New Guidelines for Cardiovascular Risk Assessment Released by ACC/AHA

By focusing on prevention strategies, broader assessment may enhance at-risk patient identification.

New and improved clinical practice guidelines were released by the American College of Cardiology and the American Heart Association with the key aim to assist primary care clinicians in better recognising those adult patients at increased risk for developing atherosclerotic cardiovascular disease, and to suggest subsequent preventive measures such as lifestyle changes and drug treatment to be used.

Atherosclerosis is a buildup of plaque that can eventually harden and narrow the arteries, potentially leading to heart attack and stroke, and those at risk may benefit from changes to their lifestyle or receive drug therapy in order to help prevent it.

The guideline was last updated more than a decade ago, and has been widened to include assessment for heart attack as well as risk of stroke. The recommendation offers novel gender- and ethnicity-specific formulas for risk prediction in African-American and white men and women, and also targets looking beyond traditional short-term 10-year risk assessments to evaluate a person's lifetime risk of having a stroke and being affected by heart disease.

According to Donald M. Lloyd-Jones, MD, ScM, Senior Associate Dean, Chair and Professor of Preventive Medicine at Northwestern University Feinberg School of Medicine and co-chair of the work group that devised the new guidelines, atherosclerosis-caused cardiovascular disease still a significant source of disability, high health care costs and most importantly, it is the number one cause of death, and prevention of atherosclerosis must improve.

The authors state that approximately one in three US adults as yet undiagnosed with and unaffected by heart disease, are at high enough risk to benefit from primary prevention such as medications to lower their risk.

Age, blood pressure, cholesterol levels, smoking, and diabetes are contributing factors leading to atherosclerosis, and by offering high-quality risk assessment methods easily collectible by primary care providers, this information can be integrated into a risk score aimed at guiding care and prompting risk discussions with patients.

David C. Goff, Jr., MD, PhD, Dean and Professor, Colorado School of Public Health, and co-chair of the work group, explains that most heart attacks and strokes are preventable if people were aware of their risk and improved their lifestyle accordingly, however this long-term risk is often underestimated by patients and doctors alike. He goes on to say that the new guidelines provide clinicians with the most current, comprehensive assessment recommendations aimed at working with patients in preventing harm.

Contrary to past assessments which only included coronary heart disease, the new version includes stroke risk assessment as it is the US' fourth leading cause of death, with women and African-Americans particularly affected, and Dr. Lloyd-Jones is confident the new algorithm will allow for better calculation of overall cardiovascular risk.

By developing gender- and race-specific formulas to increase quantifying risk assessment, the new formulas are derived from a broad group of existing data sets, and as such, the recommendation is made for them to be used to assess risk in non-Hispanic whites and African-Americans ages 40-79 years old. Eventually incorporating these algorithms into electronic health records will help clinicians to swiftly calculate a patient's risk and subsequently discuss individualized treatment options for lowering it, especially for younger adults.

The clinical usefulness of newer risk markers, i.e. conditions that can be measured in the blood, urine or by CT scan, was also a consideration, though existing evidence did not favour their use in routine risk assessment.

Four markers, however, stood out as possibly being helpful in when patients or providers are uncertain about risk-based treatment, once the quantitative risk has been calculated using the pooled equations. These include family history of premature cardiovascular disease; coronary artery calcium score, which can show the presence of plaque in artery walls; high-sensitivity C-Reactive Protein levels, as higher levels have been associated with heart attack and stroke; and ankle brachial index, the ratio of the blood pressure in the ankle compared to blood pressure in the arm.

Dr. Goff confirmed that these indicators proved promising and may contribute to informed decision making when quantitative risk assessment alone has been inconclusive.

According to authors further studies and research is required to improve the understanding of the optimal measurements in short- and long-term cardiovascular risk assessment across all race and ethnic groups, ages as well as genders.

The full report, "2013 ACC/AHA Guideline on the Assessment of Cardiovascular Risk" can be viewed on the ACC's website.

Source: American Heart Association

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