We used the Vanguard 2016 records as the source for our descriptive analysis. The clinical demographics are from the Visit Analysis records for each Visit. The hypertension information is from the medical codes and self report data on medications from each Visit. The incident numbers are from the Events records.

The Hypertension Status categories are defined as the following:

Missing if either systolic blood pressure or diastolic blood pressure is missing

HTNNormal, if 0 < SBP < 120 and 0 < DBP < 80

Pre-HTN, if 120 ≤ SBP < 140 or 80 ≤ DBP < 90

Stage I HTN, if 140 ≤ SBP < 160 or 90 ≤ DBP < 100

Stage II, if SBP ≥ 160 or DBP ≥ 100

The CKD Categories are defined based on the following criteria:

Stage 1 with normal or high **GFR** (**GFR** > 90 mL/min)

Stage 2 Mild **CKD** (**GFR** = 60-89 mL/min)

Stage 3 Moderate **CKD** (**GFR** = 30-59 mL/min)

Stage 4 Severe **CKD** (**GFR** = 15-29 mL/min)

Stage 5 End Stage **CKD** (**GFR** <15 mL/min)

The HDL categories are defined as the following:

Low, for males with hdl < 40

Low, for females with hdl < 50

Normal, for males where 40 <= hdl < 60

Normal, for females where hdl < 60

High, if hdl >= 60

Missing, if hdl is not any of the above

The LDL categories are defined as the following:

Optimal, if ldl < 100

Near/Above Optimal, if 100 <= ldl < 130

Borderline High, if 130 <= ldl < 160

High, if 160 <= ldl < 190

Very High, if ldl >= 190

Missing, ldl is not any of the above

Uncontrolled Blood Pressure is defined as systolic blood pressure > 140 or diastolic blood pressure > 90 per the old guidelines to remain consistent with how the hypertension categories are constructed.

To fall into the assessment of Apparent Treatment Resistant Hypertension, the following criteria were met:

The participant must have

1. uncontrolled blood pressure and a medication from at least two of the Hypertension Medication Groupings below and at least one diuretic from the Diuretic Medication Groupings below.
2. OR a medication from at least three of Hypertension Medication Groupings below and at least one diuretic from the Diuretic Medication Groupings below.

Hypertension Medication Groupings

a)ACE inhibitors, ACE inhibitor/Ca channel blocker combinations, ACE inhibitor/Nutritional suppl combinations, ACE inhibitors & thiazide/thiazide-like

b)selective aldosterone receptor antagonists

c)antiadrenergics-- peripherally acting

d)angiotensin II receptor antagonists, angiotensin II receptor antag/Ca channel blocker/thiazide combination, angiotension II receptor antagonist/Ca channel blocker combination, angiotensin II receptor antagonist & thiazide/thiazide-like combination, direct renin inhibitors/angiotensin II receptor antagonist combination;

e)antiadrenergics-- centrally acting, adrenolytics- central & thiazide/thiazide-like combination as well as alpha-beta blocker combinations, alpha-beta blocker/nutritional suppl combinations

f)direct renin inhibitors, direct renin inhibitors/angiotensin II receptor antagonist combination, direct renin inhibitors/ca channel blocker combination, direct renin inhibitors & thiazide/thiazide-like combination, direct renin inhibitors/ca channel blocker/ thiazide combination;

g)vasodilating agents, vasodilators, vasodilators/thiazide combinations;

h)calcium channel blockers, calcium channel blocker/HMG CoA reductase inhibitor combination, calcium channel blocker/nutritional suppl combinations, selective n-type neuronal calcium channel blockers, ace-inhibitor/ca channel blocker combinations, arb/ca chaneel blocker/thiazide combination, arb/ca channel blocker combination, direct renin inhibitors/ca channel blocker combination, direct renin inhibitors/ca channel blocker/thiazide combination

i) beta blocker/diuretic combinations, beta blocker/nutritional suppl combinations, beta blockers-- cardioselective, beta blockers-- non-selective, beta blockers with intrinsic sympathomimetic activity, beta blockers-- cardioselective and vasodilatory as well as alpha-beta blocker combinations, alpha-beta blocker/nutritional suppl combinations

Diuretic Medication Groupings

a)loop diuretics

b)potassium-sparing diuretics

c)diuretic combinations, diuretics--misc, thiazide and thiazide-like diuretics, ACE inhibitors & thiazide/thiazide-like, beta blocker & thiazide combinations, arb/ca channel blocker/thiazides, ARB & thiazide/thiazide-like, central & thiazide/thiazide-like combination, vasodilators/thiazide combinations, direct renin inhibitors & thiazide/thiazide-like combination, direct renin inhibitors/ca channel blocker/thiazide comb, hydroflumethiazide

d) thiazide-like diuretics

CHD Incidents are defined as the following:

Cardiac Procedure, if event was a cardiac procedure

CHD - Fatal, if event was a fatal CHD

CHD – MI, if event was a Myocardial Infarction

Previous CHD Hx, if there was previous CHD history

Censored, if Cenosred at administrative cut-off date

Refused, if refused medical record review at any of the three visits