Flowchart

1. NHANES participants from 2013-2020 (n=)

2. Completed the interview and examination (n=)

3. Age 30 to 79 years of age (n=)

4. Exclude participants who self-report CVD including heart disease, myocardial infarction, stroke and heart failure (n=)

5. Have information on SBP, DBP and self-reported antihypertensive medication use (n=)

6. Have data available for the other variables in the pooled cohort risk equations and PREVENT equations (n=)

- PREVENT variables (age, sex, total cholesterol, HDL-cholesterol, cigarette smoking, diabetes, estimated glomerular filtration rate – 2021 non-race specific, statin use)\*

- Pooled cohort risk equation variables (race/ethnicity – the other variables are covered in PREVENT equations)

\* NOTE: We will not exclude those missing HbA1C or urinary albumin-to-creatinine ratio as the PREVENT equations have a coefficient for missing these variables.

Non-HDL cholesterol = total cholesterol minus non-HDL cholesterol

We will use calibrated blood pressure

FINAL SAMPLE SIZE (n=)

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 | | | |  |
|  | <120/80  (n=) | 120-129/<80  (n=) | 130-139/80-89  (n=) | ≥140/90  (n=) | Taking antihypertensive medication  (n=) |
| % (95% CI) of US population |  |  |  |  |  |
| Population characteristics† |  |  |  |  |  |
| Age, years |  |  |  |  |  |
| Male gender, % |  |  |  |  |  |
| Race/ethnicity, % |  |  |  |  |  |
| Non-Hispanic white |  |  |  |  |  |
| Non-Hispanic black |  |  |  |  |  |
| Non-Hispanic Asian |  |  |  |  |  |
| Hispanic |  |  |  |  |  |
| Cigarette smoking, % |  |  |  |  |  |
| Total cholesterol, mg/dL |  |  |  |  |  |
| HDL cholesterol, mg/dL |  |  |  |  |  |
| Non-HDL cholesterol, mg/dL |  |  |  |  |  |
| Statin use, % |  |  |  |  |  |
| HbA1c, % |  |  |  |  |  |
| Diabetes, % |  |  |  |  |  |
| eGFR, ml/min/1.73 m2 |  |  |  |  |  |
| eGFR < 60 ml/min/1.73 m2, % |  |  |  |  |  |
| Albumin-to-creatinine ratio, mg/g |  |  |  |  |  |
| Albumin-to-creatinine ratio > 30 mg/g |  |  |  |  |  |
| Systolic blood pressure, mm Hg |  |  |  |  |  |
| Diastolic blood pressure, mm Hg |  |  |  |  |  |

† 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.

SBP – systolic blood pressure; DBP – diastolic blood pressure; eGFR - estimated glomerular filtration rate.

Table 2. Ten-year predicted cardiovascular disease 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 | | | |  |
|  | <120/80 | 120-129/<80 | 130-139/80-89 | ≥140/90 | Taking antihypertensive medication |
| Mean (95% CI) 10-year predicted risk |  |  |  |  |  |
| ASCVD |  |  |  |  |  |
| PREVENT base equation |  |  |  |  |  |
| PREVENT+HbA1c equation |  |  |  |  |  |
| PREVENT+ACR equation |  |  |  |  |  |
| Pooled cohort equations |  |  |  |  |  |
| Total CVD |  |  |  |  |  |
| PREVENT base equation |  |  |  |  |  |
| PREVENT+HbA1c equation |  |  |  |  |  |
| PREVENT+ACR equation |  |  |  |  |  |
| 10-year risk ≥ 10%, % |  |  |  |  |  |
| ASCVD |  |  |  |  |  |
| PREVENT base equation |  |  |  |  |  |
| PREVENT+HbA1c equation |  |  |  |  |  |
| PREVENT+ACR equation |  |  |  |  |  |
| Pooled cohort equations |  |  |  |  |  |
| Total CVD |  |  |  |  |  |
| PREVENT base equation |  |  |  |  |  |
| PREVENT+HbA1c equation |  |  |  |  |  |
| PREVENT+ACR equation |  |  |  |  |  |
| 10-year risk ≥ 15%, % |  |  |  |  |  |
| Total CVD |  |  |  |  |  |
| PREVENT base equation |  |  |  |  |  |
| PREVENT+HbA1c equation |  |  |  |  |  |
| PREVENT+ACR equation |  |  |  |  |  |

