



# The New Lipid Guidelines: What Do Primary Care Clinicians Think?

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## ABSTRACT

**BACKGROUND:** Little is known about the opinions of primary care clinicians regarding the newly released 2013 American College of Cardiology/American Heart Association (ACC/AHA) Guidelines for the Prevention of Primary and Secondary Atherosclerotic Disease. This survey was created to assess the awareness, attitudes, and practices of primary care clinicians on adoption of the new guidelines and to explore obstacles to implementation and suggestions for improving shared decision-making.

**METHODS:** Six hundred practicing clinicians within the San Francisco Bay Area Collaborative Research Network were invited to participate in this cross-sectional, Internet-based pilot survey of primary care clinicians. These survey data were collected in March 2014, approximately 4 months after the release of the new guidelines and 1 month after the release of the ACC/AHA risk estimator application.

**RESULTS:** One hundred eighty-three clinicians responded to the survey. Of those respondents, 176 (96%) were aware of the guidelines. The majority (64%) reported implementing the new guidelines with at least some of their patients, while a minority (25%) reported adopting the guidelines for many of their patients. Disagreeing with the guidelines was the main hindrance to adoption.

**CONCLUSIONS:** While many primary care clinicians are aware of the new guidelines, a substantial proportion has yet to implement them into their clinical practice, and obstacles remain for full adoption. Further understanding of clinicians' views, opinions, and needs is necessary to optimize the approach to lipid management and ensure integration into current practice.

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**KEYWORDS:** AHA/ACC guidelines; Cholesterol; Primary care providers

The American College of Cardiology (ACC) and American Heart Association (AHA) released updated guidelines for prevention of primary and secondary atherosclerotic disease in late 2013.<sup>1</sup> The new guidelines emphasized treatment decisions based on risk stratification for atherosclerotic cardiovascular disease rather than lipid targets for cholesterol management, and lowered the threshold for

consideration of drug therapy for primary prevention of vascular events. These changes have attracted controversy—ranging from concerns about the accuracy of the published 10-year risk calculator for atherosclerotic cardiovascular disease, to the absence of lipid treatment targets, to the anticipated expansion of statin usage in the general population. In response, subsequent publications have reported reassuring performance characteristics for the risk calculator and emphasized the importance of shared decision-making and ensuring the effectiveness of treatment with statin or nonstatin agents, as outlined in the guidelines.<sup>2-10</sup>

Outside of academic discourse about the changes, limited information is available on the overall reception to the new guidelines by primary care clinicians. The perspective of primary care physicians and their evolving adoption of the new guidelines are important, as these clinicians are on the forefront of lipid management. The

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purpose of this pilot study was to gauge awareness, practices, and attitudes of primary care clinicians participating in the San Francisco Bay Area Collaborative Research Network on the implementation of the new guidelines in clinical practice. This study is a first step in the broader understanding of the reception of the new guidelines by primary care clinicians.

## METHODS

The San Francisco Bay Area Collaborative Research Network is a University of California, San Francisco-supported practice-based research network that includes over 1500 researchers, clinicians, and health care organization leaders working in more than 200 public, private, and academic settings across the greater San Francisco Bay Area and Northern California. The network's mission is to facilitate practice-based research partnerships between academic researchers and community-based clinical teams that can lead to improved primary care clinical outcomes.<sup>11</sup>

Six hundred actively practicing adult primary care clinicians within this network were invited via e-mail to participate in an anonymous online survey in March of 2014, approximately 4 months after the debut of the cholesterol guidelines. Survey questions assessed respondents' familiarity with the guidelines, their current or future plans for implementation, and barriers to adoption in clinical practice. Additional questions gauged respondents' views on the online risk calculator and tools for shared decision-making. Response options were categorical and included multiple choices; one qualitative, explanatory question inviting free text responses was also included. Age and sex were collected from all respondents. The Committee of Human Research at the University of California, San Francisco approved the study, and the survey instrument is included in the [Supplementary Table](#) (available online) in the Appendix.

