

Life-Saving Medications: The Urgent Need for Guideline Adherence and Patient Acceptance

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In this issue of the *Journal of the American Heart Association (JAHA)*, Bradley and coauthors¹ conducted a well-designed cross-sectional study that assessed patient-reported statin use in almost 5700 patients included in the PALM (Patient and Provider Assessment of Lipid Management) registry representing 140 cardiology, primary care, and endocrinology practices in the United States. All patients were deemed eligible for statin therapy according to the 4 statin benefit groups delineated in the 2013 American College of Cardiology/American Heart Association cholesterol guideline.² Patients completed a survey administered by an iPad that allowed the investigators to categorize them into 4 groups: (1) those who reported they had never been offered statin therapy; (2) those currently on therapy; (3) former statin users who had discontinued therapy; and (4) those who had been offered statin therapy but declined. Unique to this study is that all patients were asked their beliefs about statins and their perceived risk for heart disease using 5-point Likert scales.

Slightly over half of the patients had atherosclerotic cardiovascular disease (ASCVD), while the others were primary prevention patients with an indication for statin therapy. Over one quarter of patients reported they were not on treatment, which included 566 secondary prevention patients. Most concerning, of the 894 patients who were never offered a statin, 30% had ASCVD. Clinical practice guidelines clearly state that high-intensity statin therapy is a Class 1 recommendation for patients with clinical ASCVD since statins reduce major vascular events and cardiovascular mortality.²⁻⁴ Furthermore, more intensive low density

lipoprotein cholesterol-lowering is associated with a greater reduction in risk of total and cardiovascular mortality, particularly in trials of patients with higher baseline low density lipoprotein cholesterol levels.⁵

A purpose of clinical practice guidelines is to synthesize the best available evidence to support clinical decision making, which improves quality of care, patient outcomes, and provides the most cost-effective care. However, guideline publication does not guarantee guideline implementation and clinician adherence. A recent study⁶ examined trends in the use of moderate- and high-intensity statins before and after publication of the 2013 American College of Cardiology/American Heart Association cholesterol guideline in 161 cardiology practices in the PINNACLE (Practice Innovation And Clinical Excellence) registry. The postpublication period was from February 2014 to April 2015. Unfortunately, even in cardiology practices where 97% of patients had ASCVD, only two thirds of patients were treated with moderate- to high-intensity statin therapy before the 2013 guideline publication (62.1%), and this improved only modestly postpublication (66.6%). The results observed in the PALM registry were somewhat more encouraging since 73% of eligible patients were currently on statin therapy among practices that also included primary care and endocrinology.

Approximately 60% of patients in the PALM registry who were not on a statin reported that they did not recall being offered one by their healthcare provider. Of course, this high percentage is subject to recall bias. Strikingly, multivariate modeling showed that black adults, women, and those without insurance were the least likely to report having been offered a statin. Multiple studies have shown disparities in quality health care.⁷⁻¹³ Specifically, fewer women and black adults, especially black women, are offered guideline-directed interventions, including risk factor assessment, statins for primary and secondary prevention, revascularization procedures and reperfusion time targets, and evidence-based treatment upon discharge from hospital postmyocardial infarction. Unfortunately, this is true both within and outside the United States, and translates into poorer outcomes resulting from sex/gender and racial/ethnic disparities in care. Our challenge as clinicians and scientists is to engage in several strategies to reverse these trends: provider education

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and public awareness; integration of sex- and race/ethnic-specific recommendations in clinical practice guidelines; expansion of the proportion of women and nonwhite individuals in research; interventions to address social determinants of health; leveraging electronic health records to identify disparities in care; and partnering with advocacy groups and policy-makers for equitable care.⁷

Among the patients who declined statin therapy in the PALM registry, the reported number one reason was fear of side effects.¹ Patients are often unclear about the benefit versus risk of statins, and instead, focus on information obtained from the Internet or through communication with others. They fear that statins will cause muscle pain and weakness, liver damage, memory problems, and diabetes mellitus; however, the risk of serious adverse effects was very low (<1%) in clinical trials. Before prescribing a statin medication, a thorough clinician–patient risk discussion must occur, which was introduced in the 2013 American College of Cardiology/American Heart Association cholesterol guideline² and expanded in the 2018 multisociety cholesterol guideline.³ The risk discussion begins with estimating a patient’s 10-year ASCVD risk in primary prevention or an explanation of a patient’s high-risk status in secondary prevention. This requires that the clinician be knowledgeable about clinical trial data and known risks and benefits of statin therapy,¹⁴ and be able to communicate this information in a way that the patient will understand it. The risk discussion should also include factors that enhance a patient’s risk but are not part of the 10-year ASCVD risk estimation (eg, family history of premature ASCVD, metabolic syndrome, chronic inflammatory conditions, among others), and learning the patient’s preferences, goals, and values in the context of shared decision making.

