

# Predict Admissions using Classification: Addressing Emergency Department Overcrowding

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## Objective:

Predict hospital admission at the time of ED triage



1 in 5 people will seek care from the Emergency Department (ED) in a year



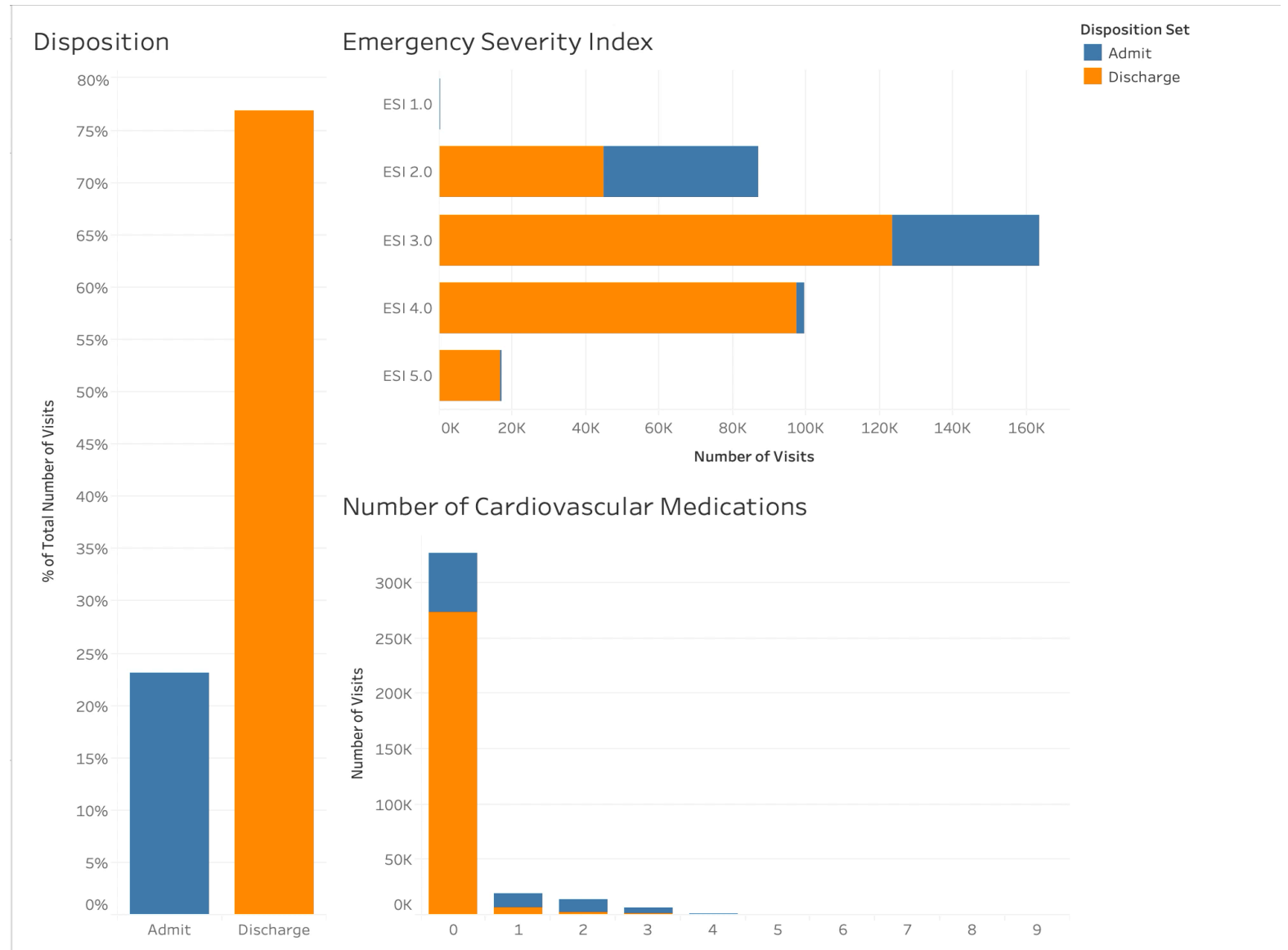
Emergency Department overcrowding and access block can adversely affect patient outcomes



Majority (50%–75%) of patients are admitted to the hospitals through Emergency Department

