Reflection Essay on Shadowing Experiences

In my exploration of shadowing experiences, I have had the opportunity to be in diverse environments that have aided my understanding of both healthcare and engineering. The virtual shadowing experience at the UCSD Burn Center exposed me to the intersection of medical science and technology. The use of advanced medical technology, such as biologic skin replacement (transite) and pressure garments, showcased the collaborative nature of healthcare. This experience, though it can be considered not directly aligned with my interest in mechanical engineering, showed me the critical importance of interdisciplinary collaboration in achieving comprehensive care.

Comparatively, my shadowing experience at Flow Serve, (with Neil as my mentor), delved into the realm of mechanical engineering. Neil, a Mechanical Engineer and manager of research and development was a window into the design process for pumps. The workflow involved months of development, testing, and redesigning to meet client specifications. The team approach in this engineering workspace was cumulative, with employees contributing their expertise to different parts of the project. The environment was as laid-back, hands-on, and friendly, showcasing the collaborative nature of their work.

The third shadowing experience, which was with a Clinical Engineer Jay Kupiszewski, offered a unique perspective within a hospital setting. Exploring various hospital floors, including the NICU, I learned all about medical equipment maintenance. The clinical engineering team's workshop, although cramped and messy, was an effective and community-based workspace. The team's approach involved everyone working on individual projects, with the managers actively participating during staffing shortages. The success of their

work was measured by the department's invisibility to hospital patients, which in turn showed their commitment to aiding in patient care in respect to equipment functionality.

Reflecting on these experiences, I see the common thread of interdisciplinary collaboration in both healthcare and engineering settings. The virtual shadowing at the UCSD Burn Center showcased the blending of medical professionals and advanced technology, which in turn showed the importance of teamwork. Similarly, the mechanical engineering setting at Flow Serve showed the cumulative nature of a team's efforts in achieving their project goals. Finally, the clinical engineering experience exhibited the importance of effective communication and community-based collaboration, even with the challenges of a crowded workspace.

Mentors played a big role in shaping my perspective and growth. Neil's insights into mechanical engineering, the team dynamics at Flow Serve, and the intricate design and testing processes gave me valuable lessons. Jay Kupiszewski's guidance in the clinical engineering setting offered firsthand knowledge of equipment maintenance and the challenges of a busy workshop. These mentors contributed significantly to my understanding of the chosen career paths and broadened my view of the possibilities within healthcare and engineering.

The most important lesson I had from these experiences is the recognition of the interconnectedness of different fields. The collaborative nature of healthcare and engineering is a core aspect that exists regardless of individual disciplines. The important role of teamwork, effective communication, and problem-solving has left a lasting impact on me.

Looking forward, these reflections will alter my approach to future shadow opportunities. I will try to look for interdisciplinary collaboration, seeing the value of different perspectives in achieving cumulative solutions. In conclusion, the analysis of my shadowing experiences has given me a better understanding of the interconnectedness of healthcare and engineering. The

knowledge I have gained from mentors, the comparison of experiences, and the recognition of lessons will shape my future interactions in these fields. When I go on upcoming shadow opportunities, I am better equipped to create a different and better experience for my growth in the worlds of healthcare and engineering.