

The 2013 ACC/AHA Cholesterol Management Guideline:

Clearing the Confusion
from Noncontroversial Components

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The 2013 cholesterol-management guideline from the American College of Cardiology (ACC)/American Heart Association (AHA) was published in November 2013.¹ On the basis of high-quality evidence and data from randomized controlled trials, this guideline recommends a risk–benefit discussion regarding statin therapy in 4 statin-benefit groups: patients with atherosclerotic cardiovascular disease (ASCVD); patients with low-density-lipoprotein cholesterol (LDL-C) levels ≥ 190 mg/dL; patients with diabetes mellitus of age 40 to 75 years; and patients with estimated 10-year ASCVD risk $\geq 7.5\%$ on the basis of an ASCVD risk estimator derived from the pooled-cohort risk equation. Moderate- to high-intensity statin therapy is recommended for these patient groups. Moderate-intensity statin therapy is defined as statin therapy that lowers LDL-C 30% to $<50\%$. High-intensity statin therapy lowers LDL-C $\geq 50\%$.

It is important to note that the outcomes ascertained from the 2013 ACC/AHA ASCVD risk estimator differ from those derived from the Framingham coronary heart disease (CHD) risk estimator, which the prior Adult Treatment Panel (ATP) III guideline² suggested for application in clinical practice:

- Apart from calculating risk separately for whites and blacks, the 2013 ACC/AHA ASCVD risk estimator calculates the 10-year risk of fatal or nonfatal CVD (fatal CHD or nonfatal myocardial infarction [MI], and fatal or nonfatal ischemic stroke)—unlike the 2001 Framingham 10-year CHD risk estimator, which calculates only the 10-year risk of fatal CHD or nonfatal MI, but not stroke.
- The 2013 ACC/AHA guideline moved to a statin dose-based approach (away from a treatment approach geared toward treating to a specific LDL-C target). However, the measurement of a lipid panel, once a patient is started on a lipid-lowering therapy, remains a class I recommendation to document the response and to evaluate adherence to lipid-lowering therapy.

Provider-Level Gaps in Understanding the 2013 ACC/AHA Cholesterol Management Guideline

Since the release of this guideline, several provider-level gaps in understanding have become evident. A recent study³ of national provider-level surveys has shown that only half of the surveyed providers had read the 2013 ACC/AHA cholesterol guideline, about half could correctly identify the 4 statin-benefit groups named above, and only one quarter knew what constituted low-, moderate-, and high-intensity statin therapy. It is of particular interest that 41% and 49% of the providers-in-training and in practice, respectively, were unaware of the $\geq 7.5\%$ 10-year ASCVD risk threshold for

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initiating a risk discussion regarding statin therapy; and most were unaware of the 4 outcomes evaluated by the 10-year ASCVD risk estimator, and of how that estimator differs from the Framingham CHD risk estimator. When provided with the case of a patient with possible heterozygous familial hypercholesterolemia (LDL-C, 210 mg/dL), only 36% of the providers-in-training and 48% of those in practice would start a discussion regarding statin therapy. When asked about an outpatient seen after a recent admission for acute coronary syndrome, only 27.6% of the providers-in-training and 40.4% of those in practice recommended a repeat lipid panel 6 to 8 weeks after statin initiation to document treatment adherence or response to statin therapy. These gaps were noted for both providers-in-training and those in practice. In addition, gaps were noted for both nonspecialty (internal medicine, family practice) and specialty (cardiology, endocrinology) providers.

What Can Be Done to Remedy These Gaps and Misconceptions?

The results shown above are consistent with a report from the Institute of Medicine⁴ that, on average, 17 years pass before new knowledge is implemented in clinical practice. This time lag between the generation of evidence and its application to clinical practice will need to be shortened considerably to improve patient outcomes. The providers themselves have a great number of guidelines to follow (including several cholesterol guidelines with conflicting messages). This cognitive load can itself decrease a health-care provider's efficacy. Therefore, it is as important to highlight the common themes (aggressive treatment of ASCVD, diabetes mellitus, and genetic hyperlipidemia, for example, and the use of lipid testing to document response and adherence) as it is to highlight the differences between various cholesterol guidelines (the use of different risk estimators and the use of a treat-to-target versus a statin dose-based

approach). Last, studies in providers' behavior⁵ have shown that passive guideline dissemination via print publication and online forums is probably not going to be successful. A combination of various guideline-implementation strategies,⁵ such as audit and feedback, the use of decision-support algorithms, academic detailing by other healthcare providers, and active case-based discussions of these gaps,⁶ will be more successful than the passive dissemination of this guideline.

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