

Package ‘CohortCharacteristics’

November 19, 2025

Type Package

Title Summarise and Visualise Characteristics of Patients in the OMOP CDM

Version 1.1.0

Maintainer Marti Catala <marti.catalasabate@ndorms.ox.ac.uk>

Description Summarise and visualise the characteristics of patients in data mapped to the Observational Medical Outcomes Partnership (OMOP) common data model (CDM).

License Apache License (>= 2)

Encoding UTF-8

RoxygenNote 7.3.3

Imports CDMConnector (>= 1.6.0), dplyr, tidyr, rlang, cli, stringr, omopgenerics (>= 1.3.1), PatientProfiles (>= 1.3.1), snakecase, lifecycle, purrr, clock

URL <https://darwin-eu.github.io/CohortCharacteristics/>

BugReports <https://github.com/darwin-eu/CohortCharacteristics/issues>

Language en-US

Depends R (>= 4.1)

Config/testthat/edition 3

Config/testthat/parallel true

VignetteBuilder knitr

Suggests CodelistGenerator, visOmopResults (>= 1.2.0), CohortConstructor, covr, DBI, dbplyr, DiagrammeR, DiagrammeRsvg, DrugUtilisation, DT, duckdb (>= 1.0.0), flextable, ggplot2, ggpubr, glue, grid, gt, here, Hmisc, htmltools, knitr, odbc, omock, plotly, png, reactable, rmarkdown, RPostgres, rsvg, scales, spelling, testthat (>= 3.1.5), tictoc, withr, extrafont

NeedsCompilation no

Author Marti Catala [aut, cre] (ORCID: <https://orcid.org/0000-0003-3308-9905>),
 Yuchen Guo [aut] (ORCID: <https://orcid.org/0000-0002-0847-4855>),
 Mike Du [ctb] (ORCID: <https://orcid.org/0000-0002-9517-8834>),
 Kim Lopez-Guell [aut] (ORCID: <https://orcid.org/0000-0002-8462-8668>),
 Edward Burn [aut] (ORCID: <https://orcid.org/0000-0002-9286-1128>),
 Nuria Mercade-Besora [aut] (ORCID: <https://orcid.org/0009-0006-7948-3747>),
 Marta Alcalde [aut] (ORCID: <https://orcid.org/0009-0002-4405-1814>)

Repository CRAN

Date/Publication 2025-11-19 06:11:12 UTC

Contents

availablePlotColumns	3
availableTableColumns	3
benchmarkCohortCharacteristics	4
mockCohortCharacteristics	5
plotCharacteristics	6
plotCohortAttrition	7
plotCohortCount	9
plotCohortOverlap	10
plotCohortTiming	11
plotComparedLargeScaleCharacteristics	12
plotLargeScaleCharacteristics	14
summariseCharacteristics	15
summariseCohortAttrition	18
summariseCohortCodelist	19
summariseCohortCount	20
summariseCohortOverlap	20
summariseCohortTiming	21
summariseLargeScaleCharacteristics	22
tableCharacteristics	24
tableCohortAttrition	25
tableCohortCodelist	26
tableCohortCount	27
tableCohortOverlap	28
tableCohortTiming	29
tableLargeScaleCharacteristics	31
tableTopLargeScaleCharacteristics	32

Index	34
--------------	-----------

availablePlotColumns	<i>Available columns to use in facet and colour arguments in plot functions.</i>
----------------------	--

Description

Available columns to use in facet and colour arguments in plot functions.

Usage

```
availablePlotColumns(result)
```

Arguments

result	A summarised_result object.
--------	-----------------------------

Value

Character vector with the available columns.

Examples

```
{
  cdm <- mockCohortCharacteristics()

  result <- summariseCharacteristics(cdm$cohort1)

  availablePlotColumns(result)
}
```

availableTableColumns	<i>Available columns to use in header, groupColumn and hide arguments in table functions.</i>
-----------------------	---

Description

Available columns to use in header, groupColumn and hide arguments in table functions.

Usage

```
availableTableColumns(result)
```

Arguments

result	A summarised_result object.
--------	-----------------------------

Value

Character vector with the available columns.

Examples

```
{
  cdm <- mockCohortCharacteristics()

  result <- summariseCharacteristics(cdm$cohort1)

  availableTableColumns(result)

}
```

benchmarkCohortCharacteristics

Benchmark the main functions of CohortCharacteristics package.

