

# The Center for Women's Heart & Vascular Health

Women are more likely to die from heart disease than cancer, and less likely to receive appropriate treatment than men. Director **Dr Stephanie Coulter** explains how the Center is addressing the gaps in diagnoses, treatment and research

## What are the core aims and objectives of the Center for Women's Heart & Vascular Health?

We started the Center for Women's Heart & Vascular Health to address significant gender gaps that exist in cardiovascular medicine by educating women, and physicians caring for women, about preventative strategies as well as investigating the causes of excess cardiac risk in minority populations.

Our approach leverages the Texas Heart Institute's (THI) strategic advantages in research and education to improve diagnosis, treatment and prevention of cardiovascular disease (CVD) for women. Our programmes are centred on three main areas of research: professional education, public education and outreach to women in the community, particularly women who are medically underserved.

## Could you explain the Center's position within THI at St Luke's Episcopal Hospital?

THI at St Luke's Episcopal Hospital is renowned for its expertise in groundbreaking research and translating that research into improved medical care and outcomes.

The Center for Women's Heart & Vascular Health is collaborating with established organisations to provide previously unavailable screening services and research that will lead to the development of effective interventions for historically underserved populations. We also expect this collaboration to act as a model for a community-based programme that can be copied or modified and implemented in this region and elsewhere in the world.

The screenings collect valuable information that will be combined in an unparalleled historical, biostatistical database at THI that will be used to identify critical cardiovascular trends in groups traditionally underrepresented in research: women, non-whites and people of lower socioeconomic status. Data will be used to advance a more comprehensive, government-sponsored study on women and heart disease.

THI's vision is to become the world leader in cardiovascular research and education. Unlike most nonprofit organisations that have a source of operating revenue, the Institute relies entirely on government grants, research contracts and – most significantly – philanthropy to achieve its goals of pioneering research and education for the prevention and treatment of heart disease.

## Why is less known about cardiovascular disease (CVD) in women than in men?

Women have been studied far less frequently than men. Only 25 per cent of cardiovascular research includes women.

In addition, women with cardiovascular disease often present with symptoms when they are older and have higher co-morbidities. Unfortunately, the symptoms of heart disease can be very different

in women than they are in men, and are often not recognised, undertreated or ignored.

## Almost 43 million American women have heart disease – 600,000 of whom live in Texas. What are you doing to raise awareness of this disease and its symptoms?

Our public education and outreach programme includes various communication channels including an award winning website (just under 5 million visitors in 2012), screening and outreach clinics, expanded community collaboration, symposia, speakers bureaus, and a new peer-to-peer support group in partnership with the national WomenHeart Hospital Alliance.

Physicians at THI, including advisors to the Women's Center for Heart and Vascular Health, are also available to answer questions submitted to Ask a Texas Heart Doctor 24 hours a day. This allows the public to gain a better understanding of the prevention, diagnosis and treatment of cardiovascular diseases and we receive calls from more than 90 countries around the world.

## 30.7 per cent of Mexican American women and 48.9 per cent of African American women have CVD. How are you aiming to tackle disparities in CVD prevalence and treatment?

We first need to find out why this is the case, in order to understand it better and fill in the research gaps.

We are actively investigating the burden of cardiovascular risk factors on racial groups in our local community. The Houston, Texas, area is home to an ethnically diverse population with a cluster of risk factors that are ideal for studying these disparities. Demographers also tell us that Houston is a demographic and cultural bellwether for what the US in general will look like in the middle of the 21<sup>st</sup> Century.

For example, we have partnered with a community group, Neighborhood Centers Inc. to provide cardiovascular risk screening consultations and treatment to women served by these individual centres. We are collecting data on the prevalence of important cardiac risk factors in these diverse racial groups, and from this data we hope to target risk groups with education as well as blood pressure and cholesterol treatment.

Ultimately, this idea is to use the data to develop strategies to address the specifics, including effective interventions and culturally appropriate messages about prevention.

## Could you highlight some of other projects underway at the Center?

We hope to expand the Houston Heart Reach for Women and make it a model for imitation. Our preliminary results demonstrate both the feasibility of our model and value of this project. Its success is already attracting additional funding and in February, we were awarded The Heart to Heart grant from the national Alpha Phi Foundation. This will allow us to collect pilot data that has the potential to support a larger study with far reaching impact on women around the world.

