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Executive Summary:

As of 2020, diabetes is a disease that afflicts approximately 10% of the US population, and is the 8th leading cause of death[1, 2]. It is not uncommon for patients to be hospitalized due to diabetes or reasons relating to diabetes. Ideally upon discharge from the hospital, a patient would have their major symptoms addressed and be able to manage their disease. However, a few patients will have to be readmitted due to continuing complications, which is associated with unfavorable patient outcomes and high financial costs[3]. In our project, we propose apply machine learning to electronic health record (EHR) data[4] and predict if diabetes patients will experience hospital readmission based on features of their original hospital stay. Predictions like these could improve patient outcomes by empowering primary healthcare workers to better identify and monitor at-risk patients.

Questions:

What category of diagnoses are most likely to be readmitted?

Are some medications for diabetes more effective than others?

Are there any racial disparities in hospital visits/ diabetes patients vs. national demographics?

Are there any disparities in patients that require readmittance?

What are common diagnoses with diabetes patients?

What is the most common age range for diabetes patients?

What features can predict readmittance rates?

References

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