 10% | 94.8 | 83.2 | 83.1 | 60.2 | 49.1 |
| < 10% | ≥ 10% | 0.02 | 0.00 | 0.00 | 0.43 | 0.04 |
| ≥ 10% | < 10% | 4.18 | 13.9 | 13.1 | 26.0 | 30.1 |
| ≥ 10% | ≥ 10% | 0.97 | 2.83 | 3.74 | 13.3 | 20.8 |
| PREVENT base equation - Total CVD | | | | | | |
| < 10% | < 10% | 94.6 | 82.8 | 82.7 | 59.2 | 44.4 |
| < 10% | ≥ 10% | 0.22 | 0.46 | 0.45 | 1.45 | 4.77 |
| ≥ 10% | < 10% | 1.80 | 3.99 | 6.56 | 9.22 | 6.06 |
| ≥ 10% | ≥ 10% | 3.35 | 12.8 | 10.3 | 30.2 | 44.8 |
| < 10% | < 15% | 94.8 | 83.2 | 83.1 | 60.2 | 48.8 |
| < 10% | ≥ 15% | 0.04 | 0.00 | 0.00 | 0.43 | 0.31 |
| ≥ 10% | < 15% | 3.56 | 12.9 | 13.1 | 24.0 | 22.6 |
| ≥ 10% | ≥ 15% | 1.59 | 3.88 | 3.81 | 15.4 | 28.3 |

Table 4. Mean 30-year predicted total cardiovascular disease risk estimated by the PREVENT equations within level of predicted atherosclerotic and total cardiovascular disease 10-year risk categories by blood pressure category among adults 30 to <60 years of age.

|  | | **SBP/DBP categories in mm Hg among US adults not taking antihypertensive medication** | | | | **Taking antihypertensive medication** |
| --- | --- | --- | --- | --- | --- | --- |
| **PCE** | **PREVENT** | **<120/80** | **120-129/<80** | **130-139/80-89** | **≥140/90** |
| PREVENT base equation - ASCVD | | | | | | |
| < 10% | < 10% | 9.27 (8.96, 9.59) | 14.0 (13.3, 14.7) | 15.7 (15.0, 16.3) | 21.7 (21.1, 22.3) | 22.8 (22.0, 23.6) |
| < 10% | ≥ 10% | 44.7 (44.7, 44.7) |  |  | 48.9 (46.1, 51.8) | 56.6 (55.3, 58.0) |
| ≥ 10% | < 10% | 27.2 (24.0, 30.3) | 34.0 (31.6, 36.4) | 32.8 (31.3, 34.2) | 37.4 (36.4, 38.4) | 38.4 (37.2, 39.7) |
| ≥ 10% | ≥ 10% | 45.6 (35.8, 55.4) | 46.6 (44.5, 48.7) | 50.3 (47.3, 53.2) | 53.4 (51.3, 55.4) | 54.7 (52.4, 57.1) |
| PREVENT base equation - Total CVD | | | | | | |
| < 10% | < 10% | 9.27 (8.95, 9.58) | 13.9 (13.2, 14.6) | 15.6 (15.0, 16.3) | 21.6 (21.0, 22.2) | 21.8 (21.0, 22.6) |
| < 10% | ≥ 10% | 41.1 (38.2, 44.1) | 40.2 (40.2, 40.3) | 38.3 (36.3, 40.4) | 47.6 (45.4, 49.9) | 43.9 (42.1, 45.7) |
| ≥ 10% | < 10% | 26.8 (23.7, 29.9) | 30.5 (29.7, 31.3) | 31.1 (29.9, 32.4) | 34.3 (33.1, 35.5) | 33.5 (32.6, 34.4) |
| ≥ 10% | ≥ 10% | 42.1 (36.3, 47.8) | 39.9 (36.2, 43.5) | 43.2 (39.6, 46.7) | 45.3 (43.4, 47.3) | 45.4 (43.9, 46.9) |
| < 10% | < 15% | 9.27 (8.95, 9.58) | 14.0 (13.3, 14.7) | 15.7 (15.0, 16.3) | 21.7 (21.1, 22.3) | 22.7 (21.9, 23.6) |
| < 10% | ≥ 15% | 41.1 (38.2, 44.1) |  |  | 48.9 (46.1, 51.8) | 45.1 (36.0, 54.3) |
| ≥ 10% | < 15% | 27.5 (23.9, 31.2) | 34.0 (31.6, 36.4) | 34.8 (31.7, 37.9) | 37.4 (36.4, 38.5) | 37.9 (36.5, 39.3) |
| ≥ 10% | ≥ 15% | 56.9 (56.9, 56.9) | 46.6 (44.5, 48.7) | 50.4 (42.1, 58.7) | 53.5 (51.4, 55.6) | 52.2 (49.9, 54.6) |

