

HMW statement:

How might we detect and communicate medical emergencies to receive fast and accurate first aid.

The broad spectrum of my research is Personal Health care. This research focuses on different types of methods and techniques that can be used to detect and communicate medical emergencies. In the age of wearables and big data my research tries to find the niche where artificial intelligence communicates medical emergencies without any human intervention.

Why is this important?

Medical Errors Are Third Leading Cause of Death in the U.S.

The right treatment can be promised only when the detection of the medical problem is accurate. More so when the time to detect and diagnose is less, i.e during an emergency. During any kind of emergency time is a major factor and thus, a technology that can help detect, and communicate emergency without human intervention would come as a boon. This may help save many lives in the ER.

During an emergency medical aid is available only after 911 is called or the medical aid is informed. In both cases the damage to the human body has to be diagnosed. This whole process takes a lot of time. My research will have two major questions to answer:

1. Which vital stats of the human can detect an emergency, and how?
2. How can an emergency be communicated with human intervention?

Research Strategy:

Phase one:

Secondary research - collecting information and data to support my rationale and strength my research proposition.

Phase two:

Secondary research - In person Interviews

Target : Doctors, ER team, Medical practitioners and Medical Professors.

Focus: to understand which human vitals can be recorded to detect emergency and how.

Phase three:

Primary research - Ethnographic research

Target : People of different age groups brought to the ER

Focus: To understand the different types of emergencies.

Phase Four:

Analysis - analysis of the Data collected will equip me with further questions to base my in depth research on.

This will also form the initial design brief of my proposal.

Phase Five:

Focused research - Collecting information on the technology available to answer the questions raised by my research

Target: Technical experts in the biomedical domain.

Focus: to understand the technical implications of my proposal.

Formulating the first draft of my proposal

Phase Six:

Focused research - Ethnographic research

Target: to test the proposal with different age groups.

Focus to understand the comfort level and aspirational values of the target user.

Forming the revised design brief.

Phase Seven:

Focused research - Validation

Target: To test the proposal with a select group of ideal users for a speculated period of time and understand its viability and the problems faced.

Focus: Validation of the final proposal

Phase Eight:

Analysis: This Phase will help me formulate and detail out my proposal, with respect to system design, innovation, business opportunities and integration and intervention with the current existing system.

Resources required:

My primary resources would be medical practitioners and ER team.

I would also closely work with different technicians and biomedical to understand the technical details.

Different hospitals, medical institutes and companies functioning in the field of biomedical will form the target audience for my interviews.

I plan to get in touch with these through my network and also approach a few government organisations for authentic data.

I would also require the help of existing market experts to understand the economic factor of my proposition, which I plan to avail through the rich faculty at parsons

This research will be presented to investors as a new business idea to develop an integration and full proof system to assist emergencies.