Table 3. 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 | | | |  |
| 10-year risk categories, % | <120/80 | 120-129/<80 | 130-139/80-89 | ≥140/90 | Taking antihypertensive medication |
| PREVENT base equation – Total CVD |  |  |  |  |  |
| <5% |  |  |  |  |  |
| 5% to <10% |  |  |  |  |  |
| 10% to <15% |  |  |  |  |  |
| ≥ 15% |  |  |  |  |  |
| PREVENT base equation – ASCVD |  |  |  |  |  |
| <5% |  |  |  |  |  |
| 5% to <10% |  |  |  |  |  |
| 10% to <15% |  |  |  |  |  |
| ≥ 15% |  |  |  |  |  |
| Pooled cohort equations - ASCVD |  |  |  |  |  |
| <5% |  |  |  |  |  |
| 5% to <10% |  |  |  |  |  |
| 10% to <15% |  |  |  |  |  |
| ≥ 15% |  |  |  |  |  |

Table 4. 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 | | | |  |
|  | | <120/80 | 120-129/<80 | 130-139/80-89 | ≥140/90 | Taking antihypertensive medication |
| PREVENT base – total CVD | PCE |  |  |  |  |  |
| < 10% | < 10% |  |  |  |  |  |
| < 10% | ≥ 10% |  |  |  |  |  |
| ≥ 10% | < 10% |  |  |  |  |  |
| ≥ 10% | ≥ 10% |  |  |  |  |  |
| PREVENT base - ASCVD | PCE |  |  |  |  |  |
| < 10% | < 10% |  |  |  |  |  |
| < 10% | ≥ 10% |  |  |  |  |  |
| ≥ 10% | < 10% |  |  |  |  |  |
| ≥ 10% | ≥ 10% |  |  |  |  |  |
| PREVENT base – total CVD | PCE |  |  |  |  |  |
| < 15% | < 10% |  |  |  |  |  |
| < 15% | ≥ 10% |  |  |  |  |  |
| ≥ 15% | < 10% |  |  |  |  |  |
| ≥ 15% | ≥ 10% |  |  |  |  |  |

**Supplemental Table**. 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 | | | |  |
| 10-year risk categories, % | <120/80 | 120-129/<80 | 130-139/80-89 | ≥140/90 | Taking antihypertensive medication |
| PREVENT base equation – Total CVD |  |  |  |  |  |
| <5% |  |  |  |  |  |
| 5% to <10% |  |  |  |  |  |
| 10% to <15% |  |  |  |  |  |
| ≥ 15% |  |  |  |  |  |
| PREVENT HbA1c equation – Total CVD |  |  |  |  |  |
| <5% |  |  |  |  |  |
| 5% to <10% |  |  |  |  |  |
| 10% to <15% |  |  |  |  |  |
| ≥ 15% |  |  |  |  |  |
| PREVENT ACR equation – Total CVD |  |  |  |  |  |
| <5% |  |  |  |  |  |
| 5% to <10% |  |  |  |  |  |
| 10% to <15% |  |  |  |  |  |
| ≥ 15% |  |  |  |  |  |
| PREVENT base equation – ASCVD |  |  |  |  |  |
| <5% |  |  |  |  |  |
| 5% to <10% |  |  |  |  |  |
| 10% to <15% |  |  |  |  |  |
| ≥ 15% |  |  |  |  |  |
| PREVENT HbA1c equation – ASCVD |  |  |  |  |  |
| <5% |  |  |  |  |  |
| 5% to <10% |  |  |  |  |  |
| 10% to <15% |  |  |  |  |  |
| ≥ 15% |  |  |  |  |  |
| PREVENT ACR equation – ASCVD |  |  |  |  |  |
| <5% |  |  |  |  |  |
| 5% to <10% |  |  |  |  |  |
| 10% to <15% |  |  |  |  |  |
| ≥ 15% |  |  |  |  |  |