Table 5: Prevalence ratios for 10-year total cardiovascular disease risk ≥ 15% on the PREVENT base equation among US adults with 10-year atherosclerotic cardiovascular disease risk ≥ 10% by the Pooled Cohort equations and systolic blood pressure of 130-139 mm Hg or diastolic blood pressure of 80-89 mm Hg.

|  | | | **Prevalence ratio (95% CI)†** | |
| --- | --- | --- | --- | --- |
| **Characteristic‡** | **PCE ≥ 10% Prevent <15%** | **PCE ≥ 10% Prevent ≥15%** | **Unadjusted** | **Adjusted§** |
| Age, years | 62.6 (61.3, 63.8) | 73.4 (72.0, 74.9) | 2.44 (1.90 3.14) | 2.58 (2.04 3.26) |
| Men | 77.3 | 74.4 | 0.88 (0.50 1.56) | 1.93 (1.10 3.39) |
| Race/ethnicity, % | | | | |
| Non-Hispanic White | 70.8 | 64.8 | 1 (ref) | 1 (ref) |
| Non-Hispanic Black | 9.95 | 9.03 | 0.99 (0.44 2.23) | 1.53 (0.81 2.89) |
| Non-Hispanic Asian | 5.32 | 4.82 | 0.99 (0.40 2.44) | 1.69 (0.96 2.99) |
| Hispanic | 13.1 | 13.8 | 1.12 (0.60 2.06) | 2.28 (1.38 3.77) |
| Other | 0.80 | 7.55 | 3.48 (1.77 6.84) | 2.21 (1.37 3.57) |
| Cigarette smoking, % | 26.8 | 19.5 | 0.72 (0.38 1.36) | 3.03 (1.79 5.13) |
| Total cholesterol, mg/dL | 209 (203, 215) | 196 (189, 204) | 0.75 (0.59 0.95) | 0.85 (0.62 1.16) |
| HDL cholesterol, mg/dL | 50.7 (48.2, 53.2) | 50.5 (46.8, 54.3) | 0.99 (0.70 1.39) | 0.46 (0.34 0.61) |
| Non-HDL cholesterol, mg/dL | 159 (152, 165) | 146 (136, 155) | 0.88 (0.78 0.99) | 1.04 (0.90 1.20) |
| Statin use, % | 16.8 | 16.5 | 0.98 (0.52 1.85) | 0.71 (0.43 1.15) |
| HbA1c, % | 6.05 (5.76, 6.35) | 6.47 (6.03, 6.91) | 1.10 (0.99 1.24) | 1.44 (1.30 1.60) |
| Diabetes, % | 17.9 | 40.6 | 2.28 (1.23 4.23) | 2.62 (1.80 3.80) |
| eGFR, ml/min/1.73 m2 | 86.3 (83.5, 89.1) | 79.0 (75.3, 82.7) | 0.87 (0.80 0.94) | 0.98 (0.90 1.07) |
| eGFR < 60 ml/min/1.73 m2, % | 1.33 | 9.92 | 3.26 (2.02 5.26) | 1.65 (1.11 2.45) |
| ACR, log mg/g | 2.30 (2.00, 2.60) | 2.55 (2.24, 2.86) | 1.14 (0.90 1.46) | 1.20 (0.94 1.54) |
| ACR ≥ 30 mg/g | 11.3 | 11.6 | 1.02 (0.42 2.44) | 1.04 (0.60 1.81) |
| SBP, mm Hg | 132 (131, 133) | 134 (133, 135) | 1.92 (1.11 3.31) | 1.15 (0.68 1.94) |
| DBP, mm Hg | 75.4 (73.8, 77.0) | 70.7 (67.4, 74.0) | 0.86 (0.77 0.96) | 1.04 (0.93 1.16) |
| †Prevalence ratios for continuous variables are per 5 years of age, per 40 mg/dL of total cholesterol, 20 mg/dL of HDL cholesterol, 20 mg/dL of non-HDL cholesterol, per 5 ml/min/1.73 m2 of estimated glomerular filtration rate, per 1 log mg/g of albumin-to-creatinine ratio, 10 mm Hg of systolic blood pressure, 5 mm Hg of diastolic blood pressure. | | | | |
| ‡Population characteristics in the table are percentage or mean (95% confidence interval). | | | | |
| §Adjusted for age and sex. | | | | |
| ACR – albumin to creatinine ratio; DBP – diastolic blood pressure; eGFR – estimated glomerular filtration rate. HDL – high density lipoprotein; SBP – systolic blood pressure | | | | |

Figure 1: Cross-categorization of 10-year atherosclerotic cardiovascular disease risk, 10-year total cardiovascular disease risk, and 30-year total cardiovascular disease risk.

