Recent activity in government and non-government agencies may affect readers of *Ethnicity & Disease* and other health care professionals working with ethnic minority and under-served populations. Below are some current items of interest.

**FROM THE NATIONAL HEART, LUNG, AND BLOOD INSTITUTE (NHLBI): BENEFITS OF QUITTING SMOKING OUTPACE RISK OF MODEST WEIGHT GAIN**

The improvement in cardiovascular health that results from quitting smoking far outweighs the limited risks to cardiovascular health from the modest amount of weight gained after quitting. The study found that former smokers without diabetes had about half as much risk of developing cardiovascular disease as current smokers, and this risk level did not change when post-cessation weight gain was accounted for in the analysis.

“Our findings suggest that a modest weight gain, around 5–10 pounds, has a negligible effect on the net benefit of quitting smoking,” said study coauthor Caroline Fox, senior investigator in the Laboratory for Metabolic and Population Health at the NHLBI. “Being able to quantify to some degree the relationship between the benefits and side effects of smoking cessation can help in counseling those who have quit or are thinking about quitting.”

Dr. Fox added that the analysis could not definitively conclude the role of modest weight gain in former smokers with diabetes, though the numbers suggested a similar trend. She noted that follow-up studies to confirm this negligible effect of weight gain in people with diabetes would be important, as weight control is a key factor in managing diabetes and preventing diabetes-related heart problems.

The study team analyzed data collected from 1984 through 2011 from 3,251 participants enrolled in the Framingham Heart Study. During this time, participants received periodic medical exams so that researchers could calculate changes in weight and smoking status. Participants were divided whether they had diabetes or not, then further divided into 4 smoking categories: smokers, nonsmokers, recent quitters (quit for 4 years or less), and long-term quitters (quit for more than 4 years). The researchers then examined the occurrence of cardiovascular problems such as coronary heart disease, stroke or heart failure in each group.

The initial analysis, which did not account for any changes in weight, found that former smokers without diabetes had about half the risk of cardiovascular problems as smokers. By comparison, nonsmokers had about one-third the risk.

The researchers then made statistical adjustments to account for the fact that recent quitters gained more weight on average than other groups (about 6.5 pounds). The researchers found that even accounting for weight, the lowered risk remained nearly the same for recent quitters. The lowered risk for long-term quitters and nonsmokers remained constant when adjusting for weight gain.
**FROM THE NATIONAL HEART, LUNG, AND BLOOD INSTITUTE (NHLBI): EDTA CHELATION THERAPY MODESTLY REDUCES CARDIOVASCULAR EVENTS**

Results from the chelation arm of the Trial to Assess Chelation Therapy (TACT) showed that infusions of a form of chelation therapy using disodium ethylene diamine tetraacetic acid (EDTA) reduced cardiovascular events by 18% compared with a placebo treatment. Investigators stated that more research is needed before considering routine use of chelation therapy for all heart attack patients. The EDTA-based chelation solution also contained high doses of vitamin C, B-vitamins, and other components. “This study sheds light on a scientific controversy that has previously been untested,” said Gary H. Gibbons, director of NHLBI. “We now know more about the safety and efficacy of this therapy than we did before the study. Further research is needed to fully understand these results before this treatment can be applied to the routine clinical care of heart attack patients. We do not yet know whether this therapy can be applied to most people with heart disease, which patients may potentially benefit from it, or how it may work.”

From 2003 through 2010, TACT investigators enrolled 1,708 adults aged 50 or older at 134 sites in the United States and Canada. Study participants had suffered a heart attack 6 weeks or more before enrollment (average was 4.5 years). They were assigned randomly to receive 40 infusions of either the disodium EDTA chelation solution or a placebo solution. Patients also were randomly assigned to receive high doses of oral vitamins and minerals or an identical oral placebo. Most participants also took standard medicines for heart attack survivors, such as aspirin, beta-blockers, and statins. They were followed for a minimum of 1 year and up to 5 years, with follow-up ending in October 2011.

The study assessed a composite primary endpoint that included death, recurrent heart attack, stroke, hospitalization for angina, and coronary revascularization (coronary stenting or bypass surgery). The TACT investigators reported a clinically modest, but statistically significant, benefit of chelation therapy compared with placebo infusions. Fewer participants in the chelation group (222, or 26%) experienced cardiovascular events than did participants in the placebo group (261, or 30%). There was no statistically significant effect on mortality. The study was not designed to have enough patients to detect a difference in mortality.

**FROM THE NATIONAL HEART, LUNG, AND BLOOD INSTITUTE (NHLBI): RESEARCHERS FIND GENE VARIANT LINKED TO AORTIC VALVE DISEASE**

A newly identified genetic variant doubles the risk of calcium buildup in the heart’s aortic valve. Calcium buildup is the most common cause of aortic stenosis, a narrowing of the aortic valve that can lead to heart failure, stroke, and sudden cardiac death.

An international genomics team called CHARGE (Cohorts for Heart and Aging Research in Genomic Epidemiology) found the variant in the gene for lipoprotein(a), a cholesterol-rich particle that circulates in the blood. CHARGE oversees genomic studies of 5 large study populations in the United States and Europe, including the Framingham Heart Study (FHS). “No medications tested to date have shown an ability to prevent or even slow progression of aortic stenosis, and treatments are limited beyond the major step of replacing the aortic valve,” said study coauthor Christopher O’Donnell, senior director for genome research at NHLBI and associate director of the FHS. “By identifying for the first time a common genetic link to aortic stenosis, we might be able to open up new therapeutic options.”

The CHARGE researchers conducted a genome-wide analysis of 2.5 million known genetic variants in a group of nearly 7,000 White participants. The analysis identified a variant in the lipoprotein(a), or Lp(a), gene that was highly correlated with calcification of the aortic valve, as measured by CT scanning. Follow-up analysis in more than 6,000 additional participants, including Hispanics, African Americans, and Chinese Americans, confirmed this correlation. The variant was present in about 7% of the study population, and the people who carry it generally had higher amounts of Lp(a) circulating in their blood. The function of Lp(a) is unknown, but it is associated with an elevated risk of heart disease. Another independent analysis carried out by CHARGE followed participants in Sweden and Denmark and found that people with the Lp(a) variant had higher risks of clinical heart valve disease and of needing valve replacement surgery.

“What makes these findings provocative is that we linked the genetic variant with a physiologic change in lipoprotein levels, disease precursor in the form of calcium buildup, and fully diagnosed aortic valve disease, across multiple ethnicities,” O’Donnell said. “The study suggests a causal relation between Lp(a) and aortic valve disease, but further work will be needed to see whether medications that lower Lp(a) levels can lower the risk or slow the development of valve disease.”