The clinician–patient risk discussion and the process of shared decision making can take significant time and is a challenge to thoroughly accomplish within a clinical encounter. However, a discussion about potential adverse effects of statins may help the clinician learn what the patient knows about risks or side effects and can correct any misinformation.¹⁵ Over half of the participants in the PALM registry who discontinued statin therapy cited side effects as the reason.¹ It is often helpful at the initial conversation to inform patients that 7 statins are available and they have different pharmacological properties; if a patient has a side effect to 1 statin, often a different statin will be well tolerated. In fact, of the patients who discontinued or were never offered statin therapy in the PALM registry, ≈40% stated they would “very likely” retry or start statin therapy.¹ It is also helpful to state that muscle and joint problems occur for several reasons and to explain that statin-associated muscle symptoms are usually bilateral and affect the large muscle groups close to the trunk. Finally, letting the patient know that the clinical team is

available to discuss concerns by phone is enormously meaningful to patients.

The authors of the 2018 multisociety cholesterol guideline³ avoided using the term *statin intolerance* and instead preferred *statin-associated side effects*, since the vast majority of patients are able to tolerate rechallenge with a different statin or an alternative statin regimen such as reduced dose or frequency. When patients report possible statin-associated side effects, a thorough assessment of symptoms is recommended, particularly for muscle symptoms, and an evaluation for nonstatin causes and predisposing factors.³ This is an important area for education for both clinicians and patients. Additionally, if a clinician does not have the time or knowledge to address statin-associated side effects, the patient can be referred to a lipidologist or clinical lipid specialist (<https://www.learnyourlipids.com/content/specialists>).

A recent study by Okunrintemi and colleagues¹⁶ highlighted the importance of patient–provider communication on clinical outcomes and resource utilization. A sample of 6810 individuals with ASCVD answered questions from the Consumer Assessment of Health Plans Survey that assessed patient–provider communication. Results showed that patients who reported poor versus optimal communication with their providers were over 2 times more likely to report poor physical and mental health, were less likely to report taking a statin and aspirin, reported greater utilization of healthcare resources determined by emergency department visits and hospitalizations, and reported spending more on health care annually. Of course, an important limitation of this study is the possibility of recall bias from patient-reported experiences and outcomes.

Much information can be learned from the survey data in the study by Bradley and colleagues.¹ First, patients aren’t always offered guideline-recommended therapies, particularly statin medications that have been proven to reduce risk of ASCVD events. Strategies must be implemented to increase knowledge among all relevant disciplines (cardiology, primary care, OB-gyn, and endocrinology) and clinician types (physicians, nurse practitioners, nurses, physician assistants, and PharmDs), to create processes for ease of guideline implementation in the practice setting, and to leverage electronic health record capability in identifying patients not receiving guideline-recommended care. Second, fear of side effects and perceiving side effects while taking a statin is a huge issue in patients declining or stopping statin therapy. Patients have access to a great deal of information, some of which is inaccurate or may need to be clarified by a knowledgeable clinician. The clinician–patient discussion is critical for not only communicating risk but also for addressing benefit versus risk of statin therapy, potential for side effects, patient perception of statin safety, and allowing the patient to ask questions and express his/her preferences. Ample time must

be devoted to this discussion because it serves to instill trust and foster an optimal clinical–patient partnership. In addition, fostering team-based care provides the patient with multiple avenues to discuss concerns. Finally, willingness to take a statin is quite high by patients who have declined statin therapy in the past or who have never been offered one. Therefore, clinicians must revisit the statin decision at future encounters in the context of shared decision making, while providing the patient with new clinical trial data if available and offering select statin options.

Disclosures

None.

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