Problem Statement

$17 billion
Spent annually by Medicare on hospitalizations that are **avoidable**

Up to 3%
of payments can be deducted if hospitals are not able to manage **excess readmissions**

$622 billion
Total predicted **cost** of diabetes by 2030

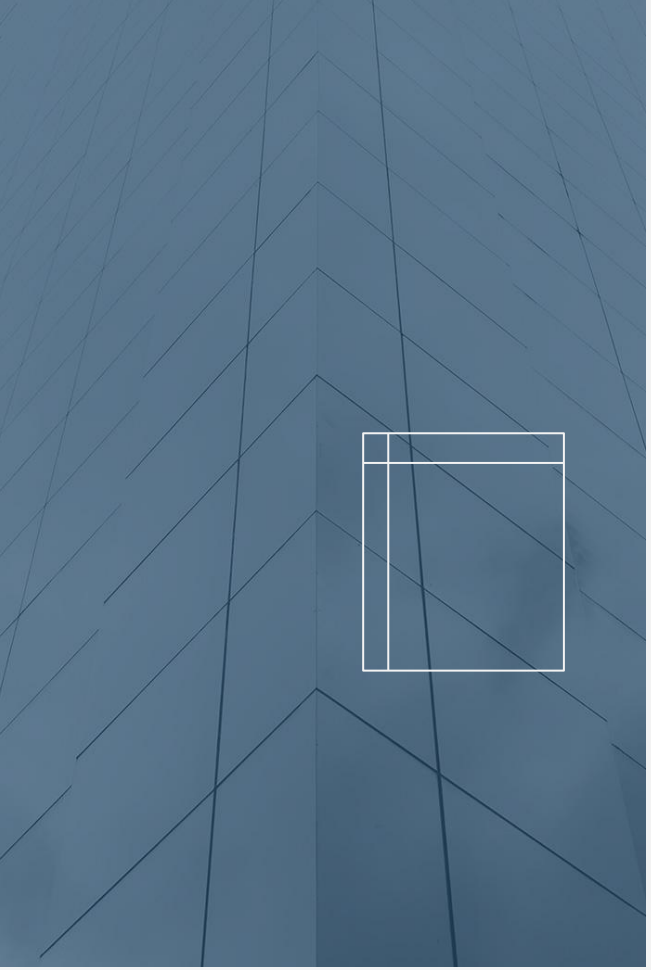
14.4 to 22.7%
Readmission rate of diabetic patients, which is **higher** than the overall readmission rate for all inpatients

Problem

Diabetes mellitus is a major chronic disease that results in billions in healthcare costs annually. Two thirds of this financial burden is preventable.

Solution

Build a predictive model to determine a diabetic patient's risk of readmission so that healthcare providers can provide timely intervention.



Implications

A 5% reduction in the readmission rate for diabetic patients would lead to an estimated annual cost savings of **$1.2 billion** and countless **lives saved**

Key Findings

60% Accuracy

Our predictive model was able to correctly identify whether a patient would be readmitted 60% of the time

Increased Readmission Risks

seen in elderly patients; African-Americans and Caucasians; patients being transferred to Medicare swing bed, outpatient services, and psychiatric unit

Comorbidities

of diabetes mellitus include circulatory, respiratory, and digestive diseases. Patients with a primary diagnosis of diabetes or respiratory diseases were more likely to be readmitted.

Time in Hospital

Patients who spend more time in the hospital and had more diagnoses entered into the system were more likely to be readmitted

Next Steps

Diabetes Mellitus

Accurately predict readmission risk for diabetic patients to reduce overall financial burden and save lives

Chronic Diseases

Apply insights gained from diabetes model to make predictions for other chronic diseases

Overall Readmission

Look at major risk factors associated with readmission to reduce overall hospitalization risk for all inpatients