Description

Benchmark the main functions of CohortCharacteristics package.

Usage

```
benchmarkCohortCharacteristics(
  cohort,
  analysis = c("count", "attrition", "characteristics", "overlap", "timing",
    "large scale characteristics")
)
```

Arguments

cohort	A cohort_table from a cdm_reference.
analysis	Set of analysis to perform, must be a subset of: "count", "attrition", "characteristics", "overlap", "timing" and "large scale characteristics".

Value

A summarised_result object.

Examples

```
## Not run:
library(CohortCharacteristics)
library(omock)
library(CDMConnector)

cdm <- mockCdmFromDataset(datasetName = "GiBleed", source = "duckdb")
```

```

cdm <- generateConceptCohortSet(
  cdm = cdm,
  conceptSet = list(sinusitis = 40481087, pharyngitis = 4112343),
  name = "my_cohort"
)

benchmarkCohortCharacteristics(cdm$my_cohort)

## End(Not run)

```

mockCohortCharacteristics

It creates a mock database for testing CohortCharacteristics package

Description

It creates a mock database for testing CohortCharacteristics package

Usage

```

mockCohortCharacteristics(
  numberIndividuals = 10,
  ...,
  source = "local",
  con = lifecycle::deprecated(),
  writeSchema = lifecycle::deprecated(),
  seed = lifecycle::deprecated()
)

```

Arguments

numberIndividuals	Number of individuals to create in the cdm reference.
...	User self defined tables to put in cdm, it can input as many as the user want.
source	Source for the mock cdm, it can either be 'local' or 'duckdb'.
con	deprecated.
writeSchema	deprecated.
seed	deprecated.

Value

A mock cdm_reference object created following user's specifications.

Examples

```
library(CohortCharacteristics)

cdm <- mockCohortCharacteristics()
```

plotCharacteristics	Create a ggplot from the output of summariseCharacteristics.
---------------------	--

Description**[Experimental]****Usage**

```
plotCharacteristics(
  result,
  plotType = "barplot",
  facet = NULL,
  colour = NULL,
  style = "default",
  plotStyle = lifecycle::deprecated()
)
```

Arguments

result	A summarised_result object.
plotType	Either barplot, scatterplot or boxplot. If barplot or scatterplot subset to just one estimate.
facet	Columns to facet by. See options with availablePlotColumns(result). Formula is also allowed to specify rows and columns.
colour	Columns to color by. See options with availablePlotColumns(result).
style	Named list that specifies how to style the different parts of the table generated. It can either be a pre-defined style ("default" or "darwin" - the latter just for gt and flextable), NULL to get the table default style, or custom. Keep in mind that styling code is different for all table styles. To see the different styles see visOmopResults::tableStyle().
plotStyle	deprecated.

Value

A ggplot.

Examples

```

library(CohortCharacteristics)
library(dplyr, warn.conflicts = FALSE)

cdm <- mockCohortCharacteristics()

results <- summariseCharacteristics(
  cohort = cdm$cohort1,
  ageGroup = list(c(0, 19), c(20, 39), c(40, 59), c(60, 79), c(80, 150)),
  tableIntersectCount = list(
    tableName = "visit_occurrence", window = c(-365, -1)
  ),
  cohortIntersectFlag = list(
    targetCohortTable = "cohort2", window = c(-365, -1)
  )
)

results |>
  filter(
    variable_name == "Cohort2 flag -365 to -1", estimate_name == "percentage"
  ) |>
  plotCharacteristics(
    plotType = "barplot",
    colour = "variable_level",
    facet = c("cdm_name", "cohort_name")
  )

results |>
  filter(variable_name == "Age", estimate_name == "mean") |>
  plotCharacteristics(
    plotType = "scatterplot",
    facet = "cdm_name"
  )

results |>
  filter(variable_name == "Age", group_level == "cohort_1") |>
  plotCharacteristics(
    plotType = "boxplot",
    facet = "cdm_name",
    colour = "cohort_name"
  )

```

plotCohortAttrition	<i>create a ggplot from the output of summariseLargeScaleCharacteristics.</i>
---------------------	---

Description**[Experimental]**

Usage

```
plotCohortAttrition(
  result,
  show = c("subjects", "records"),
  type = "htmlwidget",
  cohortId = lifecycle::deprecated()
)
```

Arguments

<code>result</code>	A summarised_result object.
<code>show</code>	Which variables to show in the attrition plot, it can be 'subjects', 'records' or both.
<code>type</code>	type of the output, it can either be: 'htmlwidget', 'png', or 'DiagrammeR'.
<code>cohortId</code>	deprecated.

