

## **Cholesterol disorder treatment gap exists among ethnicities and genders**

– Many people at risk for cardiovascular disease (CVD) don't have their elevated cholesterol and other lipid disorders under control, researchers reported in *Circulation: Journal of the American Heart Association*.

"Cholesterol disorders are common among people without CVD," Goff said. "The quality of care is sub-optimal in general and variable by CVD risk group, ethnicity and gender," said David C. Goff Jr., M.D., Ph.D., senior author of the study and a professor of public health sciences and internal medicine at Wake Forest University School of Medicine in Winston-Salem, N.C.

Previous studies have shown proper treatment of cholesterol disorders can reduce the risk of developing heart disease by about 30 percent over five years. This study investigated the implementation challenges of the Third Report of the Adult Treatment Panel (ATP III) of the National Cholesterol Education Program (NCEP), published in 2001.

Researchers studied the prevalence, treatment and control of dyslipidemia — a family of cholesterol disorders — including ethnic and gender differences in people free of known clinical CVD.

Researchers reviewed information on 6,814 patients ages 45 to 84 who had participated in the Multi-Ethnic Study of Atherosclerosis (MESA), a study of Caucasian, Hispanic, Chinese and African Americans in six U.S. communities. Complete data was available on 6,704 of the patients.

Researchers found that 29 percent of patients had cholesterol abnormalities. Overall, 16 percent reported receiving treatment with lipid-lowering drugs, including 54 percent of those with dyslipidemia.

Among other findings:

- Men were more likely than women to qualify for drug therapy, but their cholesterol levels were less likely to be treated and controlled.
- Relative to non-Hispanic whites, Chinese Americans were less likely to qualify for drug treatment, but no differences in treatment and control rates were observed.
- African Americans and Hispanic Americans had prevalence of dyslipidemia comparable to non-Hispanic whites, but their levels were less likely to be treated and controlled.
- Ethnic disparities were reduced substantially by adjusting for healthcare access variables.
- Gender disparities persisted despite adjusting for risk factors, socioeconomic characteristics and healthcare access variables.
- Control of dyslipidemia was achieved less commonly in the high and intermediate CVD risk groups than in the low-risk group.

Researchers say women are more likely than men to have both health insurance and an ongoing source for primary care and are reported to seek healthcare services more often than men. "These behavioral differences could explain part of the observed gender differences in treatment and control," Goff said.

Chinese Americans had the lowest prevalence of dyslipidemia, which could be related to dietary and other cultural differences that result in lower total and LDL cholesterol concentrations. Chinese Americans also were less likely to report a family history of heart attack or, at least among women, recent cigarette smoking.

Researchers noted that the ethnic disparities in treatment and control observed in African Americans and Hispanic Americans may be due to ethnic differences in healthcare-seeking behaviors and access to care. African Americans and Hispanic Americans also have lower insurance coverage rates and poorer access to care. Ethnic differences in treatment were reduced more by adjusting for socioeconomic characteristics and healthcare access variables than by adjusting for other risk factors.

The study also examined the presence of calcium buildup in coronary arteries across groups of people and compared calcium levels in people with and without lipid-lowering treatments. Researchers measured coronary artery calcium (CAC) with computed tomography, a medical imaging method in which digital processing generates a three-dimensional image. Researchers found that about a fifth of high-risk persons who did not qualify for lipid-lowering treatments had substantial CAC, and the number of people who qualified for drug treatment but weren't treated differed according to presence and severity of CAC.

Although calcium buildup has been shown to predict risk of cardiovascular events, treatment based on the presence of calcium has not been demonstrated to reduce progression of CAC or event rates. Researchers said further studies are needed to find out if the presence and severity of CAC could predict who might benefit from lipid-lowering drug treatment.

"Given the significance of CVD as a public health problem in the United States, and the proven benefits of lipid-lowering drugs, improving the treatment and control of cholesterol disorders and eliminating disparities in management should move to the forefront of national public health efforts," Goff said. "Research and quality improvement programs are needed to optimize management of cholesterol disorders."

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