

# Package ‘readmission’

December 7, 2023

**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](https://doi.org/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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**Repository** CRAN

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## R topics documented:

readmission . . . . .	2
<b>Index</b>	<b>4</b>

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

\* **datasets**

readmission, [2](#)

readmission, [2](#)