5X

Women are five times more likely to die of cardiovascular disease than breast cancer

43 Million

Almost 43 million American women have heart disease

30.7%  
48.9%

30.7 per cent of Mexican American women and 48.9 per cent of African American women have CVD

25%

Only 25 per cent of cardiovascular research includes women

20%

Treating depression in women could reduce aggregate risk by as much as 20 per cent

80%

While heart and vascular disease is the number one killer for women, at least 80 per cent of cases are preventable

This project also includes screening for depression. Recent health information suggests that depression may be an independent CVD risk factor which, if treated, could reduce aggregate risk by as much as 20 per cent. This hypothesis is based on preliminary data from a population with known heart disease, where women were twice as likely as men to be depressed, and the depressed women were twice as likely to have a second cardiac event.

#### **Women are less likely than men to receive appropriate treatment after a heart attack. Why is this so, and what is being done to correct this?**

There are a number of reasons why this is the case. Women present with symptoms more frequently and later than men and endure symptoms longer before seeking help. Thus, women's experiences can be very different than men's. Those who treat women, as well as women themselves, are often unaware that a heart attack has occurred. The vast majority of doctors don't know about these disparities and women too often go undiagnosed or under-diagnosed, or they are diagnosed late.

Women often present to local community hospitals and doctors where treatment is often less aggressive. One key issue is to do a better job of educating primary care givers, gynaecologists and other medical professionals who regularly see women, as well as the women themselves.

Finally, many women are the medical gatekeepers for their families, making sure their children and spouses get medical care but, for a variety of reasons, they often put their own care needs aside. Sometimes they say they just don't have time. Many don't associate warning signs with cardiovascular disease because it is generally perceived as a man's disease. So changing these attitudes has to be a part of the solution.

#### **In a video that has since gone viral, American star Barbara Streisand recently discussed the stem cell research being conducted by the Center's very own Dr Doris Taylor, revealing how it could have a significant impact on both women and men. How important is it that the public is kept abreast of research efforts?**

Stem cell research is very important and I applaud Barbara for her dedication to women living with cardiovascular disease and acknowledging Doris Taylor's work. All efforts to keep the public informed of the progress with stem cells and regenerative medicine are critical to translating stem cell science into clinical solutions for patients.

Our healthcare system is burdened by costly treatments for our ageing and increasingly ailing population. The best way to significantly improve our current system is to prevent disease altogether and awareness efforts should continue. Unfortunately, this does not solve all of the problems for cardiovascular disease, which is at the top of the list of our most burdensome diseases worldwide and we need research efforts to continue.

Stem cell research is helping us to give us a better picture of many diseases and could help us understand the differences between diseases in men and women at a cellular level.

THI leads the world in stem cell research and now Dr Doris Taylor's lab, with others, is pioneering the emerging field of regenerative medicine providing hope for many of our patients and millions more around the world.

#### **From a personal standpoint, what led you to pursue a research career in the field of CVD?**

Cardiovascular disease is a largely preventable cause of death and disability, yet it is still the most common cause of death in the Western world. This leads me to believe that something should and must be done. I trained during the era of great scientific and clinical advancement on the diagnosis, treatment and now the prevention of CVD. The excitement and improvements in the field helped encourage me to pursue this career.

#### **Finally, how important are events to the Center's overall remit?**

The Women's Center, with THI's world-renowned continuing medical education programme, conducts an annual one-day symposium geared to doctors who see women most. The annual Risk, Diagnosis and Treatment of Cardiovascular Disease in Women symposia have been very well received and attended for the past three years. In addition we produce a special section in the *Texas Heart Institute Journal* that includes papers on the topics from the symposium. The journal is sent to 45,000 cardiologists throughout the world. In addition, this year we will mail the special section to over 6,000 internists, ob-gyns, family and general practitioners, endocrinologists, nurse practitioners and ER doctors in Texas. Finally, I and other THI doctors lecture on women's CVD in other medical venues.

We are holding our fourth annual symposium on 19 October, 2013, and this year we will hope to extend the continued education hours to nurses who are integral to our healthcare system and who are often the first to interact with women in the healthcare setting.

  
TEXAS HEART INSTITUTE  
at St. Luke's Episcopal Hospital

The Center for  
**WOMEN'S HEART &  
VASCULAR HEALTH**



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