Webinar on recent ACC/AHA Cholesterol, Hypertension, and Sodium Guidelines:

Implications for Cardiovascular Health: **Cholesterol**

**Background:** The 2013 American College of Cardiology/American Heart Association Guideline on the Treatment of Blood Cholesterol, along with the 2013 ACC/AHA Guideline on the Assessment of Cardiovascular Risk, were published online in *Circulation* and *Journal of American College of Cardiology* on November 12, 2013. These guidelines reinforce the importance of identifying people at risk for atherosclerotic cardiovascular disease (ASCVD) and treating them appropriately with lifestyle interventions and statin therapy. CDC-funded programs and partners addressing heart disease and stroke can use this information brief as an overview of the 2013 ACC/AHA guidelines and as a comparison to the National Cholesterol Education Program Adult Treatment Panel III (ATP III) guidelines.

* The **ACC/AHA guidelines** are summarized in a flowchart (attached) that includes presence of ASCVD or major risk factors, an low-density lipoprotein (LDL) cholesterol level of 190 mg/dL for most people, and a new risk calculator—the “new Pooled Cohort Equations”—to determine the need for lifestyle interventions and statin therapy. The ACC/AHA guidelines recommend statin treatment intensity (i.e., high or moderate) rather than specific LDL cholesterol goal levels to guide clinicians’ treatment of persons most likely to benefit from statin therapy (e.g., people with existing ASCVD or high risk of developing ASCVD).
* In comparison, the **ATP III guidelines**, released in 2001, used LDL cholesterol levels as the goal to treat for people based on the number of other major risk factors and presence of (or high risk for) coronary heart disease (CHD). ATP III also used a 10-year-risk calculator for CHD, based on the Framingham study.

**The 2013 ACC/AHA guidelines identify 4 statin benefit groups**. Three groups would benefit from statin therapy with a good margin of safety (as directly quoted from the ACC/AHA Guidelines):

1. Individuals older than 21 years with clinical ASCVD (acute coronary syndromes, or a history of MI, stable or unstable angina, coronary or other arterial revascularization, stroke, transit Ischemic Attack (TIA), or peripheral arterial disease presumed to be of atherosclerotic origin) without New York Heart Association (NYHA) class II-IV heart failure or receiving hemodialysis.
2. Individuals older than 21 years with primary elevations of low-density lipoprotein cholesterol (LDL-C) ≥190 mg/dL.
3. Individuals 40-75 years of age with diabetes, and LDL-C 70-189 mg/dL without clinical ASCVD.

The fourth group includes individuals without clinical ASCVD or diabetes, who are 40-75 years of age with LDL-C 70-189 mg/dL, and have an estimated 10-year ASCVD risk of 7.5% or higher. Individuals in the fourth group can be identified by using the new [Pooled Cohort Equations for ASCVD risk prediction](http://www.cardiosource.org/Science-And-Quality/Practice-Guidelines-and-Quality-Standards/2013-Prevention-Guideline-Tools.aspx), developed by the Risk Assessment Work Group of ACC/AHA. The calculator can be downloaded directly at <http://my.americanheart.org/professional/StatementsGuidelines/PreventionGuidelines/Prevention-Guidelines_UCM_457698_SubHomePage.jsp>. The user enters data on an individual’s sex, age, race, total cholesterol, HDL cholesterol, systolic blood pressure, and whether on treatment for high blood pressure, has diabetes, or is a smoker.

The ACC/AHA guidelines note that there are people who may benefit from statin therapy who do not fall into one of the four groups, and people with conditions for whom no recommendations are made for initiating or discontinuing statin therapy (e.g., individuals on maintenance hemodialysis). As with other guidelines, clinicians may use their judgment in considering other factors such as family history of ASCVD, biomarkers such as C - reactive protein, ankle-brachial index, etc.

As partners working to reduce the burden of heart disease and stroke across the US, we all recognize that high cholesterol is a major and controllable risk factor for heart attacks and strokes. One goal of the ACC/AHA guidelines is to better identify and focus statin therapy on those who are most at risk for (or have) ASCVD. No matter how the guidelines are implemented at the community and clinical levels, one thing is clear: **We already have much room for improvement among people most at risk for heart disease and stroke.**

**What can we do?**

* The ACC/AHA guidelines can help CDC and its partners guide programs, health systems, and clinicians on identifying those who do not yet know they might have a heart attack or stroke in the next 10 years—or sooner—and then start therapy that may prevent that event.
* Although the development of new performance measures for cholesterol is evolving, we can increase levels of lifestyle and statin therapy for those who do know they are at risk, and help them adhere to that therapy for the rest of their longer lives.
* We can also continue to work with our partners in the related areas of smoking, diabetes, nutrition, and exercise, since all impact cardiovascular health and the health of individual overall.

Attachment: Flowchart figure from ACC/AHA Guidelines

Sources

* Goff DC, Lloyd-Jones DM, Bennett G, et al. 2013 ACC/AHA Guideline on the Assessment of Cardiovascular Risk: A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines [published online ahead of print Nov. 12 2013]. *Circulation*. 2013. <http://circ.ahajournals.org/content/early/2013/11/11/01.cir.0000437741.48606.98.citation>. Accessed Feb. 3, 2014.
* Stone NJ, Robinson J, Lichtenstein AH, et al. 2013 ACC/AHA Guideline on the Treatment of Blood Cholesterol to Reduce Atherosclerotic Cardiovascular Risk in Adults: A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines [published online ahead of print Nov. 12 2013]. *Journal of American College of Cardiology*. 2013. <http://www.sciencedirect.com/science/article/pii/S0735109713060282>. Accessed Feb. 3, 2014.

Attachment 1: Figure 2 – Major recommendation for statin therapy for ASCVD prevention

