Authentication of key biological or chemical resources

No additional biologic or chemical testing will be done specifically for this proposal. Tests of cardiovascular disease risk factors in the blood and urine specimens collected from REasons for Geographic And Racial Differences in Stroke (REGARDS) study participants during the baseline in-home visits were processed, stored, and analyzed by the University of Vermont Laboratory for Clinical Biochemistry Research (http://www.uvm.edu/medicine/lcbr/). This laboratory has conducted biochemical tests for numerous large observational studies and trials and has established quality control procedures.

We will be abstracting the results of in-hospital cardiac testing, particularly troponin assays, from medical records and using those results to in the adjudication of myocardial infarction (MI). For these tests, we will be relying on hospital laboratories, which are required by United States federal regulations to have appropriate certifications in order to receive Medicare and Medicaid reimbursement. Although troponin is now a commonly conducted clinical assay that is a cornerstone of diagnostic testing for MI, troponin assays have not been standardized and the sensitivity of the assays is rapidly increasing. For this reason, we will abstract the upper limit of normal for each institution (and each testing method if more than one testing method is used in an institution) to aide in the interpretation of the results. In addition, consistent with American College of Cardiology recommendations, a single elevated troponin value will only be considered diagnostic for MI if other supporting evidence is very compelling, such as symptoms of severe ischemia and ST-segment elevations on electrocardiograms that strongly suggest MI.