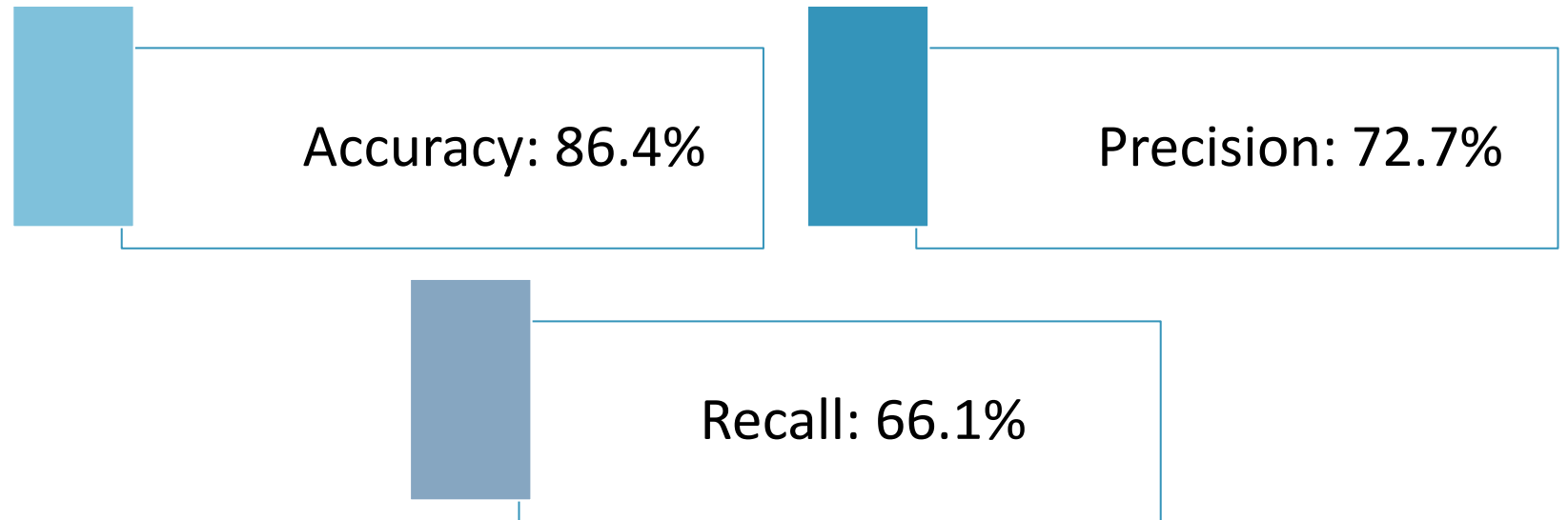
# Data

- Adult ED visits between 2014 and 2017
- Features:
  - Triage evaluation information
  - Chief complaint
  - Past medical history
  - Outpatient medications
  - Hospital usage statistics
  - Imaging/EKG counts

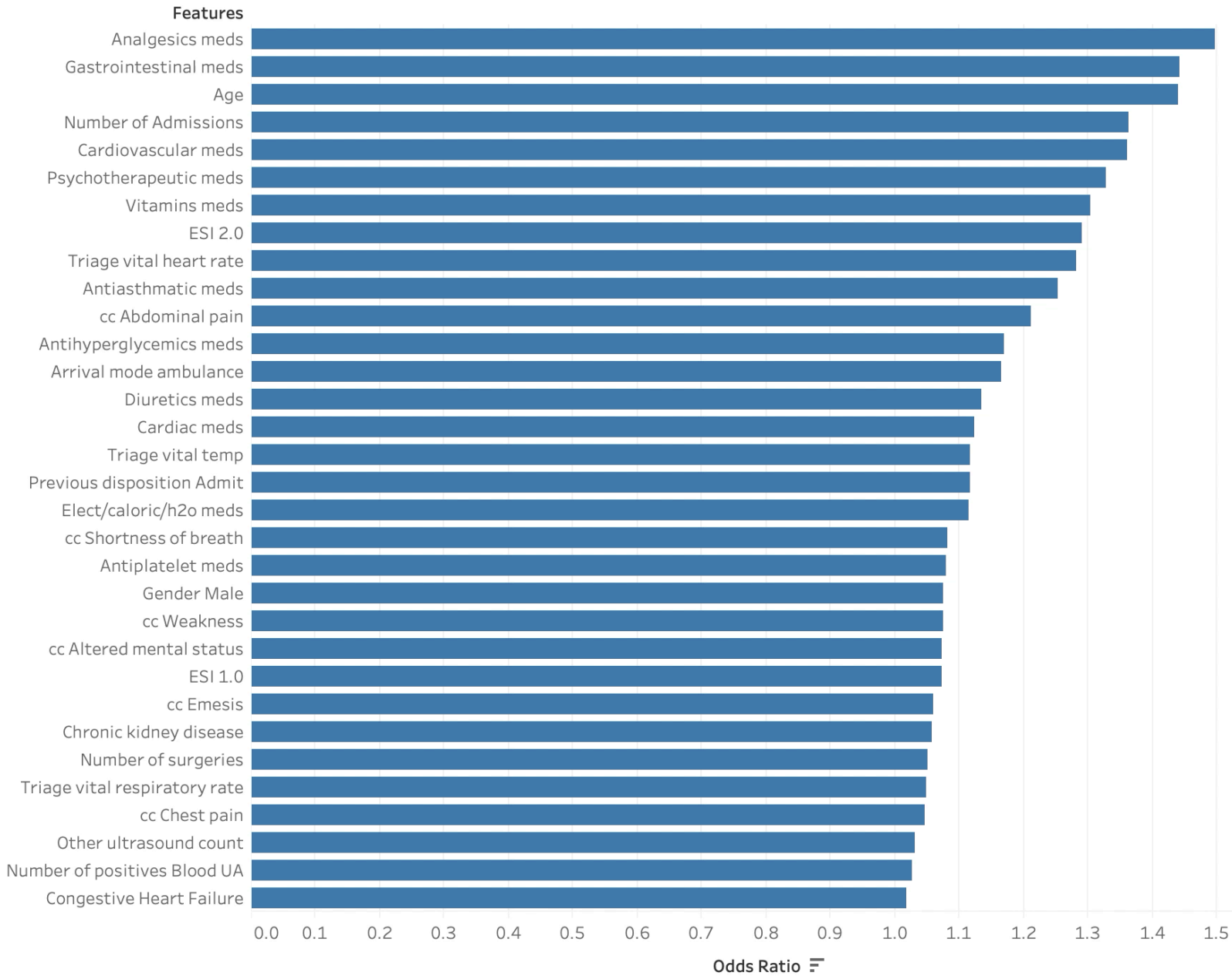


# Results

- Use logistic regression model to predict whether a person will be admitted or discharged



Feature Importance



Top N

61



# Conclusion

- Information gathered during triage, along with past medical history, medication information and chief complaint may help to identify patients that will be admitted to the hospital