

Package ‘nhds’

March 31, 2019

Title National Hospital Discharge Survey 2010 Data

Version 1.0.3

Description The National Hospital Discharge Survey (2010) summarizes the state of patients at the end of their hospital admissions. The US CDC publishes the data in the public domain, and describes it as follows: The National Hospital Discharge Survey (NHDS) is a continuing nationwide sample survey of short-stay hospitals in the United States. The scope of NHDS encompasses patients discharged from noninstitutional hospitals, exclusive of military and Department of Veterans Affairs hospitals, located in the 50 States and the District of Columbia. Only hospitals having six or more beds for in-patient use are included in the survey. See <https://www.cdc.gov/nchs/nhds> for more information.

License GPL-3

URL <https://github.com/jackwasey/nhds>

BugReports <https://github.com/jackwasey/nhds/issues>

Depends R (>= 2.10)

Suggests icd, knitr, readr, rmarkdown

Encoding UTF-8

LazyData true

RoxygenNote 6.1.1

VignetteBuilder knitr

NeedsCompilation no

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nhds2010	<i>National Hospital Discharge Survey 2010 data</i>
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Description

The United States National Hospital Discharge Survey (NHDS) 2010 data is public domain data from the US [Center for Disease Control](https://www.cdc.gov). This is de-identified patient data with summary information about each patient at the end of a hospital admission, including demographic information, admission diagnoses, comorbidities and procedure codes, death or disposition. There are no identifiers in the data, so a simple count was included.

Source

<https://www.cdc.gov/nchs/nhds/index.htm>

Examples

```
if (require("icd", versionCheck(version = "3.4", op = ">="))) {
  head(nhds2010)
  colSums(icd::comorbid_ahrq(nhds2010))
  nhds2010$hypertension <- icd::comorbid_ahrq(nhds2010)[, "HTN"]
  nhds2010$charlson <- icd::charlson(nhds2010)
  hist(nhds2010[nhds2010$age_unit == "years", "age"],
       main = "Histogram of age when specified in years",
       xlab = "Age in years"
  )
  boxplot(age ~ hypertension,
          data = nhds2010,
          outline = FALSE,
          ylab = "Age")
  boxplot(charlson ~ adm_type,
          data = nhds2010,
          las = 2,
          varwidth = TRUE,
          outline = FALSE,
          ylab = "Charlson Score"
  )
}
```

nhds_adult	<i>Return adult, pediatric or just neonatal elements from the NHDS data</i>
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Description

The age in the adult data is all specified in years, so the ‘age_unit’ column is dropped. The ‘age_unit’ field is retained when returning pediatric data.

Usage

```
nhds_adult(nhds_data = nhds::nhds2010, rename_age = TRUE)
nhds_adults(nhds_data = nhds::nhds2010, rename_age = TRUE)
nhds_pediatric(nhds_data = nhds::nhds2010)
nhds_peds(nhds_data = nhds::nhds2010)
nhds_neonatal(nhds_data = nhds::nhds2010, rename_age = TRUE)
nhds_neonatal_not_newborn(nhds_data = nhds::nhds2010,
  rename_age = TRUE)
nhds_neonate_not_newborn(nhds_data = nhds::nhds2010, rename_age = TRUE)
nhds_neonate(nhds_data = nhds::nhds2010, rename_age = TRUE)
nhds_infant(nhds_data = nhds::nhds2010, rename_age = TRUE)
nhds_infant_not_neonate(nhds_data = nhds::nhds2010, rename_age = TRUE)
nhds_newborn(nhds_data = nhds::nhds2010)
nhds_newborns(nhds_data = nhds::nhds2010)
```

Arguments

nhds_data	The NHDS data, default is ‘nhds2010’, which is the only year currently provided by this package.
rename_age	Logical, if ‘TRUE’, the default, the ‘age’ field is renamed to either ‘age_days’ (for neonatal data) or ‘age_years’ (for adult data).

Neonates and newborns

For newborns, when the ‘newborn’ field is ‘TRUE’, the ‘age’ is always zero at time of admission, so ‘age’ and ‘age_unit’ are dropped. This must therefore refer to birth in hospital, not an admission

of a neonate who is transferred. For the same reason, 'adm_type' is dropped because it is always 'newborn'.

In contrast, neonatal data includes both in-hospital births and admissions of patients with age 28 or fewer days. Strangely, 'marital_status' is populated with a variety of values for the neonatal data, but all 'newborn' babies are considered 'single', so that field is dropped by 'nhds_newborn'.

Examples

```
head(nhds_adult())
# subset returned data directly
nhds_pediatic()[11:20, c("age_unit", "age")]
nhds_pediatic()[1:5, 1:7]
nhds_infant()[111:115, 1:7]
nhds_infant_not_neonate()[1:5, 1:7]
nhds_neonatal()[1:5, 1:7]
nhds_neonatal_not_newborn()[1:5, 1:7]
identical(nhds_neonatal()[1:10, ],
          nhds_neonate()[1:10, ])
identical(nhds_neonatal_not_newborn()[1:10, ],
          nhds_neonate_not_newborn()[1:10, ])
nhds_newborn()[1:5, 1:7]
```

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