Value

A grViz visualisation.

Examples

```
library(CohortCharacteristics)
library(omopgenerics)
library(dplyr, warn.conflicts = FALSE)
library(clock)

cdm <- mockCohortCharacteristics(numberIndividuals = 1000)

cdm[["cohort1"]] <- cdm[["cohort1"]] |>
  filter(get_year(cohort_start_date) >= 2000) |>
  recordCohortAttrition("Restrict to cohort_start_date >= 2000") |>
  filter(get_year(cohort_end_date) < 2020) |>
  recordCohortAttrition("Restrict to cohort_end_date < 2020") |>
  compute(temporary = FALSE, name = "cohort1")

result <- summariseCohortAttrition(cdm$cohort1)

result |>
  filter(group_level == "cohort_2") |>
  plotCohortAttrition()
```

plotCohortCount	<i>Plot the result of summariseCohortCount.</i>
-----------------	---

Description

[Experimental]

Usage

```
plotCohortCount(
  result,
  x = NULL,
  facet = c("cdm_name"),
  colour = NULL,
  style = "default"
)
```

Arguments

result	A summarised_result object.
x	Variables to use in x axis.
facet	Columns to facet by. See options with availablePlotColumns(result). Formula is also allowed to specify rows and columns.
colour	Columns to color by. See options with availablePlotColumns(result).
style	Named list that specifies how to style the different parts of the table generated. It can either be a pre-defined style ("default" or "darwin" - the latter just for gt and flextable), NULL to get the table default style, or custom. Keep in mind that styling code is different for all table styles. To see the different styles see visOmopResults::tableStyle().

Value

A ggplot.

Examples

```
library(CohortCharacteristics)
library(PatientProfiles)
library(dplyr, warn.conflicts = FALSE)

cdm <- mockCohortCharacteristics(numberIndividuals = 100)

counts <- cdm$cohort2 |>
  addSex() |>
  addAge(ageGroup = list(c(0, 29), c(30, 59), c(60, Inf))) |>
  summariseCohortCount(strata = list("age_group", "sex", c("age_group", "sex"))) |>
  filter(variable_name == "Number subjects")
```

```
counts |>
  plotCohortCount(
    x = "sex",
    facet = cohort_name ~ age_group,
    colour = "sex"
  )
```

plotCohortOverlap	<i>Plot the result of summariseCohortOverlap.</i>
-------------------	---

Description

[Experimental]

Usage

```
plotCohortOverlap(
  result,
  uniqueCombinations = TRUE,
  facet = c("cdm_name", "cohort_name_reference"),
  colour = "variable_name",
  style = "default",
  .options = lifecycle::deprecated()
)
```

Arguments

result	A summarised_result object.
uniqueCombinations	Whether to restrict to unique reference and comparator comparisons.
facet	Columns to facet by. See options with availablePlotColumns(result). Formula is also allowed to specify rows and columns.
colour	Columns to color by. See options with availablePlotColumns(result).
style	Named list that specifies how to style the different parts of the table generated. It can either be a pre-defined style ("default" or "darwin" - the latter just for gt and flextable), NULL to get the table default style, or custom. Keep in mind that styling code is different for all table styles. To see the different styles see visOmopResults::tableStyle().
.options	deprecated.

Value

A ggplot.

Examples

```
library(CohortCharacteristics)

cdm <- mockCohortCharacteristics()

overlap <- summariseCohortOverlap(cdm$cohort2)

plotCohortOverlap(overlap, uniqueCombinations = FALSE)
```

plotCohortTiming	<i>Plot summariseCohortTiming results.</i>
------------------	--

Description**[Experimental]****Usage**

```
plotCohortTiming(
  result,
  plotType = "boxplot",
  timeScale = "days",
  uniqueCombinations = TRUE,
  facet = c("cdm_name", "cohort_name_reference"),
  colour = c("cohort_name_comparator"),
  style = "default"
)
```

Arguments

result	A summarised_result object.
plotType	Type of desired formatted table, possibilities are "boxplot" and "densityplot".
timeScale	Time scale to show, it can be "days" or "years".
uniqueCombinations	Whether to restrict to unique reference and comparator comparisons.
facet	Columns to facet by. See options with availablePlotColumns(result). Formula is also allowed to specify rows and columns.
colour	Columns to color by. See options with availablePlotColumns(result).
style	Named list that specifies how to style the different parts of the table generated. It can either be a pre-defined style ("default" or "darwin" - the latter just for gt and flextable), NULL to get the table default style, or custom. Keep in mind that styling code is different for all table styles. To see the different styles see visOmopResults::tableStyle().

