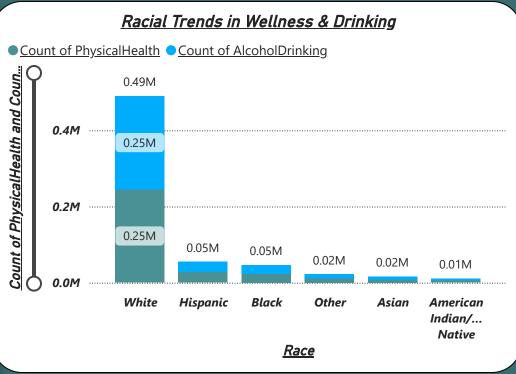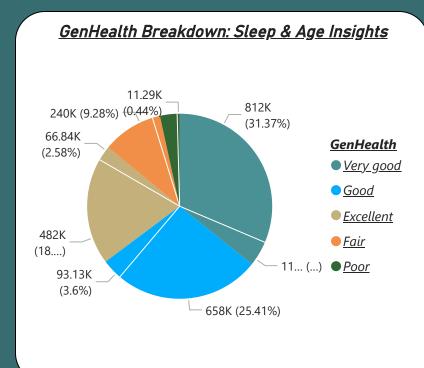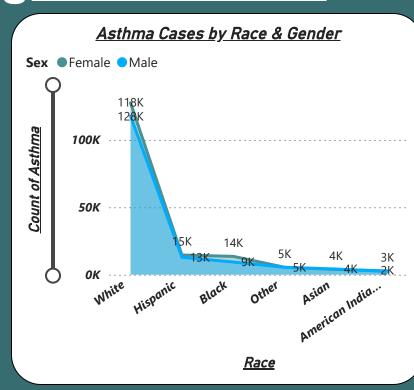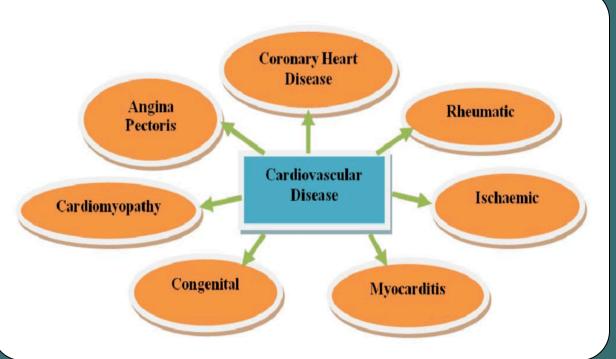# SmartHeart AI: Predictive Analytics for Cardiovascular Health Using BRFSS 2020

Racial Trends in Wellness & Drinking

● Count of PhysicalHealth ● Count of AlcoholDrinking

White: 0.49M (0.25M, 0.25M), Hispanic: 0.05M, Black: 0.05M, Other: 0.02M, Asian: 0.02M, American Indian/... Native: 0.01M

X-axis: Race

GenHealth Breakdown: Sleep & Age Insights

GenHealth
● Very good
● Good
● Excellent
● Fair
● Poor

812K (31.37%), 658K (25.41%), 482K (18....%), 93.13K (3.6%), 11... (...), 11.29K (0.44%), 66.84K (2.58%), 240K (9.28%)

Asthma Cases by Race & Gender

Sex ● Female ● Male

White: 118K / 120K, Hispanic: 15K / 13K, Black: 14K / 9K, Other: 5K / 5K, Asian: 4K / 4K, American Indian...: 3K / 2K

X-axis: Race

General Health Trends Across Sex and Age

Sex ● Female ● Male

Very good: 60K / 54K, Good: 49K / 45K, Excellent: 34K / 33K, Fair: 19K / 15K, Poor: 5K / 6K

X-axis: GenHealth

Physical Activity vs. Asthma Incidence by Race

100%

Yes: 247.96K
No: 71.84K

29%

Health Status by Gender, Stroke History & Mobility

DiffWalking ● No ● Yes

Female — No: 137K / 24K, Yes: 3K / 3K
Male — No: 131K / 15K, Yes: 3K / 2K

X-axis: Stroke

Health Factors by Alcohol Consumption Status

● Count of ... ● Count of ... ● Count of ... ● Count of ...

No: 1.19M, 0.30M, 0.30M, 0.30M, 0.30M
Yes: 0.09M

X-axis: AlcoholDrinking

Mental Health & Mobility by Gender and Smoking Status

Sex ● Female ● Male

151.99K (15.84%), 167.81K (17.49%) — repeated for each segment

Racial Insights: Drinking Habits and Physical Activity

● Increase ● Decrease ● Total

White: 245K, Hispanic: 27K, Black: 23K, Other: 11K, Asian: 8K, American Indian/Alas... Native: 5K, Total: 320K

X-axis: Race

Health Status by Gender, Stroke & Mobility Factors

Sex ● Female ● Male ● Count of Race

Very good: 114K, Good: 93K, Excellent: 67K, Fair: 35K, Poor: 5K / 6K

X-axis: GenHealth

Cardiovascular Disease: Coronary Heart Disease, Rheumatic, Ischaemic, Myocarditis, Congenital, Cardiomyopathy, Angina Pectoris

Categories of Heart diseases
- Coronary HDs: Chronic Angina, Acute Coronary Syndrome (Unstable Angina, Acute MI → NSTEMI, STEMI)
- Cerebrovascular HD: TIA, Stroke
- Other HDs: Heart Failure, RHD, Valvular Disease, Arrhythmia Disease, Inflammatory Disease
- Cardiovascular HD: PVD, AAA, Hypertension Disease

Superior vena cava, Pulmonary Artery, Pulmonary veins, Aortic valve, Pulmonary valve, Right Atrium, Tricuspid valve, Right ventricle, Inferior vena cava, Left Atrium, Mitral valve, Left ventricle, Pulmonary valve, Epecardium, Heart Cell, Healthy Heart