**Motivation and Goal**

**Problem:** National response time for EMS is 9 minutes. AHA reports that brain death starts to occur in 4 to 6 minutes.

The use of CPR or an AED dramatically improve survival rates, from 8% to 38%.

**Solution:** Create an integrated health system that connects CPR-certified responders with at-risk individuals.

---

**Workflow**

Our application offers two different workflows, one for at-risk individuals and one for responders.

---

**Locating Users**

Responders will see a map, showing their current location and the location of the at-risk individual.

They can use this interface to alert users that they are responding to a given incident.

The map updates in real time to help responders reach users and allow users to receive visual feedback.

---

**Architecture**

---

**Notifications**

**CPR Certified Responders**

Responders receive a text message (Twilio) and push notification (GCM) when they are within a certain distance from an incident.

We found that the notifications took the following times:

- Push Notification < 1 second
- Text Message < 2 seconds
- Email < 5 seconds

---

**Evaluation and Results**

When testing, we focused our results specifically for Philadelphia. Some of our assumptions included:

- 4% of the population know CPR
- Responders would be uniformly distributed across the city
- Responders would be able to travel to at-risk individuals at 3 miles per hour.

The graph depicts the average response time for a given adoption of our application.