Value

A ggplot.

Examples

```
## Not run:
library(CohortCharacteristics)
library(omock)
library(DrugUtilisation)

cdm <- mockCdmFromDataset(datasetName = "GiBleed", source = "duckdb")

cdm <- generateIngredientCohortSet(
  cdm = cdm,
  name = "my_cohort",
  ingredient = c("acetaminophen", "morphine", "warfarin")
)

timings <- summariseCohortTiming(cdm$my_cohort)

plotCohortTiming(
  timings,
  timeScale = "years",
  uniqueCombinations = FALSE,
  facet = c("cdm_name", "cohort_name_reference"),
  colour = c("cohort_name_comparator")
)

plotCohortTiming(
  timings,
  plotType = "densityplot",
  timeScale = "years",
  uniqueCombinations = FALSE,
  facet = c("cdm_name", "cohort_name_reference"),
  colour = c("cohort_name_comparator")
)

cdmDisconnect(cdm = cdm)

## End(Not run)
```

plotComparedLargeScaleCharacteristics

create a ggplot from the output of summariseLargeScaleCharacteristics.

Description

[Experimental]

Usage

```
plotComparedLargeScaleCharacteristics(
  result,
  colour,
  reference = NULL,
  facet = NULL,
  missings = 0,
  style = "default"
)
```

Arguments

<code>result</code>	A summarised_result object.
<code>colour</code>	Columns to color by. See options with <code>availablePlotColumns(result)</code> .
<code>reference</code>	A named character to set up the reference. It must be one of the levels of reference.
<code>facet</code>	Columns to facet by. See options with <code>availablePlotColumns(result)</code> . Formula is also allowed to specify rows and columns.
<code>missings</code>	Value to replace the missing value with. If NULL missing values will be eliminated.
<code>style</code>	Named list that specifies how to style the different parts of the table generated. It can either be a pre-defined style ("default" or "darwin" - the latter just for gt and flextable), NULL to get the table default style, or custom. Keep in mind that styling code is different for all table styles. To see the different styles see <code>visOmopResults::tableStyle()</code> .

Value

A ggplot.

Examples

```
## Not run:
library(CohortCharacteristics)
library(DrugUtilisation)
library(plotly, warn.conflicts = FALSE)

cdm <- mockCdmFromDataset(datasetName = "GiBleed", source = "duckdb")

cdm <- generateIngredientCohortSet(
  cdm = cdm, name = "my_cohort", ingredient = "acetaminophen"
)

resultsLsc <- cdm$my_cohort |>
  summariseLargeScaleCharacteristics(
    window = list(c(-365, -1), c(1, 365)),
    eventInWindow = "condition_occurrence"
  )
```

```

resultsLsc |>
  plotComparedLargeScaleCharacteristics(
    colour = "variable_level",
    reference = "-365 to -1",
    missings = NULL
  ) |>
  ggplotly()

```

```
cdmDisconnect(cdm)
```

```
## End(Not run)
```

plotLargeScaleCharacteristics

create a ggplot from the output of summariseLargeScaleCharacteristics.

Description

[Experimental]

Usage

```

plotLargeScaleCharacteristics(
  result,
  facet = c("cdm_name", "cohort_name"),
  colour = "variable_level",
  style = "default"
)

```

Arguments

result	A summarised_result object.
facet	Columns to facet by. See options with availablePlotColumns(result). Formula is also allowed to specify rows and columns.
colour	Columns to color by. See options with availablePlotColumns(result).
style	Named list that specifies how to style the different parts of the table generated. It can either be a pre-defined style ("default" or "darwin" - the latter just for gt and flextable), NULL to get the table default style, or custom. Keep in mind that styling code is different for all table styles. To see the different styles see visOmopResults::tableStyle().

Value

A ggplot2 object.

