Isabella Rosa Nanini

Mr. Speice

Independent Study and Mentorship II 3B

22 January 2018

Observation Assessment

Type of Observation: Observed a Heart Transplant

Mentor: Dr. Timothy Pirolli

Location: Children's Health Medical Center- Dallas 1935 Medical District Drive Dallas, Texas 75235

Date: Wednesday, January 10th 2018

Time: 8:30am to 1:00pm

Assessment:

Coming into this eventful observation date I had no idea I was about to watch the beauty and innovation of medicine right before my eyes. It is impossible to schedule a student observer for a heart transplant since they happen at random times, so it was a great coincidence that the case I was scheduled to observe got cancelled for a heart transplant. Although this surgery is pretty unrelated to the specific topics I have been researching in my assessments and my original work product, it allowed me to encounter a side of pediatric cardiothoracic surgery I had yet to encounter.

Through my Independent Study and Mentorship journey I have learned that there is no limit to learning when it comes to my topic, pediatric cardiothoracic surgery. My knowledge of heart transplants extended to what Grey's Anatomy had taught me, and the whole experience

overall seemed like a less dramatic Grey's Anatomy episode. The case was a 13 year-old child who has collapsed in the middle of his basketball game due to a heart attack. Fortunately his coach performed CPR quickly and the hospital was able to get him on a bypass machine. I had the opportunity of meeting Traci, a soon-to-be pediatric cardiothoracic surgeon, who in kindly explained his heart attack for me. A normal healthy heart has two coronary arteries coming of the aorta. The right coronary artery feeds blood to the right heart muscle and the left coronary artery feeds blood to the left heart muscle. The right heart muscle pumps blood to the lungs, and the left heart muscle pumps blood to the body, making the left coronary artery extremely important. In this patient's heart left coronary artery was malformed which caused constant constriction when feeding blood to the left heart muscle. During this patient's basketball game this patient's coronary artery completely constricted causing the left heart muscle to die. Due to the lack of blood feeding the body this patient's organs began to fail, so a heart transplant was urgent. I arrived during the dissection of the heart from the body. The patient had already been attached to the cardiopulmonary bypass machine and the dissection was almost over and the heart team was waiting for the donor heart. Once the heart was completely dissected the surgeons placed the heart on the table and Traci showed me the heart beating alone on the operating table, she reviewed with Dr. Pirolli, this patient's heart anatomy which confirmed the diagnosis of this patient's malformed left coronary artery. Once the donor heart arrived on a cooler it was removed from its container and cut to fit the patient's chest, arteries, and veins, and with the innovation of pediatric cardiothoracic surgery I was able to see this heart come back to life and beat again and a life being saved.

This surgery reminded me of the beauty of the impact of pediatric cardiothoracic surgery. Within hours a patient who came so close to death at such a young age now has a chance in life, and I want to one day be able to be part of the team of medical professionals who made this happen. It is beautiful how so many professionals can come together and perform a life saving surgery.