

DOCTOR WHO?

ED WAIT TIME PREDICTOR

Alyssa Harker, Amir Kazi and Tianchu Shu

Introduction

People hate waiting

Project Goal: predict
wait time for five
closest hospitals and
current driving time
to those hospitals



Final Product

Website:

- User enters zip code
- Lists 5 closest hospitals by fastest total time
- Total time = Predicted wait time + Travel time

Enter your Zip Code:

Fastest Hospital

Total Time: 45 min
Predicted wait time*: 30 min
Travel time: 15 min
Rating: 4/5

*Based off average wait time: 15 min

2nd Fastest Hospital

Total Time: 55 min
Predicted wait time*: 40 min
Travel time: 15 min
Rating: 3/5

*Based off average wait time: 20 min

3rd Fastest Hospital

Total Time: 57 min
Predicted wait time*: 32 min
Travel time: 25 min
Rating: 4/5

*Based off average wait time: 17 min

4th Fastest Hospital

Total Time: 68 min
Predicted wait time*: 40 min
Travel time: 28 min
Rating: 5/5

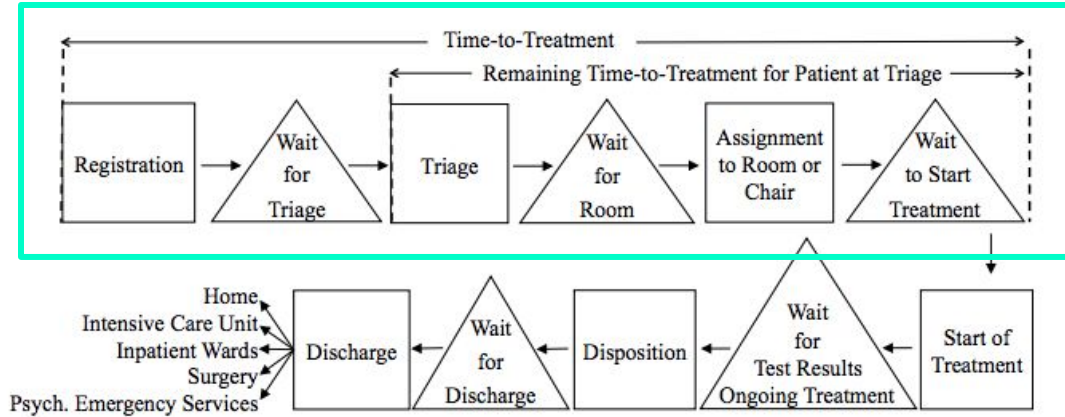
*Based off average wait time: 20 min

5th Fastest Hospital

Total Time: 70 min
Predicted wait time*: 50 min
Travel time: 20 min
Rating: 2/5

*Based off average wait time: 32 min

Databases: Wait Time Averages

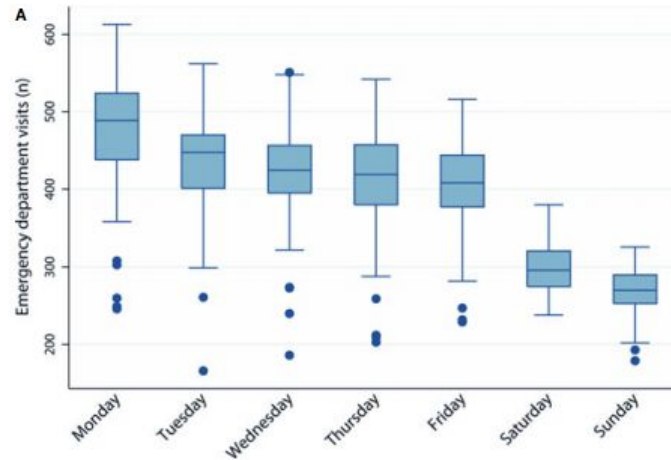
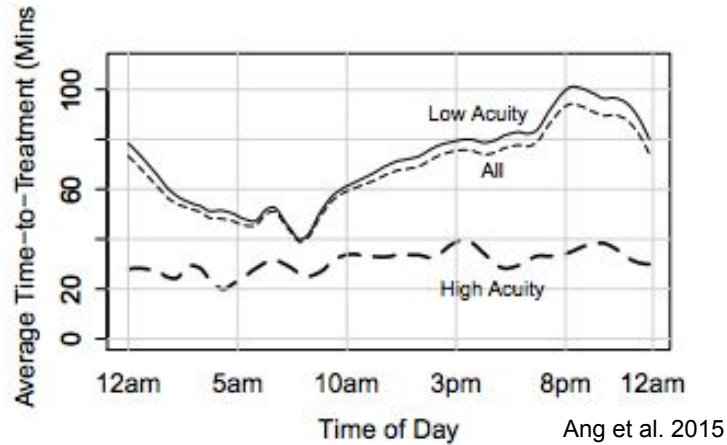


Ang et al. 2015

Medicare.gov: Hospital Compare

- Timely and Effective Care - Hospital
 - average wait time for being seen by a medical professional in the emergency department
- Hospital General Information
 - location, contact information, as well as ratings of hospitals.

Databases: Predicting Wait Time



National Hospital Ambulatory Medical Care Survey Data (NHAMCS)

- ED visit data including wait time, time of day, and day of the week
- Use this data to calculate how time and day of the week affect wait time

APIs

- Weather Underground API
 - current weather
 - historical temperatures



- Google Maps API
 - Calculate current driving time to the 5 closest hospitals



Summary

- Goal: Give potential patients more information about choosing an Emergency Department
- Databases: Medicare.gov's Hospital Compare and National Hospital Ambulatory Medical Care Survey Data
- APIs: Weather Underground and Google Maps
- Final product: website displaying information for the five closest hospitals sorted by fastest total time

THANK YOU!
ANY QUESTIONS?

