

Candace McClure  
Student Gallery

- Please describe your **Background**

I had always aspired for a career in medicine; however I did not desire to be a physician, nor a bench scientist. As a junior in college, I was still unsure of how I would contribute to the medical field. An internship search the following summer led me to the Magee-Women's Research Institute (MWRI). At MWRI, I was introduced to the field of epidemiology. I was given the opportunity to apply the knowledge and skills gained in my favorite courses (developmental biology, cellular and molecular biology, research methods, and statistics) to a single project. It was in epidemiology that I had found my niche.

As an intern, I became interested in women's health; specifically issues surrounding pregnancy. To pursue epidemiology, I applied to the University of Pittsburgh Graduate, School of Public Health (GSPH).

I was subsequently invited to interview for a graduate student researcher (GSR) position with Dr. Sheryl Kelsey to work on the National Heart, Lung, and Blood Institute-sponsored Women's Ischemia Syndrome Evaluation (WISE) study. As a GSR on WISE, I became well-versed in the physiology and epidemiology of cardiovascular disease (CVD) in women.

Although I enjoyed my work on WISE, I had not lost my desire to impact the health of pregnant women and infants. I interned at the New Hampshire Department of Health and Human Services Maternal and Child Health (MCH) Division researching the relationships between pregnancy and pre-conception factors and adverse birth outcomes.

I also decided to focus my dissertation research on a pregnancy related issue. I designed a study with specific aims 1) to determine the epidemiology of acute poisonings in women of reproductive age and during pregnancy and 2) to investigate the effects of acute poisoning during pregnancy on birth outcomes.

Following graduation, I searched for employment at an academic or research institution. My greatest strength moving forward in my career was my ability to apply epidemiological methods to a variety of disease states. I became a well-rounded researcher from my experience and training in women's health, CVD epidemiology, observational cohort studies, clinical trials, injury epidemiology, and maternal and child health. However, in the same turn, my greatest weakness was my lack of expertise in a narrowly defined area.

Today, I am using my strength to overcome my weakness. I was recommended for a post-doctoral position in CVD epidemiology at the University of Pittsburgh under the direction of Dr. Kim Sutton-Tyrrell. Dr. Sutton-Tyrrell's primary research focus is subclinical CVD. When we discussed my interests in pregnancy and my knowledge of CVD in women, she suggested that we merge my two research interests. Now I have a long-term goal of building a research program with the potential to assess adverse birth outcomes and future risk for CVD by measures of maternal vascular adaptation to pregnancy.

- **Areas of Interest and dissertation work**

I am interested in the interrelationships between reproductive and cardiovascular health. Most recently I have been working on developing a pilot study aimed to examine maternal vascular adaptation to healthy pregnancy. The cardiovascular demands of a normal pregnancy are substantial and vascular remodeling is required to handle the increased circulating fluid volume. The ability of the body to successfully deal with this challenge likely determines whether or not the pregnancy is a healthy one. By understanding the normal pattern of vascular adaptation and the degree to which the arterial system is “stressed”, we may be able to better understand vascular abnormalities with pregnancy and possibly detect them at an early stage. In addition, adverse pregnancy outcomes are known to place women at increased risk of cardiovascular disease. It is not yet clear whether women with an underlying predisposition to CV disease are at risk for adverse pregnancy outcomes or whether there is something about the adverse pregnancy outcome that in and of itself carries risk.

I have also been investigating the impact of lactation on future cardio-metabolic health using data from the Study of Women’s Health Across the Nation Heart Study data.

- **Remote training experience:**

I will participate in a remote training experience to foster cross-institution collaboration; however, the details of this experience have yet to be determined. In the past I have collaborated with investigators at other sites and have traveled to attend meetings or training. I found these experiences to be worthwhile opportunities to learn varying perspectives and new skills. It also enabled me to create a larger professional network.

- **Perspectives on the program –**

One of the major advantages of being a CVD trainee at Pitt, and the one that I value the most, is autonomy. I have the opportunity to explore areas of research that are of specific interest to me. I am given the time and resources to develop in-depth knowledge in a defined area that I can build my career upon.

Other advantages of the program include numerous resources available to trainees. These include:

- **Intellectual resources:** Trainees are encouraged to work with experts in their fields interest, whether they are here at Pitt and UPMC or at other universities or research institutions.
- **Professional resources:** Professional development workshops are offered as are opportunities to take additional classes.
- **Networking opportunities:** Trainees are encouraged to attend professional meetings to broaden their network.
- **Facilities:** The Ultrasound Research Laboratory is well established and is involved with numerous studies.

**Advice to current and prospective students:**

Take advantage of the opportunities available to you. Think big. If you have ideas that are scientifically sound and that you are excited about, you will likely find ways to pursue them.

**• Future Plans and opportunities:**

My ultimate goal is to become an independent investigator and epidemiology/public health professor. My NRSA post-doctoral fellowship will provide me the opportunities to reach these goals. Toward the conclusion of my fellowship, I plan to apply for a K award and subsequently enter the academic arena where I will pursue an independent research program and both teach and mentor students.