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Research for me is like a puzzle, an answer lies within the pieces waiting to be solved.

What I love about interning under a research mentor is that not only are you able to assist your mentor with solving their mystery, but you are also able to create your own and seek out your area of interest. This summer I was exposed to the research process in more depth and allowed to piece together my own puzzle and identify very interesting trends in data.

This summer, I helped Dr. Terry in her epidemiological lab with two of her studies. The first one was a pilot study, and I entered descriptive data from participants' initial visits into the database. This survey asked participants about their use of alcohol and tobacco, family history, and pubertal development. This was a learning experience as I was able to catch a few errors in the line of questioning that may have been misleading participants and to recognize trends in the data. Together, we were able to work together in tweaking the way the data was entered and adjusting the line of questioning for the next survey. Even within this process, I noticed that certain behaviors seemed to be related simply from reading these surveys.

The second study I worked on was the U01 study, which follows mothers and their daughters, recording the pubertal timing for both, the environmental exposures of the mothers while pregnant, and the exposures and activities of the daughters. I ensured that each biospecimen (urine, saliva, blood, and serum) recorded on paper corresponded to those on the electronic file, organized the files, and checked that all requirements for each visit were met for each participant. I was given the opportunity to sit-in on an appointment as the interview was done and watch as the body measurements were taken and the blood was drawn. It was

interesting to be able to associate the actual process of obtaining the data with the paperwork I had been going through.

One of the best parts of my internship was being able to help craft a teen cancer education curriculum. I helped with this last year, but this year we considered ways to make the presentation engaging and easily applicable to teen life and began collaborating with an outside environmental organization. I was able to attend meetings on this front and assist with a similar adult breast cancer curriculum. It was great to be able to help pioneer a new project and I felt so honored to be a part of such a process.

My project was “Vitamin D Intake Status and its relationship with Race, Season, Pubertal Development, and BMI Measurements in girls ages 5 to 15.” I created this project to examine the prevalence of Vitamin D deficiency in adolescent girls and did so using a de-identified dataset from the lab’s LEGACY Girls Study. Using combined guidelines from the Food and Nutrition Board and CDC, I found that overall, 35% of the girls were in the optimal range, 47% adequate, 15% inadequate, 2 % insufficient, 1% excessive, and 0% dangerous (overconsumption of the nutrient). I worked with one of the doctors to run a linear regression model and found that race/ethnicity and season of blood draw were statistically significant to Vitamin D levels in the model. Based on these results, I concluded that most girls had sub-optimal Vitamin D levels and only race and season were related to Vitamin D levels.

My internship this summer was a great learning experience and gave me a better understanding of epidemiology in relation to breast cancer. I enjoyed learning about the fundamentals of research, working on the education project, and being able to conduct my own research. I helped with my mentor’s “puzzle” by helping with data entry and the education initiative and put together my own in my research on Vitamin D deficiency.