



Urgent Care Medical Device Analysis: Bridging Bioengineering and Clinical Practice



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Site Information

Site Name: FirstCall Medical Center -
Maple Lawn

Supervisor: Elizabeth Steinberg, PA

Address: 10981 Johns Hopkins Road,
Laurel, MD 20723

Website: www.firstcallmedicalcenter.com/laurel-maple-lawn/

Mission: To make communities a healthier place by improving access to healthcare while simultaneously lowering healthcare cost.

Introduction

This past winter, I shadowed a physician's assistant at an urgent care medical center. Following the PA, I observed patient assessment and treatment workflows while gaining exposure to basic medical assistant tasks including room preparation, vital sign collection, bedside manner, and patient board management. I also researched and presented findings on various basic medical screening devices.

Issues Confronting Site

Just like many other medical facilities, FirstCall had been experiencing severe understaffing especially since the pandemic. There were also issues with medical devices not working as intended as well as a lack of how they work. This led to wasted time, unclear or incorrect results, and overall frustration amongst staff.



Beth Steinberg (Right) and myself in the FirstCall lab



A typical examination room at FirstCall

Activities

- Analyzed clinical workflow and patient management
- Assisted patient intake and vital sign collection
- Researched medical device function and use
 - SmartHeart ECG
 - Urispec Plus Urinalysis Analyzer
 - Eko CORE Smart Stethoscope

Future Work

The site itself continues to find ways to provide accurate and affordable healthcare to its patrons. This means researching and purchasing reliable medical devices. As for myself, I hope to continue my work there as a medical assistant over the summer. In doing this, I hope to gain even more knowledge on medical devices currently offered, understand their use, and ideate improvements.

Impact

In my time at FirstCall, I was able to provide an engineering perspective to the medical field amongst the people I worked with. I translated technical knowledge into a better understanding for providers and staff at the center. I also gained a better understanding of devices that exist and gained exposure to the types of machines I want to improve and develop in my own future. The experience reinforced my desire to enter medical device manufacturing and gave me a patient and clinician focused design outlook. I know that devices not only need to work, but need to be understood by those using them and receiving their benefits.

Acknowledgements

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Practice suture kit that I used on site