| **PCEs** | **%** | **PREVENT 10-year CVD** | **%** | **PREVENT 30-year CVD** | **%** |
| --- | --- | --- | --- | --- | --- |
| <120/80 | | | | | |
| < 10% | 94.8 | < 15% | 94.8 | < 30% | 94.0 |
| ≥ 30% | 0.83 |
| ≥ 15% | 0.04 | < 30% | 0.00 |
| ≥ 30% | 0.04 |
| ≥ 10% | 5.2 | < 15% | 3.6 | < 30% | 1.69 |
| ≥ 30% | 1.87 |
| ≥ 15% | 1.59 | < 30% | 0.14 |
| ≥ 30% | 1.45 |
| 120-129/<80 | | | | | |
| < 10% | 83.2 | < 15% | 83.2 | < 30% | 80.5 |
| ≥ 30% | 2.7 |
| ≥ 15% | 0.00 | < 30% | 0.00 |
| ≥ 30% |
| ≥ 10% | 16.8 | < 15% | 12.9 | < 30% | 2.3 |
| ≥ 30% | 10.5 |
| ≥ 15% | 3.9 | < 30% | 0.00 |
| ≥ 30% | 3.9 |
| 130-139/80-89 | | | | | |
| < 10% | 83.1 | < 15% | 83.1 | < 30% | 79.2 |
| ≥ 30% | 3.9 |
| ≥ 15% | 0.00 | < 30% | 0.00 |
| ≥ 30% |
| ≥ 10% | 16.9 | < 15% | 13.1 | < 30% | 3.8 |
| ≥ 30% | 9.3 |
| ≥ 15% | 3.8 | < 30% | 0.03 |
| ≥ 30% | 3.8 |
| ≥140/90 | | | | | |
| < 10% | 60.6 | < 15% | 60.2 | < 30% | 50.8 |
| ≥ 30% | 9.4 |
| ≥ 15% | 0.43 | < 30% | 0.00 |
| ≥ 30% | 0.43 |
| ≥ 10% | 39.4 | < 15% | 24.0 | < 30% | 2.0 |
| ≥ 30% | 22.0 |
| ≥ 15% | 15.4 | < 30% | 0.26 |
| ≥ 30% | 15.1 |
| Taking antihypertensive medication | | | | | |
| < 10% | 49.1 | < 15% | 48.8 | < 30% | 32.9 |
| ≥ 30% | 15.9 |
| ≥ 15% | 0.31 | < 30% | 0.00 |
| ≥ 30% | 0.31 |
| ≥ 10% | 50.9 | < 15% | 22.6 | < 30% | 1.25 |
| ≥ 30% | 21.3 |
| ≥ 15% | 28.3 | < 30% | 0.00 |
| ≥ 30% | 28.3 |

**SUPPLEMENT**

Supplemental Figure 1: Participant cascade

| **Inclusion criteria** | **Total** | **2013-2014** | **2015-2016** | **2017-2020** |
| --- | --- | --- | --- | --- |
| NHANES participants from 2013-2020 | 35,706 | 10,175 | 9,971 | 15,560 |
| Completed the interview and examination | 33,657 | 9,813 | 9,544 | 14,300 |
| Age 30-79 years | 15,235 | 4,337 | 4,200 | 6,698 |
| No history of CVD | 13,582 | 3,922 | 3,756 | 5,904 |
| Have information on SBP and DBP | 12,758 | 3,789 | 3,643 | 5,326 |
| Have information on self-reported antihypertensive medication use | 12,743 | 3,785 | 3,639 | 5,319 |
| Have information on other variables in the PCEs and PREVENT equations | 11,948 | 3,581 | 3,423 | 4,944 |
| All variables in range for PREVENT equations | 10,068 | 3,084 | 2,889 | 4,095 |

Supplemental Table 1: Distribution of 10-year predicted risk by blood pressure levels and antihypertensive medication use based on the 2013-2020 National Health and Nutrition Examination Survey.

|  | **SBP/DBP categories in mm Hg among US adults not taking antihypertensive medication** | | | | **Taking antihypertensive medication** |
| --- | --- | --- | --- | --- | --- |
| **Distribution characteristic** | **<120/80** | **120-129/<80** | **130-139/80-89** | **≥140/90** |
| Pooled cohort equations - ASCVD | | | | | |
| Mean (95% CI) | 2.55 (2.31, 2.78) | 5.48 (4.99, 5.97) | 5.73 (5.20, 6.26) | 10.5 (9.76, 11.3) | 13.8 (13.1, 14.4) |
| <5% | 85.3 | 64.4 | 62.7 | 35.0 | 26.8 |
| 5% to <10% | 9.60 | 18.8 | 20.5 | 25.6 | 22.3 |
| 10% to <15% | 3.18 | 6.58 | 8.25 | 14.6 | 16.0 |
| ≥ 15% | 1.97 | 10.2 | 8.63 | 24.7 | 34.8 |
| PREVENT full equation - ASCVD\* | | | | | |
| Mean (95% CI) | 1.35 (1.25, 1.45) | 2.65 (2.45, 2.84) | 2.85 (2.63, 3.07) | 5.11 (4.75, 5.46) | 6.06 (5.81, 6.31) |
| <5% | 95.9 | 84.8 | 84.5 | 60.5 | 50.8 |
| 5% to <10% | 3.38 | 12.4 | 12.4 | 27.7 | 32.7 |
| 10% to <15% | 0.71 | 2.61 | 2.19 | 8.92 | 12.0 |
| ≥ 15% | 0.03 | 0.20 | 0.96 | 2.82 | 4.55 |
| PREVENT full equation - Total CVD\* | | | | | |
| Mean (95% CI) | 2.25 (2.08, 2.42) | 4.26 (3.94, 4.57) | 4.59 (4.23, 4.95) | 8.27 (7.66, 8.87) | 11.2 (10.7, 11.6) |
| <5% | 88.8 | 72.6 | 71.1 | 41.0 | 26.5 |
| 5% to <10% | 7.59 | 16.1 | 18.0 | 30.6 | 27.9 |
| 10% to <15% | 2.41 | 6.85 | 6.44 | 14.1 | 18.7 |
| ≥ 15% | 1.20 | 4.39 | 4.39 | 14.3 | 26.9 |
| \*Incorporates information on glycated hemoglobin and albumin-to-creatinine ratio | | | | | |

