Decision logic:

If on statins already, display under risk score: "Currently on statin therapy"; can display specific indications as below; can display NA in the 10-year ASCVD risk score field.

If not on statins & "Vascular Dis" = "Yes", display under risk score: "Consider statin therapy for secondary prevention (high ASCVD risk)" "Indication: Group 1. Secondary Prevention: Clinical atherosclerotic cardiovascular disease"
For this category, can display NA in the 10-year ASCVD risk score field, disable link to Statin Choice

If not on statins & "Vascular Dis" = "No" & LDL ≥ 190, display under risk score: "Consider statin therapy" "Indication: Primary Prevention: Group 2. Primary LDL elevation (>=190)"

If not on statins & "Vascular Dis" = "No" & Age = 40-75 yrs & LDL = 70-189 & Diabetes = "Yes", display under risk score: "Consider statin therapy" "Indication: Primary Prevention: Group 3. Age 40-75 yrs, diabetes with no ASCVD, LDL 70-189"

If not on statins & "Vascular Dis" = "No" & Age = 40-75 yrs & LDL = 70-189 & Diabetes = "No" & 10-year ASCVD risk ≥ 7.5%, display under risk score: "Consider statin therapy" "Indication: Primary Prevention: Group 4. Age 40-75 yrs, no diabetes or ASCVD, LDL 70-189, 10-yr risk ≥ 7.5%"

If not on statins & none of the above and age < 75 yrs, display under risk score: "Low ASCVD risk"

If not on statins & none of the above and age ≥ 75 yrs, display under risk score "Risk estimation may not be reliable for age ≥ 75 yrs"

Alternative for the two scenarios immediately above:

If "Not on statin" and "vascular dz = no" and (age < 40 yrs and LDL < 190), then "Low ASCVD Risk" under risk score
If "Not on statin" and "vascular dz = no" and (age 40-75 yrs and LDL < 70), then "Low ASCVD Risk" under risk score
If "Not on statin" and "vascular dz = no" and (age 40-75 yrs and LDL >= 70 and DM = "No" and ASCVD risk < 7.5%), then "Low ASCVD Risk" under risk score
If "Not on statin" and "vascular dz = no" and (age >= 75 yrs and LDL < 190), then "Risk estimation may not be reliable for age ≥ 75 yrs" under risk score

<u>Definitions</u>

Diabetes (any one of the following):

ICD-9: 250.xx
ICD-10: E10.xxx, E11.xxx, E13.xxx

Vascular Disease (any one of the following):

ICD-9: 410.xx-414.xx, 433.xx, 434.xx, 440.xx, 444.xx, 445.xx,
ICD-10: I20.xxx-I25.xxx, I63.xxx, I65.xxx, I66.xxx, I70.xxx, I74.xxx, I75.xxx
CPT-4: 33510-33519, 33521-33523, 33533-33536, 92920, 92924, 92929, 92933, 92937, 92941, 92943
HCPCS: S2205-S2209

Anti-hypertensives (any one of the following drug categories):
angiotensin converting enzyme inhibitors
angiotensin II inhibitors
beta-adrenergic blocking agents
calcium channel blocking agents
thiazide and thiazide-like diuretics
potassium-sparing diuretics
antiadrenergic agents, centrally acting
vasodilators
renin inhibitor
antihypertensive combinations
ACE inhibitors with thiazides
antiadrenergic agents (central) with thiazides
antiadrenergic agents (peripheral) with thiazides
miscellaneous antihypertensive combinations
beta blockers with thiazides
angiotensin II inhibitors with thiazides
beta blockers with calcium channel blockers
potassium sparing diuretics with thiazides
ACE inhibitors with calcium channel blocking agents
angiotensin II inhibitors with calcium channel blockers

Calculation:

Treat=0 if not on treatment for HTN
Treat=1 if on treatment for HTN;

NotTreat=0 if on treatment for HTN
NotTreat=1 if not on treatment for HTN

Female African-American:
X= 17.1141*ln(age)+0.9396*ln(total chol)+(-18.9196*ln(HDL))+4.4748*ln(age)*ln(HDL)+ 29.2907*treat*ln(SBP)+(-6.4321*ln(age)*treat*ln(SBP))+27.8197*NotTreat*Ln(SBP)+(-6.0873*ln(age)*NotTreat*ln(SBP))+0.6908*smoker+0.8738*diabetes
10-year ASCVD risk % = (1 – 0.95334 ^ (e ^ (X – 86.6081))) * 100

Female White or Other:
X= (-29.799*ln(age))+4.884*(ln(age))^2+13.54*ln(total chol)+(-3.114*ln(age)*ln(total chol))+(-13.578*ln(HDL))+3.149*(ln(age)*ln(HDL))+2.019*treat*ln(SBP)+ 1.957*NotTreat*ln(SBP)+7.574*smoker+(-1.665*ln(age)*smoker)+0.661*diabetes
10-year ASCVD risk % = (1 – 0.96652 ^ (e ^ (X + 29.1817))) * 100

Male African-American:
X= 2.469*ln(age)+0.302*ln(total chol)+(-0.307*ln(HDL))+1.916*treat*ln(SBP)+ 1.809*NotTreat*ln(SBP)+0.549*smoker+0.645*diabetes
10-year ASCVD risk % = (1 – 0.89536 ^ (e ^ (X - 19.5425))) * 100

Male White or Other:
X= 12.344*ln(age)+11.853*ln(total chol)+(-2.664*ln(age)*ln(total chol))+(-7.99*ln(HDL)) +1.769*ln(age)*ln(HDL)+1.797*treat*ln(SBP)+1.764*NotTreat*ln(SBP)+7.837*smoker+ (-1.795*ln(age)*smoker)+0.658*diabetes
10-year ASCVD risk % = (1 – 0.91436 ^ (e ^ (X – 61.1816))) * 100