Examples

```
## Not run:
library(CohortCharacteristics)
library(omock)
library(DrugUtilisation)

cdm <- mockCdmFromDataset(datasetName = "GiBleed", source = "duckdb")

cdm <- generateIngredientCohortSet(
  cdm = cdm, name = "my_cohort", ingredient = "acetaminophen"
)

resultsLsc <- cdm$my_cohort |>
  summariseLargeScaleCharacteristics(
    window = list(c(-365, -1), c(1, 365)),
    eventInWindow = "condition_occurrence"
  )

resultsLsc |>
  plotLargeScaleCharacteristics(
    facet = c("cdm_name", "cohort_name"),
    colour = "variable_level"
  )

cdmDisconnect(cdm)

## End(Not run)
```

summariseCharacteristics

Summarise characteristics of cohorts in a cohort table

Description

Summarise characteristics of cohorts in a cohort table

Usage

```
summariseCharacteristics(
  cohort,
  cohortId = NULL,
  strata = list(),
  counts = TRUE,
  demographics = TRUE,
  ageGroup = NULL,
  tableIntersectFlag = list(),
  tableIntersectCount = list(),
  tableIntersectDate = list(),
```

```

tableIntersectDays = list(),
cohortIntersectFlag = list(),
cohortIntersectCount = list(),
cohortIntersectDate = list(),
cohortIntersectDays = list(),
conceptIntersectFlag = list(),
conceptIntersectCount = list(),
conceptIntersectDate = list(),
conceptIntersectDays = list(),
otherVariables = character(),
estimates = list(),
weights = NULL
)

```

Arguments

cohort	A cohort_table object.
cohortId	A cohort definition id to restrict by. If NULL, all cohorts will be included.
strata	A list of variables to stratify results. These variables must have been added as additional columns in the cohort table.
counts	TRUE or FALSE. If TRUE, record and person counts will be produced.
demographics	TRUE or FALSE. If TRUE, patient demographics (cohort start date, cohort end date, age, sex, prior observation, and future observation will be summarised).
ageGroup	A list of age groups to stratify results by.
tableIntersectFlag	A list of arguments that uses PatientProfiles::addTableIntersectFlag() to add variables to summarise.
tableIntersectCount	A list of arguments that uses PatientProfiles::addTableIntersectCount() to add variables to summarise.
tableIntersectDate	A list of arguments that uses PatientProfiles::addTableIntersectDate() to add variables to summarise.
tableIntersectDays	A list of arguments that uses PatientProfiles::addTableIntersectDays() to add variables to summarise.
cohortIntersectFlag	A list of arguments that uses PatientProfiles::addCohortIntersectFlag() to add variables to summarise.
cohortIntersectCount	A list of arguments that uses PatientProfiles::addCohortIntersectCount() to add variables to summarise.
cohortIntersectDate	A list of arguments that uses PatientProfiles::addCohortIntersectDate() to add variables to summarise.
cohortIntersectDays	A list of arguments that uses PatientProfiles::addCohortIntersectDays() to add variables to summarise.

conceptIntersectFlag	A list of arguments that uses PatientProfiles::addConceptIntersectFlag() to add variables to summarise.
conceptIntersectCount	A list of arguments that uses PatientProfiles::addConceptIntersectCount() to add variables to summarise.
conceptIntersectDate	A list of arguments that uses PatientProfiles::addConceptIntersectDate() to add variables to summarise.
conceptIntersectDays	A list of arguments that uses PatientProfiles::addConceptIntersectDays() to add variables to summarise.
otherVariables	Other variables contained in cohort that you want to be summarised.
estimates	To modify the default estimates for a variable. By default: 'min', 'q25', 'median', 'q75', 'max' for "date", for "numeric" and "integer" variables ("numeric" and "integer" also use 'mean' and 'sd' estimates). 'count' and 'percentage' for "categorical" and "binary". You have to provide them as a list: list(age = c("median", "density")). You can also use 'date', 'numeric', 'integer', 'binary', 'categorical', 'demographics', 'intersect', 'other', 'table_intersect_count', ... as valid labels, see available estimates using PatientProfiles::availableEstimates()
weights	Column in cohort that points to weights of each individual.

Value

A summary of the characteristics of the cohorts in the cohort table.

