Although deaths from heart attacks have been steadily decreasing for most of the population, they have been increasing among younger women (<55 years). This trend is even more pronounced among African American women. To reverse this trend, it is important to recognize the many factors that contribute to the difference in the incidence of heart disease. In this month’s Spotlight on Health, we discuss how and why heart attack differs between genders and races.

Heart Attacks in Women vs Men

After having a heart attack, young women have higher mortality rates than men of similar age. Factors that account for this disparity include differences in risk factors, delays before treatment, and treatment strategies. Compared to men, women who have heart attacks are more likely to have the traditional risk factors: diabetes, hypertension, dyslipidemia, and/or obesity. Younger female patients are more likely to be smokers. In addition, women are more likely to have heart failure or to have renal failure or depression, which are associated with heart disease.

Symptoms of heart attack can look very different in women than in men. Most patients experience chest pain or discomfort, but women are more likely to present with atypical symptoms such as upper back, stomach, neck, jaw, arm, or shoulder pain; generalized weakness or anxiety; unusual fatigue or shortness of breath; dizziness; or indigestion. Thus, women may not realize they are having a heart attack and therefore might not seek medical attention right away. When treatment is delayed, heart damage is more extensive and the mortality rate increases.

Women are less frequently referred for appropriate treatment than men. Healthcare providers, like patients, may misinterpret symptoms, and the cause of heart attack in women can be more difficult to determine. On presentation, treatment is less aggressive: women are less likely to receive angioplasty or bypass surgery. After a heart attack, women receive fewer guideline-directed medications, even though these drugs show similar benefits for men and women. Finally, fewer women than men are referred for cardiac rehabilitation.

Heart Attacks in African American Women

African American women are more likely to have a heart attack than women of all other racial and ethnic groups. In addition, their survival rate is lower than that of white women. There are many reasons for these disparities. African American women tend to have more comorbidities than white women, including hypertension, diabetes, kidney disease, and heart failure. Stress and depression caused by lower income (<$35,000 per household per year) are additional risk factors that are disproportionally borne by African American women.

Coronary Heart Disease (CHD) Statistics for Women

Each year in the United States:

- 6.6 million women have CHD
- 2.7 million have a heart attack
- >53,000 die from a heart attack
- More women (26%) than men (19%) die ≤1 year after their first heart attack
- More women (47%) than men (36%) die ≤5 years after their first heart attack

Heart Attacks Among Women

The following types and causes of heart attacks are more common among women than among men:

- Non–ST-segment elevation myocardial infarction (NSTEMI) vs STEMI
- Plaque erosion (vs rupture) as the primary cause of coronary thrombosis
- Coronary microvasculature disease vs obstructive coronary artery disease as a cause of heart attack
- Rare causes such as spontaneous coronary artery dissection and coronary artery spasm
What Can Be Done?
Healthcare providers can:

• Increase awareness that cardiovascular disease is the leading cause of death among women (only 56% of white women, 36% of African American women, and 34% of Hispanic women know this).6
• Increase awareness of cardiovascular risk factors in their female patients.
• Recognize that the symptoms and presentation of heart attack may look very different in women than in men (and make their patients aware of these differences).
• Refer more women to cardiac rehabilitation programs.
• Adhere to guideline-directed pharmacological therapy.

How Quest Diagnostics Can Help
Quest offers the ASCVD Risk Panel with Score, which provides the 10-year and lifetime risk of atherosclerotic cardiovascular disease (ASCVD). The score is based on age, sex, race (African American or not), lipid results, systolic blood pressure and treatment status, diabetes status, and smoking status. The panel can be ordered with a Cardio IQ® report, which includes color-coded risk categories, comparison of current results to previous results, and a graphic display of lipid subclass distribution. The report can be used as a tool for patient education.

In addition to assessing baseline health, the Cardio IQ report can be used to guide and monitor response to therapy based on the results of advanced cardiovascular tests. These tests measure lipid, inflammation, heart failure, metabolic, and cardiovascular genetic markers and can be ordered separately or as panels.

Additional Information
• For more information about ASCVD risk, refer to the Atherosclerotic Cardiovascular Disease Risk: Assessment and Management white paper.