Question: What have been the biggest challenges you’ve faced in implementing the long-awaited atherosclerotic cardiovascular disease (ASCVD) guidelines?

Dr. Taylor: It is difficult for patients and practitioners to practice without low-density lipoprotein cholesterol (LDL-C) targets. For years, LDL-C goals have given patients and practitioners a sense of security that treatment is effective and appropriately lowering risk. Additionally, I think practitioners find it challenging to implement guidelines that many experts do not endorse. Further, when patients hear of the controversy in the media, they are skeptical of the validity of the new guidelines.

Dr. McCall: The biggest challenges have been explaining the new guidelines and how they differ from the old guidelines. Patients do not easily understand the difference and want to know why the guidelines are changing. Additionally, I think practitioners find it challenging to implement guidelines that many experts do not endorse. Further, when patients hear of the controversy in the media, they are skeptical of the validity of the new guidelines.

Most clinicians individualize therapy and typically do not start at higher- or medium-intensity statin doses because of concerns about tolerance. Although many doctors do not titrate doses upward, I do that when needed. Thirdly, the guidelines do not recommend serial lipid testing. I find that re-testing of lipids can detect adherence issues and, therefore, also individualize repeated lipid testing.

Question: Little evidence in the guidelines recommended the use of non-statin therapies to reduce ASCVD risk. Do you still use these therapies and if so, when?

Dr. Taylor: It is important to recognize that these guidelines do not apply to complex lipid abnormalities. I absolutely use non-statin therapies in these situations.

Dr. McCall: As Dr. Taylor indicated, we see people for complex dyslipidemias and the guidelines do not apply to them. I still use non-statin therapies, probably less niacin, but both omega-3 fatty acids and fenofibrates, to control high triglycerides and low high-density lipoprotein cholesterol.

Question: The Expert Panel recommended statin therapy as primary prevention for individuals 40 to 75 years of age with diabetes and LDL-C values of 70 to 189 mg/dL. This places type 1 and type 2 diabetes in the same risk group. Do you treat cardiometabolic risks differently for individuals with type 1 and type 2 diabetes?

Dr. Taylor: The risk of cardiovascular disease in the presence of insulin resistance and type 2 diabetes actually begins long before the onset of frank diabetes and hyperglycemia, which differentiates type 1 and type 2 diabetes. Inflammatory processes that contribute to cardiovascular disease risk in type 2 diabetes occur along a continuum that begins in the phase we now call prediabetes, a phenomenon that has been demonstrated in numerous clinical trials. Thus, application of the guidelines may be more critical at an earlier stage of type 2 diabetes. Studies have also demonstrated that type 2 diabetes is a cardiovascular disease equivalent, and in my opinion, all patients with type 2 diabetes should be prescribed a statin regardless of their LDL-C values because statins are potent anti-inflammatory agents and reduce cardiovascular risk.

Dr. McCall: Debates at this year’s American Diabetes Association (ADA) and Endocrine Society meetings stressed that all of the data in the
guidelines are really for type 2 diabetes. There are no significant data about statin use in type 1 diabetes, and it is not clear whether affected patients should be treated differently. Both type 1 and type 2 diabetes are known to increase cardiovascular risk. The risk associated with type 1 diabetes largely is related to long duration of disease and the presence of proteinuria. In fact, type 1 and type 2 diabetes are treated the same, but there are virtually no outcome data with statin trials in type 1 diabetes. The etiology may well be different in type 1 diabetes, which was also mentioned in the ADA debates. I use statins in both groups of patients, but I don’t think we have enough data about type 1 diabetes. Dr. Henry Ginsberg, in his discussion with Dr. Robert Eckel, acknowledged that the data on statin needs in type 1 diabetes simply do not exist and, therefore, we are basing analogous treatment on what is known with type 2 diabetes. Much more investigation is needed to understand the best strategies for type 1 diabetes. Some even have argued that the treatment recommended for type 2 diabetes (especially among those with metabolic syndrome risks) is less aggressive than that recommended for primary prevention. No distinction is made for either renal disease or proteinuria, which have an enormous influence on cardiovascular risk. One point that Dr. Eckel mentioned and that the guidelines state is not to treat those on dialysis or those who have New York Heart Association Class II through IV heart failure because there is no proven benefit of statins for these patients. Dr. Eckel recommended cessation of statin therapy for those on dialysis because the benefit is unproven.

Question: The risk calculator generated substantial controversy, but since its release, REGARDS analysis showed that the risk calculator performed well. Do you have concerns about the current risk calculator and have you used it in clinical practice?

Dr. Taylor: I have rarely used the risk calculator. Most statin trials have used the Framingham risk calculator to determine cardiovascular risk. The new risk calculator has never been used in a large statin trial and, thus, has little proven validity. The new guidelines are very particular about using only robust clinical trial data to make recommendations, yet the calculator they recommend has never been studied in a large clinical trial. That is a bit perplexing.

Dr. McCall: I do use the risk calculator and show the results to my patients, but I believe the risk estimation remains potentially problematic for some groups of patients who have not been studied. I appreciate that one of its benefits is the ability to discuss specific groups, both male and female and African American and Caucasian, but many other groups have not been evaluated, such as individuals with type 1 diabetes, Latinos, and many Asian ethnicities. I believe concern remains about the lower level of cut off (7.5% 10-year risk), and I am uncertain whether the calculator is really validated fully if the articles that are critical of the predictions (e.g., Ridker PM, Cook NR. Statins: new American guidelines for prevention of cardiovascular disease. Lancet 2013;382:1762-1765) are correct in suggesting overestimates of 75% to 150%. Another issue is whether we should treat people who have a 5% to 7.5% risk. I do like that we can show younger patients their lifetime risk.