Supplemental Table 2: Cross-categorization of 10-year predicted risk by the pooled cohort equations and PREVENT equations after excluding people age ≥65 years, with diabetes or chronic kidney disease (ACR > 30 mg/g or eGFR < 60 ml/min/1.73 m2).

|  | | **SBP/DBP categories in mm Hg among US adults not taking antihypertensive medication** | | | | **Taking antihypertensive medication** |
| --- | --- | --- | --- | --- | --- | --- |
| **PCE** | **PREVENT** | **<120/80** | **120-129/<80** | **130-139/80-89** | **≥140/90** |
| PREVENT base equation - ASCVD | | | | | | |
| < 10% | < 10% | 99.0 | 94.9 | 93.7 | 78.6 | 81.5 |
| < 10% | ≥ 10% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ≥ 10% | < 10% | 0.95 | 5.13 | 6.31 | 20.5 | 18.2 |
| ≥ 10% | ≥ 10% | 0.00 | 0.00 | 0.03 | 0.86 | 0.24 |
| PREVENT base equation - Total CVD | | | | | | |
| < 10% | < 10% | 99.0 | 94.9 | 93.7 | 78.2 | 80.7 |
| < 10% | ≥ 10% | 0.06 | 0.00 | 0.00 | 0.43 | 0.83 |
| ≥ 10% | < 10% | 0.93 | 3.81 | 5.10 | 12.3 | 8.03 |
| ≥ 10% | ≥ 10% | 0.02 | 1.33 | 1.23 | 9.06 | 10.4 |
| < 10% | < 15% | 99.0 | 94.9 | 93.7 | 78.6 | 81.5 |
| < 10% | ≥ 15% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ≥ 10% | < 15% | 0.95 | 5.13 | 6.33 | 20.5 | 17.8 |
| ≥ 10% | ≥ 15% | 0.00 | 0.00 | 0.00 | 0.93 | 0.69 |

Supplemental Table 3: Cross-categorization of 10-year predicted risk by the pooled cohort equations and PREVENT equations among US adults < 60 years of age and ≥ 60 years of age.

|  | | **SBP/DBP categories in mm Hg among US adults not taking antihypertensive medication** | | | | **Taking antihypertensive medication** |
| --- | --- | --- | --- | --- | --- | --- |
| **PCE** | **PREVENT** | **<120/80** | **120-129/<80** | **130-139/80-89** | **≥140/90** |
| PREVENT base equation - ASCVD; Age < 60 years | | | | | | |
| < 10% | < 10% | 99.0 | 95.8 | 95.0 | 81.9 | 80.9 |
| < 10% | ≥ 10% | 0.01 | 0.00 | 0.00 | 0.65 | 0.07 |
| ≥ 10% | < 10% | 0.94 | 4.06 | 4.28 | 14.9 | 16.4 |
| ≥ 10% | ≥ 10% | 0.04 | 0.16 | 0.69 | 2.57 | 2.63 |
| PREVENT base equation - ASCVD; Age ≥ 60 years | | | | | | |
| < 10% | < 10% | 66.3 | 46.8 | 41.1 | 19.1 | 22.3 |
| < 10% | ≥ 10% | 0.09 | 0.00 | 0.00 | 0.00 | 0.02 |
| ≥ 10% | < 10% | 26.3 | 42.7 | 44.4 | 47.1 | 41.6 |
| ≥ 10% | ≥ 10% | 7.34 | 10.6 | 14.5 | 33.7 | 36.1 |
| PREVENT base equation - Total CVD; Age < 60 years | | | | | | |
| < 10% | < 10% | 99.0 | 95.6 | 94.9 | 81.6 | 77.2 |
| < 10% | ≥ 10% | 0.02 | 0.22 | 0.14 | 1.00 | 3.78 |
| ≥ 10% | < 10% | 0.91 | 2.44 | 3.29 | 8.83 | 7.57 |
| ≥ 10% | ≥ 10% | 0.07 | 1.78 | 1.69 | 8.59 | 11.4 |
| PREVENT base equation - Total CVD; Age ≥ 60 years | | | | | | |
| < 10% | < 10% | 64.8 | 45.6 | 39.6 | 16.8 | 16.7 |
| < 10% | ≥ 10% | 1.57 | 1.16 | 1.53 | 2.30 | 5.60 |
| ≥ 10% | < 10% | 7.87 | 8.50 | 18.1 | 9.94 | 4.80 |
| ≥ 10% | ≥ 10% | 25.8 | 44.7 | 40.8 | 70.9 | 72.9 |
| PREVENT base equation - Total CVD; Age < 60 years | | | | | | |
| < 10% | < 15% | 99.0 | 95.8 | 95.0 | 81.9 | 80.6 |
| < 10% | ≥ 15% | 0.02 | 0.00 | 0.00 | 0.65 | 0.41 |
| ≥ 10% | < 15% | 0.96 | 4.06 | 4.86 | 14.9 | 15.3 |
| ≥ 10% | ≥ 15% | 0.01 | 0.16 | 0.12 | 2.50 | 3.66 |
| PREVENT base equation - Total CVD; Age ≥ 60 years | | | | | | |
| < 10% | < 15% | 66.2 | 46.8 | 41.1 | 19.1 | 22.0 |
| < 10% | ≥ 15% | 0.13 | 0.00 | 0.00 | 0.00 | 0.23 |
| ≥ 10% | < 15% | 21.3 | 38.5 | 42.1 | 41.1 | 28.7 |
| ≥ 10% | ≥ 15% | 12.3 | 14.7 | 16.8 | 39.7 | 49.0 |