Categorical responses were analyzed using chi-squared as appropriate. Categorical responses by age were further analyzed by chi-squared for the trend. To further explore age and sex differences in the reception of the new guidelines, responders were stratified into 3 age groups (21-39, 40-55, and  $\geq 56$  years of age) and also by sex. A *P*-value of  $< .05$  was considered significant for all tests. Qualitative responses were thematically coded based on themes that emerged from the data. Representative quotations from respondents that illustrate the main themes identified are included in the Results section.

## CLINICAL SIGNIFICANCE

- Little is known about opinions of primary care clinicians regarding the 2013 American College of Cardiology/American Heart Association Guidelines for the Prevention of Primary and Secondary Atherosclerotic Disease.
- This survey suggests that a majority of primary care clinicians are aware of the new guidelines and many have begun to implement them in their clinical practice.
- However, barriers to implementation ranging from disagreement with recommendations to concerns about the accompanying risk calculator will need to be addressed.

## RESULTS

Of the 600 primary care clinicians invited, 183 (31%) completed the survey. Based on available data of those invited to participate, 52% were female. The majority (79%) of invited clinicians practiced in nonacademic centers such as community health centers or private practice. Additionally, approximately 13% were nurse practitioners or physician assistants, with 60% of physicians practicing family medicine and the remainder general internal medicine. Of the 183 respondents, most were female ( $n = 108$ , 59%) and 40-55 years of age ( $n = 74$ , 40%) ([Table 1](#)). The remainder were divided equally into younger (21-39 years;  $n = 52$ , 28%) or older ( $\geq 56$  years;  $n = 51$ , 28%) age groups.

### Familiarity with the Updated Guidelines

The majority of respondents ( $n = 176$ , 96%) reported being aware of the 2013 ACC/AHA cholesterol guidelines and their main tenets, either by reading them in detail or by hearing about

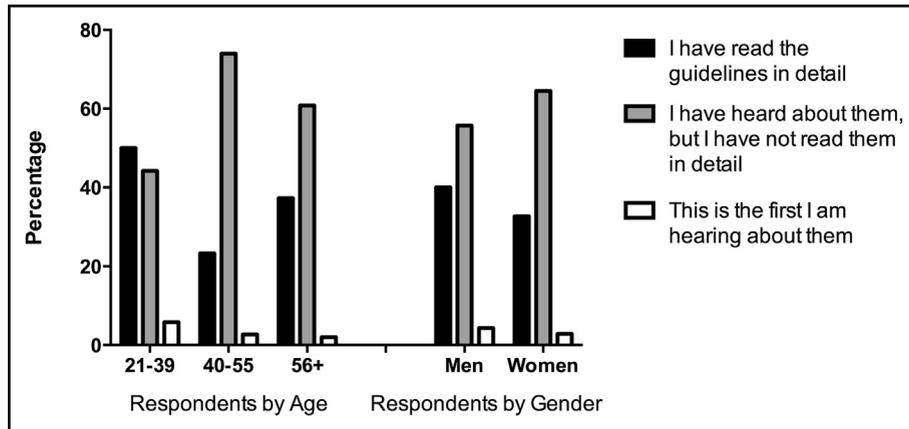
them in other venues. Guideline familiarity did not vary by the age or sex of clinicians ([Figure 1](#)) ([Table 2A](#)).

### Implementation of the Guidelines

The majority of respondents (63%) reported implementing the new guidelines with at least some of their patients; 46 (25%) reported implementing the guidelines for many patients, while 69 (38%) reported implementing the guidelines for a few. Only 68 (37%) reported they had not yet done so with any of their patients. Younger clinicians reported the highest rate of implementation of the new guidelines with many of their adult patients (35%) in comparison with

**Table 1** Demographics

	Number: 183 (%)
Age, y	
21-39	52 (28.4)
40-55	74 (40.4)
56-70	49 (26.8)
71+	2 (1.1)
No age specified	6 (3.3)
Sex	
Male	70 (38.3)
Female	108 (59.0)
No sex specified	5 (2.7)



**Figure 1** Clinicians' reported familiarity with the new 2013 American College of Cardiology/American Heart Association guidelines—by age and sex.

middle-aged (23%) and older (22%) respondents. All trends noted by age were not statistically significant. Similarly, there was no observed difference in the rate of implementation by sex (Figure 2).

