

Predicting Hospital Readmissions

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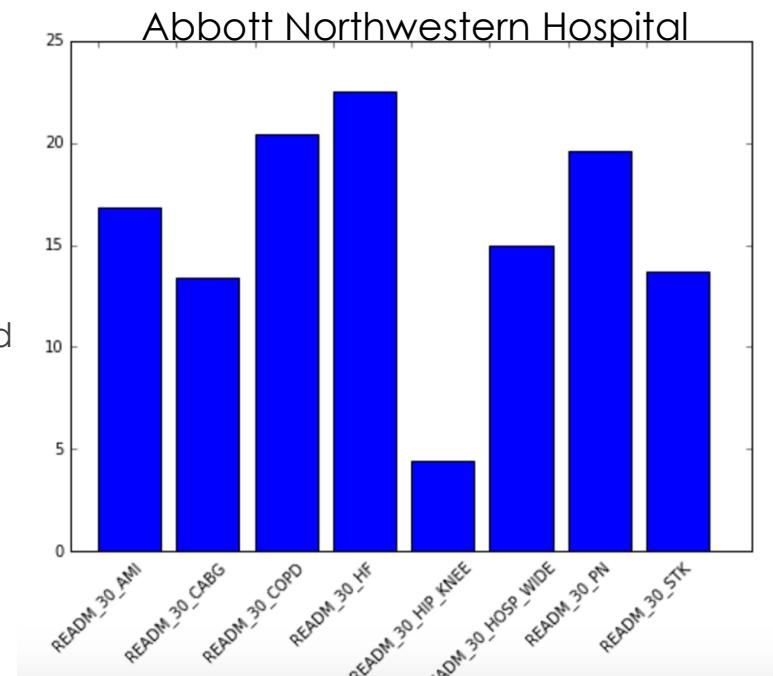
Problem: Patients often are unexpectedly readmitted to the hospital after discharge which is a burden to both the patient and to the healthcare system.

- ▶ From the provider point of view, readmissions are expensive.
- ▶ Hospitals are incentivized by Medicare to reduce their number of readmissions and many hospitals are struggling to do so.
- ▶ With insights into predictors of readmission,

Goal: To predict hospital readmission rates per hospital across various disease conditions.

Data Source

- ▶ Data comes from the Medicare website in CSV format.
- ▶ The target data set contains 30-day readmission rates and 30-day mortality rates for 8 different diseases.
- ▶ The feature datasets includes per hospital info on:
 - ▶ Average price per claim
 - ▶ Patient satisfaction surveys on hospital staff and care received
 - ▶ Average wait times per condition
 - ▶ Complication rates per condition
 - ▶ Infection rates per condition



Algorithms

- ▶ Logistic Regression
- ▶ Random forest

Product Visualization

Expected Users: Hospital Admins

INPUT:

Select your hospital...



Select a condition...



OUTPUT:

Your current 30-day readmission rate for condition “X” is : 22%

The top 2 driving predictors of this are:

- 1) ER wait time
- 2) Patient satisfaction surveys