Supplemental Table 4. Prevalence ratios for 10-year total cardiovascular disease risk ≥ 15% on the PREVENT base equation among US adults with 10-year atherosclerotic cardiovascular disease risk ≥ 10% by the Pooled Cohort equations and systolic blood pressure of < 120 mm Hg and diastolic blood pressure < 80 mm Hg.

|  | | | **Prevalence ratio (95% CI)†** | |
| --- | --- | --- | --- | --- |
| **Characteristic‡** | **PCE ≥ 10% Prevent <15%** | **PCE ≥ 10% Prevent ≥15%** | **Unadjusted** | **Adjusted§** |
| Age, years | 64.5 (61.7, 67.3) | 73.2 (71.9, 74.4) | 2.21 (1.80 2.71) | 2.37 (1.89 2.96) |
| Men | 82.9 | 79.4 | 0.85 (0.43 1.72) | 1.74 (0.95 3.19) |
| Race/ethnicity, % | | | | |
| Non-Hispanic White | 75.8 | 84.3 | 1 (ref) | 1 (ref) |
| Non-Hispanic Black | 3.26 | 2.36 | 0.74 (0.30 1.81) | 1.02 (0.41 2.54) |
| Non-Hispanic Asian | 5.93 | 5.65 | 0.90 (0.50 1.64) | 1.55 (1.01 2.39) |
| Hispanic | 12.4 | 6.58 | 0.58 (0.36 0.92) | 0.88 (0.60 1.29) |
| Other | 2.62 | 1.13 | 0.49 (0.06 3.70) | 2.44 (0.26 23.0) |
| Cigarette smoking, % | 31.6 | 29.6 | 0.94 (0.49 1.82) | 2.73 (1.70 4.40) |
| Total cholesterol, mg/dL | 202 (193, 211) | 184 (174, 193) | 0.64 (0.46 0.89) | 0.78 (0.57 1.07) |
| HDL cholesterol, mg/dL | 50.7 (45.0, 56.5) | 48.7 (43.6, 53.8) | 0.88 (0.48 1.63) | 0.49 (0.31 0.77) |
| Non-HDL cholesterol, mg/dL | 151 (138, 164) | 135 (123, 148) | 0.87 (0.73 1.03) | 1.02 (0.88 1.18) |
| Statin use, % | 31.5 | 35.3 | 1.12 (0.53 2.40) | 0.94 (0.51 1.72) |
| HbA1c, % | 5.94 (5.67, 6.20) | 5.96 (5.75, 6.17) | 1.01 (0.85 1.21) | 1.33 (1.14 1.54) |
| Diabetes, % | 19.3 | 31.6 | 1.54 (0.88 2.70) | 1.90 (1.30 2.76) |
| eGFR, ml/min/1.73 m2 | 88.2 (85.5, 90.9) | 76.5 (71.8, 81.3) | 0.85 (0.81 0.90) | 0.93 (0.87 1.00) |
| eGFR < 60 ml/min/1.73 m2, % | 2.34 | 17.7 | 2.82 (1.83 4.36) | 1.62 (1.08 2.43) |
| ACR, log mg/g | 1.90 (1.64, 2.15) | 2.02 (1.74, 2.29) | 1.12 (0.82 1.52) | 1.11 (0.82 1.51) |
| ACR ≥ 30 mg/g | 8.02 | 11.4 | 1.29 (0.44 3.72) | 1.63 (0.81 3.27) |
| SBP, mm Hg | 113 (112, 114) | 111 (109, 114) | 0.70 (0.48 1.02) | 0.90 (0.57 1.41) |
| DBP, mm Hg | 66.0 (64.5, 67.6) | 63.5 (62.0, 65.0) | 0.85 (0.74 0.98) | 0.98 (0.86 1.11) |
| †Prevalence ratios for continuous variables are per 5 years of age, per 40 mg/dL of total cholesterol, 20 mg/dL of HDL cholesterol, 20 mg/dL of non-HDL cholesterol, per 5 ml/min/1.73 m2 of estimated glomerular filtration rate, per 1 log mg/g of albumin-to-creatinine ratio, 10 mm Hg of systolic blood pressure, 5 mm Hg of diastolic blood pressure. | | | | |
| ‡Population characteristics in the table are percentage or mean (95% confidence interval). | | | | |
| §Adjusted for age and sex. | | | | |
| ACR – albumin to creatinine ratio; DBP – diastolic blood pressure; eGFR – estimated glomerular filtration rate. HDL – high density lipoprotein; SBP – systolic blood pressure | | | | |

