Package 'readmission'

May 9, 2026

Title Hospital Readmission Data for Patients with Diabetes

Version 0.1.0

Description Clinical care data from 130 U.S. hospitals in the years 1999-2008 adapted from the study Strack et al. (2014) <doi:10.1155/2014/781670>. Each row describes an ``encounter'' with a patient with diabetes, including variables on demographics, medications, patient history, diagnostics, payment, and readmission.

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Suggests knitr

Config/testthat/edition 3

Encoding UTF-8

RoxygenNote 7.2.3

Depends R (>= 2.10)

LazyData true

NeedsCompilation no

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Contents

`readmission` *Hospital Readmission Data for Patients with Diabetes*

Description

Clinical care data from 130 U.S. hospitals in years 1999-2008. Each row describes an "encounter" with a patient with diabetes, including variables on demographics, medications, patient history, diagnostics, payment, and readmission.

Usage

```
readmission
```

Format

A data frame with 71,515 rows and 12 columns:

readmitted Whether the patient was readmitted within the 30 days following discharge. A factor with levels `"Yes"` and `"No"`.

race Reported race of the patient. Source data does not document data collection strategy. A factor with levels `"African American"`, `"Asian"`, `"Caucasian"`, `"Hispanic"`, `"Other"`, and `"Unknown"`.

sex Reported sex of the patient. Source data does not document data collection strategy. A factor with levels `"Female"` and `"Male"`.

age Age range for the patient, binned in 10-year intervals. A factor with levels `"[0-10)"`, `"[10-20)"`, `"[20-30)"`, `"[30-40)"`, `"[40-50)"`, `"[50-60)"`, `"[60-70)"`, `"[70-80)"`, `"[80-90)"`, and `"[90-100)"`.

admission_source Whether the patient was referred from a physician, admitted via the ER, or arrived via some other source. A factor with levels `"Emergency"`, `"Other"`, and `"Referral"`.

blood_glucose Results from an A1C test, estimating the patient's average blood sugar over the past 2-3 months. Higher estimated average blood glucose levels are linked to diabetes complications. A factor with levels `"Normal"`, `"High"`, and `"Very High"`, and many missing values.

insurer The health insurance provider (or lack thereof, via `"Self-Pay"`) for the patient. A factor with levels `"Medicaid"`, `"Medicare"`, `"Private"`, and `"Self-Pay"`, and many missing values.

duration Number of days in the hospital between admission and discharge.

n_previous_visits Number of emergency, inpatient, and outpatient visits in the year preceding the encounter.

n_diagnoses "Number of diagnoses entered to the system" during the encounter.

n_procedures "Number of procedures (other than lab tests) performed" during the encounter.

n_medications "Number of distinct generic names administered" during the encounter.

Source

Original source data from the following paper (CC BY 3.0):

Strack, B., DeShazo, J. P., Gennings, C., Olmo, J. L., Ventura, S., Cios, K. J., & Clore, J. N. 2014. Impact of HbA1c measurement on hospital readmission rates: analysis of 70,000 clinical database patient records. BioMed research international, 781670. doi:10.1155/2014/781670.

Shared freely through the UCI Machine Learning Repository (CC BY 4.0):

Clore, J., Cios, K., DeShazo, J. P., and Strack, B. 2014. Diabetes 130-US hospitals for years 1999-2008. UCI Machine Learning Repository. doi:10.24432/C5230J.

Downloaded from resources shared by the Fairlearn team (MIT):

Weerts, H., Dudík M., Edgar, R., Jalali, A., Lutz, R., & Madaio, M. 2023. Fairlearn: Assessing and Improving Fairness of AI Systems. Journal of Machine Learning Research, 24(257):1-8.

Examples

```
str(readmission)

head(readmission)
```

Index