Examples

```
library(dplyr, warn.conflicts = FALSE)
library(CohortCharacteristics)
library(PatientProfiles)

cdm <- mockCohortCharacteristics()

cdm$cohort1 |>
  addSex() |>
  addAge(
    ageGroup = list(c(0, 40), c(41, 150))
  ) |>
  summariseCharacteristics(
    strata = list("sex", "age_group"),
    cohortIntersectFlag = list(
      "Cohort 2 Flag" = list(
        targetCohortTable = "cohort2", window = c(-365, 0)
      )
    ),
    cohortIntersectCount = list(
      "Cohort 2 Count" = list(
        targetCohortTable = "cohort2", window = c(-365, 0)
      )
    )
  )
```

```
)  
) |>  
glimpse()
```

summariseCohortAttrition

Summarise attrition associated with cohorts in a cohort table

Description

Summarise attrition associated with cohorts in a cohort table

Usage

```
summariseCohortAttrition(cohort, cohortId = NULL)
```

Arguments

cohort	A cohort_table object.
cohortId	A cohort definition id to restrict by. If NULL, all cohorts will be included.

Value

A summary of the attrition for the cohorts in the cohort table.

Examples

```
library(CohortCharacteristics)  
library(dplyr, warn.conflicts = FALSE)  
  
cdm <- mockCohortCharacteristics()  
  
summariseCohortAttrition(cohort = cdm$cohort1) |>  
glimpse()
```

`summariseCohortCodelist`*Summarise the cohort codelist attribute*

Description

[Experimental]

Usage

```
summariseCohortCodelist(cohort, cohortId = NULL)
```

Arguments

<code>cohort</code>	A <code>cohort_table</code> object.
<code>cohortId</code>	A cohort definition id to restrict by. If <code>NULL</code> , all cohorts will be included.

Value

A summarised_result object with the exported cohort codelist information.

Examples

```
library(CohortCharacteristics)
library(dplyr, warn.conflicts = FALSE)
library(omock)
library(CDMConnector)

cdm <- mockCdmFromDataset(datasetName = "GiBleed", source = "duckdb")

cdm <- generateConceptCohortSet(cdm = cdm,
                              conceptSet = list(pharyngitis = 4112343L),
                              name = "my_cohort")

result <- summariseCohortCodelist(cdm$my_cohort)

glimpse(result)

tidy(result)
```

`summariseCohortCount` *Summarise counts for cohorts in a cohort table*

Description

Summarise counts for cohorts in a cohort table

Usage

```
summariseCohortCount(cohort, cohortId = NULL, strata = list())
```

Arguments

<code>cohort</code>	A <code>cohort_table</code> object.
<code>cohortId</code>	A cohort definition id to restrict by. If <code>NULL</code> , all cohorts will be included.
<code>strata</code>	A list of variables to stratify results. These variables must have been added as additional columns in the cohort table.

Value

A summary of counts of the cohorts in the cohort table.

Examples

```
library(CohortCharacteristics)
library(dplyr, warn.conflicts = FALSE)

cdm <- mockCohortCharacteristics()

summariseCohortCount(cohort = cdm$cohort1) |>
  glimpse()
```

`summariseCohortOverlap` *Summarise overlap between cohorts in a cohort table*

Description

Summarise overlap between cohorts in a cohort table

Usage

```
summariseCohortOverlap(
  cohort,
  cohortId = NULL,
  strata = list(),
  overlapBy = "subject_id"
)
```

Arguments

cohort	A cohort_table object.
cohortId	A cohort definition id to restrict by. If NULL, all cohorts will be included.
strata	A list of variables to stratify results. These variables must have been added as additional columns in the cohort table.
overlapBy	Columns in cohort to use as record identifiers.

Value

A summary of overlap between cohorts in the cohort table.

Examples

```
library(CohortCharacteristics)
library(dplyr, warn.conflicts = FALSE)

cdm <- mockCohortCharacteristics()

summariseCohortOverlap(cdm$cohort2) |>
  glimpse()
```

`summariseCohortTiming` *Summarise timing between entries into cohorts in a cohort table*

Description

Summarise timing between entries into cohorts in a cohort table

Usage

```
summariseCohortTiming(
  cohort,
  cohortId = NULL,
  strata = list(),
  restrictToFirstEntry = TRUE,
  estimates = c("min", "q25", "median", "q75", "max", "density"),
  density = lifecycle::deprecated()
)
```

Arguments

cohort	A cohort_table object.
cohortId	A cohort definition id to restrict by. If NULL, all cohorts will be included.
strata	A list of variables to stratify results. These variables must have been added as additional columns in the cohort table.
restrictToFirstEntry	If TRUE only an individual's first entry per cohort will be considered. If FALSE all entries per individual will be considered.
estimates	Summary statistics to use when summarising timing.
density	deprecated.

Value

A summary of timing between entries into cohorts in the cohort table.

