

## **Diagnosis and Evaluation of CHD in Men and Women Prior to First AMI**

Coronary heart disease (CHD) is the leading cause of death in women in the United States. The recent proliferation of studies of women and heart disease suggest a gender bias regarding treatment and evaluation but have focused on women with diagnosed CHD often after the first myocardial infarction, ignoring the important pre-and peri-CHD diagnostic phase. Without consideration of CHD and its inclusion in the diagnostic evaluation, women may experience delays in the recognition and treatment of CHD and its risk factors which may further compound any gender bias occurring later in the course of disease. The recent vignette study that demonstrated a gender in primary care physicians' evaluation of chest pain further justifies the need for this work.

This study will focus on the important hypothesis activation or differential diagnosis phase. We will describe and compare the recorded CHD-related symptoms and the evaluation and diagnoses given to those symptoms in women and men during the ten years prior to their first acute myocardial infarction (AMI). In addition, we will describe and compare the recording, evaluation and treatment of CHD risk factors in the ten years prior to (the) first AMI. Using these data we will be able to identify gender differences in timing of CHD diagnoses prior to AMI, and differences in physician response to men's and women's recorded symptoms. Our extensive data collection will allow exploration of the association of other factors such as risk status, co-morbidity and age with gender differences in CHD-related testing or treatment. Control subjects (both men and women) who do not have known CHD will also be studied to explore the role of prior probabilities of non-cardiac disease in any gender differences noted in the evaluation of possible cardiac symptoms.

By using a retrospective or look-back design from the time of the subject's first AMI, it will be possible to assure that the subjects have CHD and to complete the study in a much shorter time and with greater efficiency than would be possible using a prospective cohort study. Using a community based population sample should eliminate referral bias and will allow access to data from the entire spectrum of care, from primary ambulatory to tertiary hospital care. The use of a more homogenous population will allow us to isolate and study in greater depth the issue of gender difference.

The information obtained will help fill the gap in existing knowledge regarding gender bias or differences in the recognition and evaluation of CHD in men and women. In addition, we will provide specific information on current practice patterns and gender-related differences, information that can be used to inform future practice recommendations.