Supplemental Table 5. Prevalence ratios for 10-year total cardiovascular disease risk ≥ 15% on the PREVENT base equation among US adults with 10-year atherosclerotic cardiovascular disease risk ≥ 10% by the Pooled Cohort equations and systolic blood pressure of 120 to 129 mm Hg and diastolic blood pressure < 80 mm Hg.

|  | | | **Prevalence ratio (95% CI)†** | |
| --- | --- | --- | --- | --- |
| **Characteristic‡** | **PCE ≥ 10% Prevent <15%** | **PCE ≥ 10% Prevent ≥15%** | **Unadjusted** | **Adjusted§** |
| Age, years | 65.1 (63.9, 66.4) | 72.6 (70.8, 74.4) | 2.03 (1.60 2.57) | 2.39 (1.80 3.17) |
| Men | 77.0 | 71.7 | 0.81 (0.43 1.54) | 2.29 (1.38 3.79) |
| Race/ethnicity, % | | | | |
| Non-Hispanic White | 73.2 | 82.4 | 1 (ref) | 1 (ref) |
| Non-Hispanic Black | 6.44 | 3.06 | 0.49 (0.19 1.32) | 0.89 (0.40 1.98) |
| Non-Hispanic Asian | 5.37 | 2.15 | 0.43 (0.14 1.27) | 0.43 (0.17 1.11) |
| Hispanic | 9.79 | 9.74 | 0.91 (0.50 1.65) | 1.49 (0.82 2.71) |
| Other | 5.15 | 2.64 | 0.53 (0.12 2.35) | 1.05 (0.26 4.25) |
| Cigarette smoking, % | 28.1 | 25.4 | 0.90 (0.46 1.77) | 3.33 (2.00 5.54) |
| Total cholesterol, mg/dL | 209 (201, 217) | 194 (179, 209) | 0.72 (0.46 1.12) | 0.90 (0.61 1.32) |
| HDL cholesterol, mg/dL | 49.5 (46.6, 52.4) | 47.5 (44.2, 50.9) | 0.85 (0.59 1.22) | 0.42 (0.30 0.60) |
| Non-HDL cholesterol, mg/dL | 159 (151, 168) | 146 (131, 162) | 0.88 (0.72 1.08) | 1.03 (0.87 1.23) |
| Statin use, % | 20.8 | 38.3 | 1.88 (1.18 3.00) | 1.41 (0.87 2.30) |
| HbA1c, % | 6.01 (5.75, 6.27) | 6.23 (5.81, 6.64) | 1.11 (0.88 1.40) | 1.51 (1.26 1.80) |
| Diabetes, % | 17.3 | 35.9 | 2.03 (1.04 3.95) | 4.01 (2.05 7.84) |
| eGFR, ml/min/1.73 m2 | 86.0 (82.8, 89.1) | 76.3 (70.9, 81.7) | 0.87 (0.80 0.94) | 0.96 (0.86 1.08) |
| eGFR < 60 ml/min/1.73 m2, % | 2.28 | 16.5 | 3.35 (1.89 5.93) | 1.67 (0.80 3.48) |
| ACR, log mg/g | 2.05 (1.80, 2.30) | 2.14 (1.94, 2.34) | 1.08 (0.81 1.46) | 1.08 (0.89 1.32) |
| ACR ≥ 30 mg/g | 5.91 | 8.33 | 1.31 (0.47 3.70) | 1.17 (0.59 2.34) |
| SBP, mm Hg | 125 (125, 126) | 126 (125, 127) | 2.85 (0.86 9.44) | 2.69 (1.16 6.24) |
| DBP, mm Hg | 68.5 (67.3, 69.7) | 65.4 (63.4, 67.4) | 0.80 (0.70 0.92) | 0.96 (0.83 1.10) |
| †Prevalence ratios for continuous variables are per 5 years of age, per 40 mg/dL of total cholesterol, 20 mg/dL of HDL cholesterol, 20 mg/dL of non-HDL cholesterol, per 5 ml/min/1.73 m2 of estimated glomerular filtration rate, per 1 log mg/g of albumin-to-creatinine ratio, 10 mm Hg of systolic blood pressure, 5 mm Hg of diastolic blood pressure. | | | | |
| ‡Population characteristics in the table are percentage or mean (95% confidence interval). | | | | |
| §Adjusted for age and sex. | | | | |
| ACR – albumin to creatinine ratio; DBP – diastolic blood pressure; eGFR – estimated glomerular filtration rate. HDL – high density lipoprotein; SBP – systolic blood pressure | | | | |

