Equations for New Sex and Race/Ethnic-Specific Metabolic Syndrome Severity Score

Adolescent (Ages 12-19 Years)

Males
Non-Hispanic White $= -4.9310 + 0.2804 * \text{BMI Z-score} - 0.0257 * \text{HDL} + 0.0189 * \text{SBP} + 0.6240 * \ln(\text{Tri}) + 0.0140 * \text{Glu}$
Non-Hispanic Black $= -4.7544 + 0.2401 * \text{BMI Z-score} - 0.0284 * \text{HDL} + 0.0134 * \text{SBP} + 0.6773 * \ln(\text{Tri}) + 0.0179 * \text{Glu}$
Hispanic $= -3.2971 + 0.2930 * \text{BMI Z-score} - 0.0315 * \text{HDL} + 0.0109 * \text{SBP} + 0.6137 * \ln(\text{Tri}) + 0.0095 * \text{Glu}$

Females
Non-Hispanic White $= -4.3757 + 0.4849 * \text{BMI Z-score} - 0.0176 * \text{HDL} + 0.0257 * \text{SBP} + 0.3172 * \ln(\text{Tri}) + 0.0083 * \text{Glu}$
Non-Hispanic Black $= -3.7145 + 0.5136 * \text{BMI Z-score} - 0.0190 * \text{HDL} + 0.0131 * \text{SBP} + 0.4442 * \ln(\text{Tri}) + 0.0108 * \text{Glu}$
Hispanic $= -4.7637 + 0.3520 * \text{BMI Z-score} - 0.0263 * \text{HDL} + 0.0152 * \text{SBP} + 0.6910 * \ln(\text{Tri}) + 0.0133 * \text{Glu}$

Adult (Ages 20+ Years)

Males
Non-Hispanic White $= -5.4559 + 0.0125 * \text{WC} - 0.0251 * \text{HDL} + 0.0047 * \text{SBP} + 0.8244 * \ln(\text{Tri}) + 0.0106 * \text{Glu}$
Non-Hispanic Black $= -6.3767 + 0.0232 * \text{WC} - 0.0175 * \text{HDL} + 0.0040 * \text{SBP} + 0.5400 * \ln(\text{Tri}) + 0.0203 * \text{Glu}$
Hispanic $= -5.5541 + 0.0135 * \text{WC} - 0.0278 * \text{HDL} + 0.0054 * \text{SBP} + 0.8340 * \ln(\text{Tri}) + 0.0105 * \text{Glu}$

Females
Non-Hispanic White $= -7.2591 + 0.0254 * \text{WC} - 0.0120 * \text{HDL} + 0.0075 * \text{SBP} + 0.5800 * \ln(\text{Tri}) + 0.0203 * \text{Glu}$
Non-Hispanic Black $= -7.1913 + 0.0304 * \text{WC} - 0.0095 * \text{HDL} + 0.0054 * \text{SBP} + 0.4455 * \ln(\text{Tri}) + 0.0225 * \text{Glu}$
Hispanic $= -7.7641 + 0.0162 * \text{WC} - 0.0157 * \text{HDL} + 0.0084 * \text{SBP} + 0.8872 * \ln(\text{Tri}) + 0.0206 * \text{Glu}$

Abbreviations and Units:

BMI z-score: Body mass index z-score (calculated from height and weight)
WC: Waist circumference (cm)
HDL: High-density lipoprotein (mg/dL)
SBP: Systolic blood pressure (mm Hg)
Tri: Triglycerides (mg/dL)
Glu: Fasting blood glucose (mg/dL)