Package ‘socialrisk’
February 15, 2023

Type Package
Title Identifying Patient Social Risk from Administrative Health Care Data
Version 0.5.1
Description Social risks are increasingly becoming a critical component of health care research. One of the most common ways to identify social needs is by using ICD-10-CM "Z-codes." This package identifies social risks using varying taxonomies of ICD-10-CM Z-codes from administrative health care data. The conceptual taxonomies come from:
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Encoding UTF-8
LazyData true
RoxygenNote 7.1.2
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clean_data Prepare our administrative data for analysis

Description

clean_data returns a dataset which has been transformed and cleaned for subsequent functions in this package.

Usage

clean_data(dat = NULL, style = "long", id = NULL, prefix_dx = "dx")

Arguments

dat dataset

style long, the default, is one diagnosis column per row whereas wide is multiple diagnosis columns

id unique patient identifier variable name

prefix_dx the variable prefix for the diagnosis columns (defaults to "dx"), in quotes

Details

This function takes our raw administrative data, in a number of different forms, and prepares it in a way which allows the other functions in this package to easily work with it. It is recommended to run this package on all data regardless of setup.

Value
dataframe with multiple rows per patient, which has re-structured their administrative data

Examples

clean_data(dat = i10_wide, id = patient_id, style = "wide", prefix_dx = "dx")
**i10_wide**

*Example administrative data.*

**Description**

A dataset with fake patient data for 5 patients with ICD-10 diagnosis codes.

**Usage**

```r
data(i10_wide)
```

**Format**

A data frame with 29 rows and 11 variables:

- `patient_id` patient_id
- `sex` patient's sex (male or female)
- `date_of_serv` the date of service for the fake claim
- `dx1` first diagnosis
- `dx2` second diagnosis
- `dx3` third diagnosis
- `dx4` fourth diagnosis
- `dx5` fifth diagnosis
- `visit_type` inpatient (ip) or outpatient(ot)
- `hcpcs` HCPCS code
- `icd_version` Which version of ICD the row is. 9 = ICD-9, 0 = ICD-10

**Source**

This was created by the package author.

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**socialrisk**

*Social Risk*

**Description**

`socialrisk` returns a summary dataset containing indicators of social risk, which vary based on the taxonomy command, for each patient.

**Usage**

```r
socialrisk(dat = NULL, id = NULL, dx = "dx", taxonomy = "cms")
```
Arguments

- **dat**: dataset which has been properly prepared in long format
- **id**: variable of the unique patient identifier
- **dx**: the column with the diagnoses (defaults to `dx`)
- **taxonomy**: the taxonomy one wishes to use for social risk, with options of "cms" (default), "mha", and "siren"

Details

This function uses data which has been properly prepared to identify and flag social risks.

Value

dataframe with one row per patient, a column for their patient id, a column with whether they have any social risk, a column with the number of social risk domains, and columns with indicator variables for each social risk

Examples

```r
data <- clean_data(dat = i10_wide, id = patient_id, style = "wide", prefix_dx = "dx")
socialrisk(dat = data, id = patient_id, dx = dx, taxonomy = "cms")```
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