Have practice guidelines led to optimal management of non-HDL cholesterol?

No, because many practitioners are unaware of or don’t consistently implement the guidelines, says Salim Virani, M.D., a researcher and physician at the Michael E. DeBakey Veterans Affairs (VA) Medical Center, who studies non-HDL (high-density lipoprotein) cholesterol, a measurement that can be obtained from any standard cholesterol panel by subtracting the good cholesterol (HDL-C) from total cholesterol. Many studies have shown non-HDL cholesterol to be a more powerful predictor of future risk of heart disease than the traditional bad cholesterol (LDL or low-density lipoprotein cholesterol) because it includes all forms of bad cholesterol, including LDL cholesterol. The use of non-HDL cholesterol is also cost-effective because it can be calculated from any standard lipid panel, and does not require specialized testing.

The non-HDL cholesterol concept was introduced into the National Adult Treatment Panel III cholesterol management guidelines in 2001. But only half of the 354 internal medicine, family practice, endocrinology and cardiology providers responding to a survey were able to calculate non-HDL cholesterol when provided with a standard cholesterol panel by subtracting the good cholesterol (HDL-C) from total cholesterol. Many studies have shown non-HDL cholesterol to be a more powerful predictor of future risk of heart disease than the traditional bad cholesterol (LDL or low-density lipoprotein cholesterol) because it includes all forms of bad cholesterol, including LDL cholesterol. The use of non-HDL cholesterol is also cost-effective because it can be calculated from any standard lipid panel, and does not require specialized testing.

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This gap has significant implications for patients. A separate study of 21,801 patients with heart disease receiving care in one Midwest VA network found that 80 percent of patients attained LDL cholesterol treatment goals, but the percentage of patients attaining non-HDL cholesterol treatment goals was only 50 percent.

Noting a 2001 Institute of Medicine report suggesting it takes 17 years for new knowledge to be incorporated into clinical practice, Virani favors policy that bridges the gap between evidence and practice by positively influencing provider behavior. Instead of relying on professional journals or manuals to communicate best practices in a timely manner, he supports more active efforts — such as academic detailing of guidelines by experts, audit and feedback strategies on provider performance, and the use of decision support systems to aid providers in making more evidence-based choices for patient management.

Including non-HDL cholesterol levels and treatment goals on standard lipid panel results from laboratories would also be useful, so that providers don’t have to do a manual calculation.

“Our preliminary work has shown that steps as simple as reporting the calculation of this cholesterol parameter on standard lipid panel results from laboratories would also be useful, so that providers don’t have to do a manual calculation.”

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“Providers are faced with a large number of guidelines to read and implement in clinical practice; the number of these guidelines alone may lead to cognitive overload, and serve as a barrier to effective implementation,” says Virani, who is also affiliated with Baylor College of Medicine. “This is evident from the fact that almost half of the providers in our study also reported that they had not read the cholesterol management guidelines despite having a high proportion of patients with cholesterol disorders.”
Health Policy research presents a summary of findings on current health policy issues. It is provided by the James A. Baker III Institute for Public Policy’s Health Economics Program in collaboration with the Baylor College of Medicine’s Section of Health Services Research in the Department of Medicine.

This publication is provided to make research results accessible to regional and national health policymakers. The views expressed herein are those of the study authors and do not necessarily represent those of the Baker Institute or of the Baylor College of Medicine.

The Baker Institute and the Baylor College of Medicine’s Section of Health Services Research work with scholars from across Rice University and the Baylor College of Medicine to address issues of health care — access, financing, organization, delivery and outcomes. Special emphasis is given to issues of health care quality and cost.

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