Of those who had implemented the new guidelines with only some of their patients or none at all ( $n = 133$ ), 62 (47%) planned to implement them in the future, while 63 (47%) remained unsure (Supplementary Figure 1). Only 8 (6%) respondents were not planning to implement the new guidelines at all.

Of those who were not sure or were not planning to implement the new guidelines for many of their adult patients ( $n = 71$ ), 33 (47%) cited disagreeing with the guidelines as at least one of their concerns (Table 2B). Twenty-nine (41%) noted they did not know the guidelines well enough, while 18 (25%) had not had time to think about the new guidelines. Finally, 23% cited difficulty using the risk calculator as a barrier to implementation (Figure 3). Free text responses provided by respondents identified concerns related to overtreatment, especially related to the validity of the current risk calculator, lack of applicability to all populations, particularly racial and ethnic minorities, and the controversy surrounding the guidelines (Table 2C). Others noted that the current risk calculator was too cumbersome to use in clinical practice.

### Use of Online Tools for Shared Decision-Making

The majority of all respondents ( $n = 129$ , 71%) thought there was a need for better evidence-based online tools to help engage adult patients in shared decision-making about cholesterol treatment (Supplementary Figure 2). Similarly, the majority of clinician respondents reported they would be very likely ( $n = 90$ , 51%) or somewhat likely ( $n = 59$ , 33%) to use such a tool regularly for shared decision-making if available (Supplementary Figure 3). These beliefs were similar across all age groups and sexes. Many clinicians also emphasized a need for a patient-focused tool with illustrative outcomes

for shared decision-making and motivational use in their practice (Table 2D).

### DISCUSSION

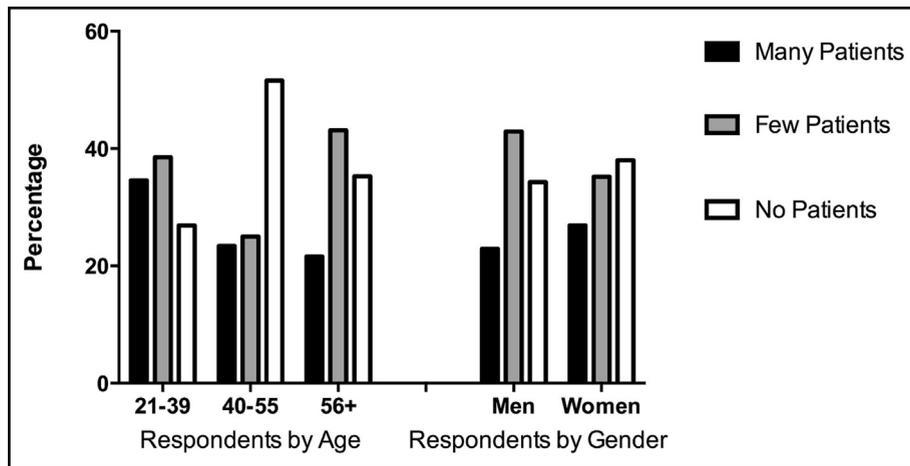
The controversy surrounding the new AHA/ACC cholesterol guidelines has generated much discussion, but little is known about how the guidelines have actually been received in primary care providers' clinical practice. Limited information derived from cardiologists and primary care clinicians is consistent with the findings of this survey: many clinicians are aware of the new guidelines, but there are multiple barriers to implementation.<sup>12,13</sup>

Perhaps in part due to the controversy surrounding the new guidelines, the overwhelming majority of clinicians in our sample were aware of them, across ages and sexes. The controversy has not prevented clinicians from adopting at least portions of the guidelines into their practice: only a small minority of clinicians in our sample has not and does not plan to implement and adopt the new guidelines for any of their patients.