Supplemental Table 6. Prevalence ratios for 10-year total cardiovascular disease risk ≥ 15% on the PREVENT base equation among US adults with 10-year atherosclerotic cardiovascular disease risk ≥ 10% by the Pooled Cohort equations and systolic blood pressure of ≥ 140 mm Hg or diastolic blood pressure ≥ 90 mm Hg.

|  | | | **Prevalence ratio (95% CI)†** | |
| --- | --- | --- | --- | --- |
| **Characteristic‡** | **PCE ≥ 10% Prevent <15%** | **PCE ≥ 10% Prevent ≥15%** | **Unadjusted** | **Adjusted§** |
| Age, years | 60.9 (59.5, 62.2) | 69.8 (68.5, 71.1) | 1.54 (1.42 1.68) | 1.55 (1.40 1.71) |
| Men | 74.8 | 56.6 | 0.62 (0.47 0.82) | 1.02 (0.78 1.34) |
| Race/ethnicity, % | | | | |
| Non-Hispanic White | 62.1 | 64.7 | 1 (ref) | 1 (ref) |
| Non-Hispanic Black | 16.2 | 10.3 | 0.72 (0.49 1.06) | 0.97 (0.69 1.39) |
| Non-Hispanic Asian | 4.46 | 8.19 | 1.35 (0.97 1.87) | 1.23 (0.93 1.62) |
| Hispanic | 13.6 | 12.5 | 0.93 (0.67 1.28) | 1.17 (0.88 1.55) |
| Other | 3.67 | 4.35 | 1.08 (0.43 2.69) | 1.21 (0.74 1.97) |
| Cigarette smoking, % | 26.9 | 23.0 | 0.88 (0.60 1.27) | 1.93 (1.47 2.52) |
| Total cholesterol, mg/dL | 216 (209, 223) | 202 (195, 210) | 0.80 (0.65 0.97) | 0.91 (0.77 1.07) |
| HDL cholesterol, mg/dL | 54.5 (52.0, 57.0) | 50.6 (47.8, 53.4) | 0.79 (0.63 1.00) | 0.51 (0.43 0.60) |
| Non-HDL cholesterol, mg/dL | 161 (154, 169) | 152 (144, 159) | 0.93 (0.84 1.02) | 1.04 (0.96 1.12) |
| Statin use, % | 14.2 | 17.4 | 1.15 (0.77 1.73) | 0.83 (0.60 1.16) |
| HbA1c, % | 5.80 (5.66, 5.95) | 6.42 (6.12, 6.71) | 1.20 (1.11 1.29) | 1.35 (1.25 1.46) |
| Diabetes, % | 9.68 | 36.9 | 2.30 (1.70 3.11) | 2.99 (2.35 3.80) |
| eGFR, ml/min/1.73 m2 | 89.3 (86.9, 91.7) | 77.5 (73.8, 81.3) | 0.90 (0.87 0.92) | 0.97 (0.94 1.01) |
| eGFR < 60 ml/min/1.73 m2, % | 1.67 | 18.2 | 2.52 (2.06 3.08) | 1.45 (1.17 1.80) |
| ACR, log mg/g | 2.26 (2.13, 2.39) | 2.97 (2.69, 3.25) | 1.25 (1.15 1.35) | 1.28 (1.16 1.41) |
| ACR ≥ 30 mg/g | 8.19 | 26.1 | 1.98 (1.48 2.63) | 2.03 (1.48 2.77) |
| SBP, mm Hg | 152 (150, 154) | 156 (154, 159) | 1.16 (1.05 1.28) | 1.18 (1.09 1.28) |
| DBP, mm Hg | 82.9 (81.0, 84.8) | 76.6 (74.1, 79.0) | 0.89 (0.85 0.94) | 0.99 (0.94 1.05) |
| †Prevalence ratios for continuous variables are per 5 years of age, per 40 mg/dL of total cholesterol, 20 mg/dL of HDL cholesterol, 20 mg/dL of non-HDL cholesterol, per 5 ml/min/1.73 m2 of estimated glomerular filtration rate, per 1 log mg/g of albumin-to-creatinine ratio, 10 mm Hg of systolic blood pressure, 5 mm Hg of diastolic blood pressure. | | | | |
| ‡Population characteristics in the table are percentage or mean (95% confidence interval). | | | | |
| §Adjusted for age and sex. | | | | |
| ACR – albumin to creatinine ratio; DBP – diastolic blood pressure; eGFR – estimated glomerular filtration rate. HDL – high density lipoprotein; SBP – systolic blood pressure | | | | |