**SUPPLEMENTAL Table**. Cross-categorization of 10-year atherosclerotic cardiovascular disease 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 | | | |  |
|  | | <120/80 | 120-129/<80 | 130-139/80-89 | ≥140/90 | Taking antihypertensive medication |
| PREVENT base | PREVENT + HbA1c |  |  |  |  |  |
| < 10% | < 10% |  |  |  |  |  |
| < 10% | ≥ 10% |  |  |  |  |  |
| ≥ 10% | < 10% |  |  |  |  |  |
| ≥ 10% | ≥ 10% |  |  |  |  |  |
| PREVENT base | PREVENT + ACR |  |  |  |  |  |
| < 10% | < 10% |  |  |  |  |  |
| < 10% | ≥ 10% |  |  |  |  |  |
| ≥ 10% | < 10% |  |  |  |  |  |
| ≥ 10% | ≥ 10% |  |  |  |  |  |
| PCE | PREVENT + HbA1c |  |  |  |  |  |
| < 10% | < 10% |  |  |  |  |  |
| < 10% | ≥ 10% |  |  |  |  |  |
| ≥ 10% | < 10% |  |  |  |  |  |
| ≥ 10% | ≥ 10% |  |  |  |  |  |
| PCE | PREVENT + ACR |  |  |  |  |  |
| < 10% | < 10% |  |  |  |  |  |
| < 10% | ≥ 10% |  |  |  |  |  |
| ≥ 10% | < 10% |  |  |  |  |  |
| ≥ 10% | ≥ 10% |  |  |  |  |  |
| PREVENT + HbA1c | PREVENT + ACR |  |  |  |  |  |
| < 10% | < 10% |  |  |  |  |  |
| < 10% | ≥ 10% |  |  |  |  |  |
| ≥ 10% | < 10% |  |  |  |  |  |
| ≥ 10% | ≥ 10% |  |  |  |  |  |

**SUPPLEMENTAL Table**. 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 | | | |  |
|  | | <120/80 | 120-129/<80 | 130-139/80-89 | ≥140/90 | Taking antihypertensive medication |
| PREVENT base – Total CVD | PREVENT + HbA1c – Total CVD |  |  |  |  |  |
| < 15% | < 15% |  |  |  |  |  |
| < 15% | ≥ 15% |  |  |  |  |  |
| ≥ 15% | < 15% |  |  |  |  |  |
| ≥ 15% | ≥ 15% |  |  |  |  |  |
| PREVENT base – Total CVD | PREVENT + ACR – Total CVD |  |  |  |  |  |
| < 15% | < 15% |  |  |  |  |  |
| < 15% | ≥ 15% |  |  |  |  |  |
| ≥ 15% | < 15% |  |  |  |  |  |
| ≥ 15% | ≥ 15% |  |  |  |  |  |
| PCE - ASCVD | PREVENT + HbA1c – Total CVD |  |  |  |  |  |
| < 10% | < 15% |  |  |  |  |  |
| < 10% | ≥ 15% |  |  |  |  |  |
| ≥ 10% | < 15% |  |  |  |  |  |
| ≥ 10% | ≥ 15% |  |  |  |  |  |
| PCE - ASCVD | PREVENT + ACR – Total CVD |  |  |  |  |  |
| < 10% | < 15% |  |  |  |  |  |
| < 10% | ≥ 15% |  |  |  |  |  |
| ≥ 10% | < 15% |  |  |  |  |  |
| ≥ 10% | ≥ 15% |  |  |  |  |  |
| PREVENT + HbA1c – Total CVD | PREVENT + ACR – Total CVD |  |  |  |  |  |
| < 15% | < 15% |  |  |  |  |  |
| < 15% | ≥ 15% |  |  |  |  |  |
| ≥ 15% | < 15% |  |  |  |  |  |
| ≥ 15% | ≥ 15% |  |  |  |  |  |