However, substantial barriers to adoption remain. The main obstacles cited by respondents who have not implemented the guidelines were unsurprising. One was disagreement with the recommendations of the guidelines—with some citing the public discourse as a hindrance to full

**Table 2** Representative Quotations from Survey Respondents

- 2A "Moving away from strict cut point targets makes sense..."  
 2B "I am still hearing some valid criticisms of the guidelines so I am not implementing them wholesale."  
 2C "My patients have very low literacy and many do not speak English. An online risk calculator can help the discussion but often it does not."  
 2D "I think online risk calculators that can show graphically risk reduction for behavioral change would be the most useful for getting patients to make a decision that works for them."



**Figure 2** Clinicians' reported extent of implementation of the new 2013 American College of Cardiology/American Heart Association guidelines—by age and sex.

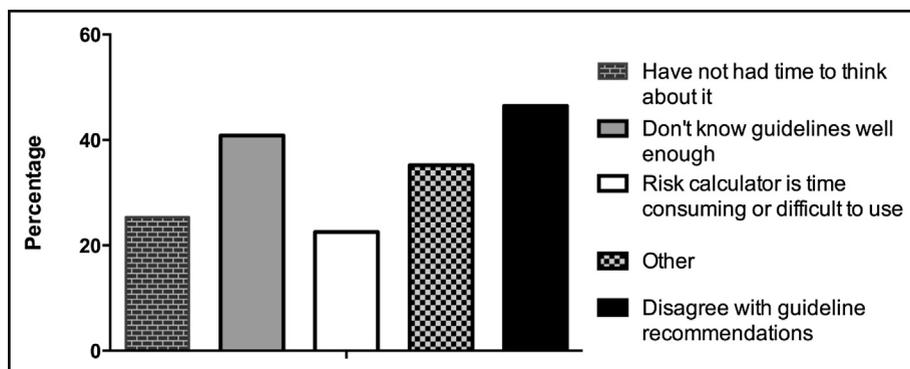
implementation. Notably, many clinicians in this survey echoed the public's concern for statin overtreatment with the current risk calculator, and some questioned its validity. Additional direct and public approaches to addressing these concerns may be needed by AHA/ACC. Further studies addressing whether physicians' attitudes toward the new guidelines are influenced directly by the source of their information about the guidelines, including whether or not they used the ACC/AHA risk-estimator calculator, would be helpful. Future studies also are needed to assess primary clinicians' understanding of the new ACC/AHA guidelines recommendations—specially after the robust response to the original criticism aired in both medical and lay media. Some of the respondents also cited perceived lack of applicability to racial and ethnic minorities as a barrier for guideline adoption, an especially pertinent issue given the ethnic diversity of the patient population in Northern California. Lack of familiarity with the guidelines reported by many clinicians suggests that further efforts to educate primary care clinicians about the lipid guidelines, beyond publication in medical journals, may be needed. As suggested by some respondents, integration of

the risk calculator into electronic medical records, possibly prepopulated from clinical documentation, may also aid adoption of guidelines in a busy primary care practice.

Lastly, shared decision-making is an important element in the primary care clinician and patient relationship. Clinicians appear to endorse the idea of an easy-to-use online patient-centered risk calculator or other illustrative tool to help with patient motivation and education, especially in the face of recent reports about statin medication disutility and discontinuation.<sup>4,14-16</sup> Notably, given the complexity of the guidelines and perceived limitations of the current risk calculator, many clinicians expressed a strong interest in having patient-centered resources targeting the low-literacy and multilingual audiences especially prevalent in the San Francisco Bay area.

### Study Limitations

The participants of this survey were isolated geographically to Northern California and answers were self-reported. Respondents utilized individual definitions for “many” vs



**Figure 3** Cited reasons by clinicians who have not implemented the new 2013 American College of Cardiology/American Heart Association guidelines for many of their adult patients.