Supplemental Table 7. Prevalence ratios for 10-year total cardiovascular disease risk ≥ 15% on the PREVENT base equation among US adults with 10-year atherosclerotic cardiovascular disease risk ≥ 10% by the Pooled Cohort equations and taking antihypertensive medication.

|  | | | **Prevalence ratio (95% CI)†** | |
| --- | --- | --- | --- | --- |
| **Characteristic‡** | **PCE ≥ 10% Prevent <15%** | **PCE ≥ 10% Prevent ≥15%** | **Unadjusted** | **Adjusted§** |
| Age, years | 61.9 (60.9, 63.0) | 70.3 (69.9, 70.8) | 1.43 (1.36 1.49) | 1.44 (1.38 1.51) |
| Men | 61.1 | 50.4 | 0.83 (0.70 0.98) | 1.13 (0.99 1.31) |
| Race/ethnicity, % | | | | |
| Non-Hispanic White | 68.1 | 68.3 | 1 (ref) | 1 (ref) |
| Non-Hispanic Black | 18.2 | 13.3 | 0.86 (0.75 0.98) | 1.15 (1.02 1.31) |
| Non-Hispanic Asian | 5.03 | 4.67 | 0.97 (0.77 1.22) | 1.02 (0.84 1.24) |
| Hispanic | 7.91 | 10.6 | 1.13 (0.99 1.28) | 1.26 (1.11 1.43) |
| Other | 0.80 | 3.11 | 1.49 (1.26 1.77) | 1.59 (1.30 1.96) |
| Cigarette smoking, % | 18.7 | 17.1 | 0.95 (0.79 1.15) | 1.59 (1.35 1.88) |
| Total cholesterol, mg/dL | 199 (194, 204) | 188 (185, 191) | 0.87 (0.80 0.94) | 0.92 (0.85 0.99) |
| HDL cholesterol, mg/dL | 52.9 (51.0, 54.7) | 51.3 (49.7, 53.0) | 0.94 (0.86 1.03) | 0.75 (0.70 0.81) |
| Non-HDL cholesterol, mg/dL | 146 (141, 151) | 137 (134, 140) | 0.94 (0.91 0.97) | 1.00 (0.97 1.04) |
| Statin use, % | 45.7 | 49.4 | 1.07 (0.95 1.20) | 0.99 (0.91 1.09) |
| HbA1c, % | 6.00 (5.86, 6.14) | 6.35 (6.25, 6.45) | 1.11 (1.05 1.17) | 1.23 (1.18 1.29) |
| Diabetes, % | 20.6 | 45.5 | 1.59 (1.39 1.82) | 2.03 (1.84 2.25) |
| eGFR, ml/min/1.73 m2 | 87.1 (85.2, 89.1) | 74.6 (72.9, 76.2) | 0.93 (0.91 0.94) | 0.97 (0.95 0.98) |
| eGFR < 60 ml/min/1.73 m2, % | 3.45 | 26.3 | 1.85 (1.68 2.05) | 1.42 (1.25 1.60) |
| ACR, log mg/g | 2.42 (2.29, 2.55) | 2.69 (2.60, 2.78) | 1.08 (1.03 1.13) | 1.08 (1.05 1.12) |
| ACR ≥ 30 mg/g | 15.0 | 20.4 | 1.17 (1.00 1.36) | 1.20 (1.07 1.35) |
| SBP, mm Hg | 135 (133, 137) | 137 (135, 140) | 1.03 (0.98 1.08) | 1.03 (0.99 1.07) |
| DBP, mm Hg | 73.8 (72.1, 75.5) | 69.2 (68.1, 70.3) | 0.94 (0.91 0.96) | 1.00 (0.97 1.02) |
| †Prevalence ratios for continuous variables are per 5 years of age, per 40 mg/dL of total cholesterol, 20 mg/dL of HDL cholesterol, 20 mg/dL of non-HDL cholesterol, per 5 ml/min/1.73 m2 of estimated glomerular filtration rate, per 1 log mg/g of albumin-to-creatinine ratio, 10 mm Hg of systolic blood pressure, 5 mm Hg of diastolic blood pressure. | | | | |
| ‡Population characteristics in the table are percentage or mean (95% confidence interval). | | | | |
| §Adjusted for age and sex. | | | | |
| ACR – albumin to creatinine ratio; DBP – diastolic blood pressure; eGFR – estimated glomerular filtration rate. HDL – high density lipoprotein; SBP – systolic blood pressure | | | | |