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Diabetes 130-US hospitals for years 1999-2008 Data Set

<https://archive.ics.uci.edu/ml/datasets/diabetes+130-us+hospitals+for+years+1999-2008>

This is our main dataset for our project, containing approximately 100,000 rows of anonymized electronic health records. Data was compiled by Clore et al. from Cerner Health Facts, a database pulling data from over 65 million patients. The methodology by which Core et al. filtered the original dataset to obtain the 100,000 records of interest are outlined in their paper below, but to summarize, filtering the original dataset for diabetes patients with hospitalization of 1-14 days from 1999-2008 resulted in the provided dataset. Our group looked for ways to access the original Cerner Health Facts database, but access appears to be limited except through academic credentials at select universities. The original paper using machine learning to identify “HbA1c measurement” an important factor in hospital readmission rates of diabetes patients. Our team plans to extend the findings of this paper and train a model to predict if a particular patient will face hospital readmission.

Relevant Papers:

Strack B, DeShazo JP, Gennings C, Olmo JL, Ventura S, Cios KJ, Clore JN. Impact of HbA1c Measurement on Hospital Readmission Rates: Analysis of 70,000 Clinical Database Patient Records. *Biomed Res Int*. 2014;781670. DOI: [10.1155/2014/781670](https://doi.org/10.1155/2014/781670)

2008 National Population Projections Tables

<https://www.census.gov/data/tables/2008/demo/popproj/2008-summary-tables.html>

To incorporate census data, our group plans to use the 2008 national population projection tables to compare the demographics of hospitalized diabetes patients with the demographics of the United States. Our diabetes dataset contains race, age, and sex information that can be compared to national demographics. Visualizations utilizing census data can help identify if certain groups of people disproportionately experience hospital readmission.