

Venturing into Healthcare Innovation

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UMMS Capstone for Impact

Branch: Systems Based, Hospital Based

Project Summary

The purpose of my impact project was to gain experience and advance my knowledge regarding healthcare innovation. Particularly I identified three stages of innovation: (1) Development and Experimentation, (2) Commercialization, and (3) Implementation and integration. I was especially interested in learning more about the first two.

In order to achieve this goal, through the branches, I arranged a month where I could work with a local venture capital firm that deals in consumer-based healthcare technologies. This specifically targeted the 'commercialization' stage of innovation. I conducted research on possible investments by working as a consultant: using my knowledge of the medical field and research skillset, I helped Three Leaf Ventures analyze the costs/benefits and potential value to the consumer for various medical devices. I examined, hands on, how resources are assigned to an invention and what type of processes are needed to refine the product for release.

While I was able to observe, second-hand, the 'Development and Experimentation' stage during my time with Three Leaf Ventures, I wanted first-hand experience as well. I started a Sling Health team, and we have been working on developing a prototype 'SteadyScope' which acts to stabilize colonoscopes. We hope to reduce patient complications for polypectomies and increasing the ergonomics and comfort for those performing the colonoscopy. We have participated in 2 Design Reviews and are continuing to work on our project throughout the end of the year.

Action Items/Outcome

My time with the venture capital firm has given me experience that I could not have gained anywhere else. This experience stood out on my residency application and was brought up in every interview I had this year. My time with Three Leaf Ventures has helped shape my perspective on medicine and, throughout the year, I have been working on a summary/PowerPoint of the main points I learned. I hope to keep this as a reference for myself, but also for future colleagues/residents to share the perspective I gained and to demystify the healthcare innovation environment in general.

Furthermore, because of experiences like these I was consulted in FirstWord Dossier report 'Ambitions in Health: Tech companies step up the pace' to provide insight based on my experiences.

Additionally, as mentioned earlier, I have been leading a Sling Health team. We have completed two design reviews and have a working prototype of the SteadyScope. We are currently working on getting endoscopist feedback and planning small trials.

Conclusion/Reflection

The experience I had during my impact month, and throughout the year, have been invaluable to me personally and professionally. My month with Three Leaf Ventures was perfectly timed as my mentor was attending a conference in San Diego and over 80 start-ups had requested a meeting with him. Because of this I was able to take several small companies and potential start-ups, perform an in-depth review, and act as a medical consultant. For a select few, I was able to participate in conference calls with CEOs, engineers, and physicians, and work with the team to perform extensive business analyses of these products. As I mentioned, these experiences made me a unique applicant for residency and played a vital role in my application. Because of the experience I gained this year, I have new and exciting career goals. I feel prepared for the technological expansion that is coming to healthcare (and is already here with Fitbits, Apple Watches, etc.), and I am ready to play my role influencing the technology that will be developed in the coming years as well as how my patients use them in the future.