ANTIDOSE
Requirements Outline

Purpose

- Use technology to help curb BC's overdose crisis.
- Connect naloxone kits to people having an overdose.
- Reduce the time for a first responder to arrive on scene.
- Reduce the number of overdose deaths in BC per year
- Create a mobile application to achieve above objectives

Demographics

Responders

- People already involved in volunteer organizations such as Cool Aid Society
- People who have been trained and own a naloxone kit
    - One main demographic of these people are young adult, and could be attending parties or festivals
- Those with some level of first aid response training
- Those in larger metropolis areas. Smaller more rural areas may benefit from the application as well, but lower user population density is worse for the app and overdose response.

Requestors

- Experimental, recreational or dependent drug users of drugs that could be laced with fentanyl
- Spotters of any drug users
- Abstainers in the presence of an overdose emergency

Requirements

Functional Requirements

Responder side:

- Register with a phone number and name

    - The system will use text notification to ensure the user is in possession of the phone they are registering with
- Be able to toggle their availability on and off which will allow/prevent them from being contacted
- Be notified when there is a nearby overdose emergency
- Be able to accept or deny response to an overdose emergency
- Be provided navigation information once a request has been accepted
- Be provided with life-saving information at any time in the app

Requestor side:

- Easily be able to contact help in the nearby area, (should text an emergency help number and also alert nearby responders). This should not require a registration or login
- Be shown information on the number of responders in the area, the number of responders incoming
- Be shown life-saving information at any time in the app

System side:

- System should collect responders location once every 30 minutes
    - If a responder cannot be reached for location data, they will be set to 'away' and not contacted with requests until their location can be reached
    - If a responder is set to 'no alerts' their location does not need to be polled
- Location data is used to alert the closest responders in a radius around the requestor location, the radius can be widened periodically until a max radius, or certain number or responders have confirmed.
- The system should keep track of each incident, which responders were involved and where the request was made from, and any other information possible, in the event that this information is needed later (eg. there was a robbery at the scene)

<u>Non-functional Requirements</u>

The system involves working in emergency situations where time is an important factor. Therefore in the long term there will be a focus on: Availability, Scalability, and Performance to ensure the app can be used, and used well, when there is an emergency.

Effectiveness will also be an important requirement, as we need the app to be easy to understand and use in high-pressure situations. Care will be taken to the wording and design of each page to allow for thoughtless navigation by both types of users.

Security, specifically related to the environment is also important as mentioned above. There could be cases where people take advantage of the system and cause others harm; both responders and requesters. At first we will maintain appropriate logging of system information for reactive measures; and in the future look at ways to be proactive about such cases.

System Technologies Outline

Application

- Android - Java
- Database - PostgreSQL
- GIS Data - PostGIS
- Server - Go
- Hosting - Digital Ocean
- Map Framework - Mapbox API
- Texting Verification - Twilio

Website (Deliverable)

www.antidose.ca
(will be cloned to engr site)

- Frontend - HTML, CSS, JS Template
- Server - Flask
- Domain - GoDaddy
- Hosting - Heroku