

## Project Deliverable B: Need Identification and Problem Statement

By: Abdel Baig, Bilal Ahmed, Yazan Elmasry, Ali Al-Zaidi, David Onoruvwe

Due Date: Sunday January 26th, 2020

GNG1103 Section #C

Team #7

The problem is that there is a growing epidemic of opioid overdoses amongst opioid users. An opioid is a drug that causes sedation and euphoria and includes other drugs such as morphine, oxycodone, etc in order to provide pain relief for an individual. However one can easily overdose on this powerful drug. We are essentially working to increase harm-reduction efforts in order to get rid of opioid overdoses, especially the ones that occur within rural communities or in the privacy of one's own home. Currently, there is a lot of stigma and discrimination that opioid users face on a daily basis with various barriers to existing services. Such terminology includes junkie, druggie, addict, etc. Using this type of vocabulary around a user can contribute to feelings of self-consciousness and eventual depression. This is an emotional harm that drives one to use opioids which can lead to overdose or even worse, death. Instead of this, an opioid user should be described as "a person who uses drugs" or "substance user." This is the first step that leads to decreasing discrimination amongst opioid users. The electronic device that our group will create for our target audience of opioid users must satisfy and meet all of their needs. The electronic device must be non-intrusive, easy to use, cheap, resistant to water (albeit not fully waterproof), and discreet. This factor is very important because the product must not be identifiable to other users due to the fact that an opioid user will not want other individuals to know whether he or she is taking drugs. However, an important feature of the device is that it should have a built-in GPS (Global Positioning System). This system should only take into effect when the user has overdosed which will then send a notification alert to a nearby paramedic, thereby telling them the location of the individual.

As aforementioned, there are various needs that must be met for the device that will be worn by the opioid users. The most important need is that the device must be easy to use. This is the most important one because if the device were more complex, the user would not know how to use it, thus rendering it useless. The second important need is that it must be discreet. This is also an essential need because most if not all opioid users do not want others to know that they are taking opioids. If the watch is hidden from plain sight, or instead masked as a regular watch, then others won't know that they are opioid users, thus reducing the prejudice against the users. The third important need is that the device must be non-intrusive. This is so that the watch does

not come into the way of a user's daily activities. Opioid users should be able to have the device on them throughout their daily routine. The device will have a GPS tracking system that is only enabled when the user has undergone an overdose. At all other times, the system is turned off so the user can feel at ease and not worry about someone tracking their every movement. The fourth need is the cost. Although cost is deemed essential for heavy opioid users, users will be inclined to invest in a device which can ultimately protect them from an overdose. However, the cost is still a pivotal need for users who cannot afford such a device (i.e. homeless individuals). The last need is waterproof capability. This falls as the least important need due to the fact that since the device is produced on such a low budget in a short timeframe (i.e. two months), the watch's materials won't be very water-resistant.

In conclusion, after carefully prioritizing the various needs of the user, we have developed the following problem statement; a device for opioid users which will decrease the risk of opioid overdose and increase harm-reduction efforts amongst users.