Examples

```
library(CohortCharacteristics)
library(dplyr, warn.conflicts = FALSE)

cdm <- mockCohortCharacteristics(numberIndividuals = 100)

summariseCohortTiming(cdm$cohort2) |>
  glimpse()
```

summariseLargeScaleCharacteristics

This function is used to summarise the large scale characteristics of a cohort table

Description

This function is used to summarise the large scale characteristics of a cohort table

Usage

```
summariseLargeScaleCharacteristics(
  cohort,
  cohortId = NULL,
  strata = list(),
  window = list(c(-Inf, -366), c(-365, -31), c(-30, -1), c(0, 0), c(1, 30), c(31, 365),
    c(366, Inf)),
  eventInWindow = NULL,
```

```

    episodeInWindow = NULL,
    indexDate = "cohort_start_date",
    censorDate = NULL,
    includeSource = FALSE,
    minimumFrequency = 0.005,
    excludedCodes = c(0)
  )

```

Arguments

<code>cohort</code>	A <code>cohort_table</code> object.
<code>cohortId</code>	A cohort definition id to restrict by. If NULL, all cohorts will be included.
<code>strata</code>	A list of variables to stratify results. These variables must have been added as additional columns in the cohort table.
<code>window</code>	Temporal windows that we want to characterize.
<code>eventInWindow</code>	Tables to characterise the events in the window. <code>eventInWindow</code> must be provided if <code>episodeInWindow</code> is not specified.
<code>episodeInWindow</code>	Tables to characterise the episodes in the window. <code>episodeInWindow</code> must be provided if <code>eventInWindow</code> is not specified.
<code>indexDate</code>	Variable in <code>x</code> that contains the date to compute the intersection.
<code>censorDate</code>	whether to censor overlap events at a specific date or a column date of <code>x</code>
<code>includeSource</code>	Whether to include source concepts.
<code>minimumFrequency</code>	Minimum frequency of codes to be reported. If a <code>concept_id</code> has a frequency smaller than <code>minimumFrequency</code> in a certain window that estimate will be eliminated from the result object.
<code>excludedCodes</code>	Codes excluded.

Value

The output of this function is a `ResultSummary` containing the relevant information.

Examples

```

## Not run:
library(CohortCharacteristics)
library(DrugUtilisation)
library(dplyr, warn.conflicts = FALSE)
library(omock)

cdm <- mockCdmFromDataset(datasetName = "GiBleed", source = "duckdb")

cdm <- generateIngredientCohortSet(
  cdm = cdm, name = "my_cohort", ingredient = "acetaminophen"
)

```

```

cdm$my_cohort |>
  summariseLargeScaleCharacteristics(
    window = list(c(-365, -1), c(1, 365)),
    eventInWindow = "condition_occurrence"
  ) |>
  glimpse()

cdmDisconnect(cdm)

## End(Not run)

```

tableCharacteristics *Format a summarise_characteristics object into a visual table.*

Description

[Experimental]

Usage

```

tableCharacteristics(
  result,
  type = "gt",
  header = c("cdm_name", "cohort_name"),
  groupColumn = character(),
  hide = c(additionalColumns(result), settingsColumns(result)),
  style = "default",
  .options = list()
)

```

Arguments

result	A summarised_result object.
type	Type of table. Check supported types with visOmapResults::tableType().
header	Columns to use as header. See options with availableTableColumns(result).
groupColumn	Columns to group by. See options with availableTableColumns(result).
hide	Columns to hide from the visualisation. See options with availableTableColumns(result).
style	Named list that specifies how to style the different parts of the table generated. It can either be a pre-defined style ("default" or "darwin" - the latter just for gt and flextable), NULL to get the table default style, or custom. Keep in mind that styling code is different for all table styles. To see the different styles see visOmapResults::tableStyle().
.options	A named list with additional formatting options. visOmapResults::tableOptions() shows allowed arguments and their default values.

Value

A formatted table.