“few” patients in our survey questions, as these terms were not defined specifically. Additionally, a minority of invited participants completed the survey, and only very limited demographic information on survey nonrespondents is available. Given that the responses were collected as a convenience sample, results may not be fully generalizable to the San Francisco Bay Area Collaborative Research Network or other populations, and should be replicated with larger, population-based samples. Finally, the specific source(s) of information used by our respondents regarding the new AHA/ACC guidelines is not known.

## CONCLUSION

Nearly all survey respondents were aware of the new AHA/ACC guidelines. Even with the surrounding controversy, many have begun implementing the guidelines, but a substantial percentage has not yet done so. Barriers may need to be addressed for a more universal adoption. Further assessment of clinicians’ perspective and evolving adoption of the guidelines may help with optimizing the approach to lipid management and ensure integration into current practice.

## ACKNOWLEDGMENT

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## APPENDIX

Supplementary table and figures accompanying this article can be found in the online version at <http://dx.doi.org/10.1016/j.amjmed.2015.02.013>.

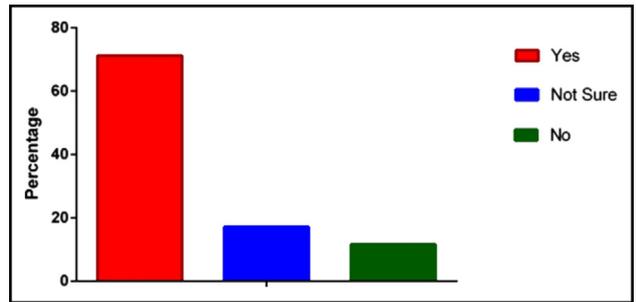
**APPENDIX**

**Supplementary Table** Questions Included in the Survey

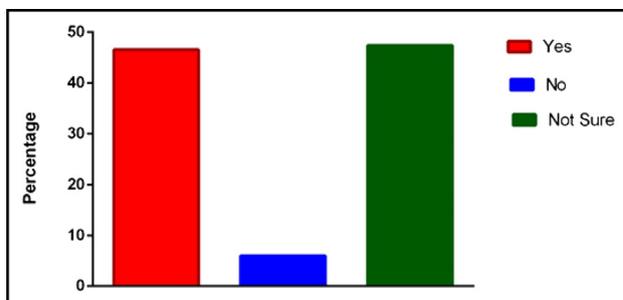
Survey Questions

- 1 How familiar are you with the newly issued AHA and ACC guidelines for diagnosis and treatment of cholesterol disorders in November of 2013?
- 2 Have you implemented these guidelines with adult patients in your clinical practice?
- 3 If you have not implemented these guidelines with most of your adult patients, are you planning to?
- 4 If you are not planning to implement these guidelines with most of your adult patients, or not sure whether you want to, why not?
- 5 Do you think there is a need for better evidence-based online tools to help you engage your adult patients in shared decisions about cholesterol treatment?
- 6 If there were a good evidence-based online tool to help you engage in shared decision about cholesterol treatment with adult patients, how likely would you be to use it regularly in practice?
- 7 Is there anything else you would like to tell us about the new cholesterol guidelines for adult patients, the use of online risk calculators in your practice, or what would help you best in the clinical treatment of cholesterol?

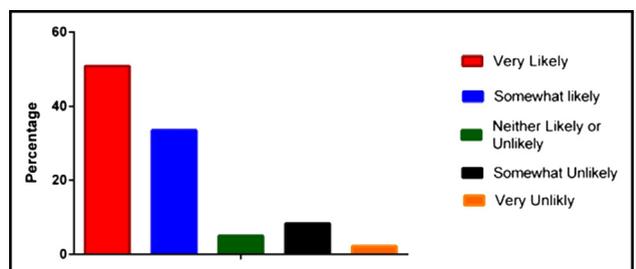
ACC = American College of Cardiology; AHA = American Heart Association.



**Supplementary Figure 2** Need for better evidence-based online tool for shared decision-making.



**Supplementary Figure 1** Plan to implement the new American College of Cardiology/American Heart Association guidelines for many of their adult patients.



**Supplementary Figure 3** Likelihood of regularly using an online evidence-based tool for shared decision-making about cholesterol management.