Question: Many clinicians still use biomarkers as an indicator of risk. The guidelines reviewed nine of the new biomarkers. The recommendation was that once risk is calculated, additional markers can provide quantitative risk assessment (family history of premature cardiovascular disease, coronary calcium score >75% for age or >300 Agatston units, C-reactive protein (CRP) >2, or low ankle brachial index <0.9). How and when would you use additional information to help with risk assessment? Further, in what situations do you use vertical auto profile (VAP) and apolipoprotein B?

Dr. Taylor: I use additional biomarkers of risk in two situations: 1) When I am on the fence about starting statin therapy and need additional information to better define individual patient risk and 2) When I feel a patient is at high risk and the patient does not want to start a statin. Additional information may be persuasive enough to convince the patient of the need for a statin. I generally perform an initial VAP in all of my patients to help define hidden genetically determined risk. If there are no abnormalities on the VAP that necessitate specific therapy, I continue follow-up using a standard lipid panel.

Dr. McCall: The additional information helps to assign those of potentially intermediate risk to higher or low aggregate risk scores and, thus, individualize the risk estimate. Clinicians can use them on a case-by-case basis. Use of one or several of these markers can help if the direction for action is not clear when somebody has an intermediate risk. Sometimes I use a CRP or carotid intimal medial thickness as additional markers, and I pay a lot of attention to family history, which is a powerful indicator of risk. The use of lifetime risk is also important because I worry about more than the short-term risk in younger individuals.
Question: Another area of considerable confusion has been the blood pressure targets and dissenting opinions about targets for age as well as optimal therapies based on race. Given this level of disagreement, how are you treating hypertension in your practice, and have the JNC 8 guidelines changed your treatment or targets?

Dr. Taylor: I remain very aggressive with blood pressure control in younger patients. However, I think the guidelines give practitioners a little more freedom in elderly people where it is likely more warranted. Unfortunately, practitioners are forced to meet guideline recommendations or be penalized. I believe our management of elderly patients has often been too aggressive in certain situations just to meet guidelines. The new guidelines allow room for the art of medicine. A clinician may wish to be less aggressive in an 80-year-old man with a blood pressure of 150/80 mm Hg and long-standing hypertension than in a 25-year-old man with the same blood pressure. We must be careful not to generalize guidelines to everyone. Medicine does still require much thinking.

Dr. McCall: The biggest issue is the decision for people 60 years and older to have a target of 150 mm Hg systolic blood pressure. I don’t routinely adhere to that recommendation, but I do pay attention to patients who have large pulse pressures and who have very low diastolic pressures and high systolic pressures. In those individuals, one must be extremely careful in advancing blood pressure drug therapy, sometimes settling for a higher systolic pressure. An across-the-board systolic blood pressure target of less than 150 mm Hg, irrespective of the diastolic pressure and the target organ damage, seems inappropriate to me. We may not treat some people as aggressively when the systolic blood pressure is less than 140 mm Hg. In addition, some patients with diabetes deserve more aggressive treatment, especially when they have proteinuria. Lower than 140/90 mm Hg is not the only goal for some high-risk patients because you can do better as long as they tolerate the therapy (based on the ACCORD trial). Tolerating the therapy without acute kidney problems, electrolyte problems, or presyncopal problems is the key. I want to try to individualize goals based on risks and adverse effects of therapy.

Question: Lifestyle is a priority in each of the guidelines, but this factor seems to have been lost in some of the other debate. How much of your time in clinical practice is devoted to discussing and negotiating lifestyle strategies?

Dr. Taylor: I believe that lifestyle should be at the forefront of the discussion. Most of the medical issues discussed in the guidelines can be controlled with lifestyle modification. While medications are critical to lowering risk, they should be an adjunct to a healthy lifestyle program. Too often we rely on a pill to fix what can be cured by what we eat and how much we walk.

Dr. McCall: Lifestyle modification is always a high priority for me, as is identifying people who are susceptible to making change in lifestyle. First I try to do motivational interviewing to assess susceptibility to change. If I see a willingness to change, I spend a considerable amount of time working on this. I also work on lifestyle changes with those who object to the number of medicines they’re taking. I emphasize that if they want to be on fewer medicines, they should focus on lifestyle changes. Lifestyle changes may help virtually every aspect of ASCVD risk (blood pressure, diabetes, sedentary behavior). I also recognize that I have the luxury of time and a staff to help me with this type of issue, which is not common to all practitioners.

Important Terms

- **Vertical Auto Profile:** Measurement of cholesterol concentrations of five lipoprotein classes.
- **C-reactive protein:** A nonspecific test that detects inflammation.
- **Ankle brachial Index:** A test to screen for peripheral arterial disease.
- **Apolipoprotein B:** A true indicator of the number of circulating atherogenic non-high-density lipoprotein-cholesterol particles and an accurate measurement of the relative number of particles.
- **Agatston units:** Method of calcium scoring related to coronary plaque.

Canola oil can help control blood glucose and improve blood cholesterol in people with type 2 diabetes when included as part of a low-glycemic index diet, according to research published in the July 2014 American Diabetes Association journal Diabetes Care. The study of 141 Canadian adults with type 2 diabetes showed that adding canola oil to the diet is a simple way of helping control blood glucose and risk of cardiovascular disease. Participants at increased risk for adverse effects from type 2 diabetes, such as those with high blood pressure, derived the greatest benefits. Learn more from DiabetesCare.net blogger Amy Hess-Fischl, MS, RD, CDE.