One in every 3 American adults has some form of cardiovascular disease (CVD). Since 1900, CVD has accounted for more deaths in the United States than any other major cause of death in every year except 1918. It has been estimated that life expectancy would rise by almost 7 years if all forms of CVD were eliminated.¹

In 2013, the American Heart Association and American College of Cardiology published the 2013 ACC/AHA Guideline on the Assessment of Cardiovascular Risk.² This Guideline identified 4 groups in whom statins treatment has been shown to reduce atherosclerotic cardiovascular disease (ASCVD) risk: (1) people with clinical ASCVD, (2) those with primary elevations of LDL-C >190 mg/dL, (3) people aged 40 to 75 years who have Diabetes Mellitus (DM) with LDL-C 70 to 189 mg/dL and without clinical ASCVD, and (4) those without clinical ASCVD or DM with LDL-C 70 to 189 mg/dL and estimated 10-year ASCVD risk >7.5%. An associated calculator is available to estimate 10-year and lifetime risks for ASCVD.³

The Million Hearts® Initiative has a goal of preventing 1 million heart attacks and stroke through several public health and healthcare strategies by 2017. The Cardiovascular Risk Reduction Model was developed by Million Hearts and the Center for Medicare & Medicaid Services as a strategy to assess a value-based payment approach toward reduction in 10-year predicted risk of atherosclerotic cardiovascular disease (ASCVD) by implementing cardiovascular preventive strategies to manage the “ABCS” (aspirin therapy in appropriate patients, blood pressure control, cholesterol management, and smoking cessation).

The purpose of this report is to describe the development and intended use of the Million Hearts Longitudinal ASCVD Risk Assessment Tool. The Million Hearts® Tool reinforces and builds on the “2013 ACC/AHA Guideline on the Assessment of Cardiovascular Risk” by allowing clinicians to estimate the baseline and updated 10-year ASCVD risk estimates for primary prevention patients adhering to the appropriate ABCS over time, alone or in combination.

The tool provides updated risk estimates based on evidence from high-quality systematic reviews and meta-analyses of the ABCS therapies.

Most heart attacks and strokes occur in older adults as a result of cumulative exposure to preventable or modifiable causal risk factors that arise from adverse environmental conditions and behavioral/lifestyle patterns, including elevated blood pressure, adverse atherogenic blood lipid levels, diabetes mellitus, and tobacco use.

While primordial prevention – preventing the occurrence of risk factors before they develop – is important for reducing the U.S. population’s future burden of cardiovascular disease, there is already a substantial CVD risk presence in the older Americans. These individuals will require primary prevention strategies to reduce their risk.

The Risk Reduction model is an evidence-based approach to estimate the reduction in 10-year predicted risk of ASCVD by adhering to the “ABCS” (aspirin therapy in appropriate patients, blood pressure control, cholesterol management, and smoking cessation).

This novel approach to personalized estimation of benefits from risk-reducing therapies in primary prevention may help target therapies to those in whom they will provide the greatest benefit, and serves as the basis for a Center for Medicare & Medicaid Services program designed to evaluate the Million Hearts Cardiovascular Risk Reduction Model.

The Million Hearts Tool is designed to assist clinicians and patients to understand ASCVD risk, to monitor patients’ risks over time, and to quantify potential benefits of adhering to preventive therapies