Examples

```
library(CohortCharacteristics)

cdm <- mockCohortCharacteristics()

result <- summariseCharacteristics(cdm$cohort1)

tableCharacteristics(result)
```

`tableCohortAttrition` *Create a visual table from the output of summariseCohortAttrition.*

Description

[Experimental]

Usage

```
tableCohortAttrition(
  result,
  type = "gt",
  header = "variable_name",
  groupColumn = c("cdm_name", "cohort_name"),
  hide = c("variable_level", "reason_id", "estimate_name", settingsColumns(result)),
  style = "default",
  .options = list()
)
```

Arguments

<code>result</code>	A summarised_result object.
<code>type</code>	Type of table. Check supported types with <code>visOmopResults::tableType()</code> .
<code>header</code>	Columns to use as header. See options with <code>availableTableColumns(result)</code> .
<code>groupColumn</code>	Columns to group by. See options with <code>availableTableColumns(result)</code> .
<code>hide</code>	Columns to hide from the visualisation. See options with <code>availableTableColumns(result)</code> .
<code>style</code>	Named list that specifies how to style the different parts of the table generated. It can either be a pre-defined style ("default" or "darwin" - the latter just for gt and flextable), NULL to get the table default style, or custom. Keep in mind that styling code is different for all table styles. To see the different styles see <code>visOmopResults::tableStyle()</code> .

`.options` A named list with additional formatting options. `visOmopResults::tableOptions()` shows allowed arguments and their default values.

Value

A formatted table.

Examples

```
library(CohortCharacteristics)

cdm <- mockCohortCharacteristics()

result <- summariseCohortAttrition(cdm$cohort2)

tableCohortAttrition(result)
```

<code>tableCohortCodelist</code>	<i>Create a visual table from <summarised_result> object from summariseCohortCodelist()</i>
----------------------------------	---

Description

[Experimental]

Usage

```
tableCohortCodelist(result, type = "reactable")
```

Arguments

<code>result</code>	A summarised_result object.
<code>type</code>	Type of table. Supported types: "gt", "flextable", "tibble", "datatable", "reactable".

Value

A visual table with the results.

Examples

```
library(CohortCharacteristics)
library(omock)
library(dplyr, warn.conflicts = FALSE)
library(CDMConnector)

cdm <- mockCdmFromDataset(datasetName = "GiBleed", source = "duckdb")

cdm <- generateConceptCohortSet(cdm = cdm,
                               conceptSet = list(pharyngitis = 4112343L),
                               name = "my_cohort")

result <- summariseCohortCodelist(cdm$my_cohort)

tableCohortCodelist(result)
```

tableCohortCount	<i>Format a summarise_characteristics object into a visual table.</i>
------------------	---

Description**[Experimental]****Usage**

```
tableCohortCount(
  result,
  type = "gt",
  header = "cohort_name",
  groupColumn = character(),
  hide = c("variable_level", settingsColumns(result)),
  style = "default",
  .options = list()
)
```

Arguments

result	A summarised_result object.
type	Type of table. Check supported types with <code>visOmoResults::tableType()</code> .
header	Columns to use as header. See options with <code>availableTableColumns(result)</code> .
groupColumn	Columns to group by. See options with <code>availableTableColumns(result)</code> .
hide	Columns to hide from the visualisation. See options with <code>availableTableColumns(result)</code> .

style	Named list that specifies how to style the different parts of the table generated. It can either be a pre-defined style ("default" or "darwin" - the latter just for gt and flextable), NULL to get the table default style, or custom. Keep in mind that styling code is different for all table styles. To see the different styles see <code>visOmapResults::tableStyle()</code> .
.options	A named list with additional formatting options. <code>visOmapResults::tableOptions()</code> shows allowed arguments and their default values.

Value

A formatted table.

Examples

```
library(CohortCharacteristics)

cdm <- mockCohortCharacteristics()

result <- summariseCohortCount(cdm$cohort1)

tableCohortCount(result)
```

tableCohortOverlap	<i>Format a summariseOverlapCohort result into a visual table.</i>
--------------------	--

Description

[Experimental]

Usage

```
tableCohortOverlap(
  result,
  uniqueCombinations = TRUE,
  type = "gt",
  header = c("variable_name"),
  groupColumn = c("cdm_name"),
  hide = c("variable_level", settingsColumns(result)),
  style = "default",
  .options = list()
)
```

Arguments

<code>result</code>	A summarised_result object.
<code>uniqueCombinations</code>	Whether to restrict to unique reference and comparator comparisons.
<code>type</code>	Type of table. Check supported types with <code>visOmapResults::tableType()</code> .
<code>header</code>	Columns to use as header. See options with <code>availableTableColumns(result)</code> .
<code>groupByColumn</code>	Columns to group by. See options with <code>availableTableColumns(result)</code> .
<code>hide</code>	Columns to hide from the visualisation. See options with <code>availableTableColumns(result)</code> .
<code>style</code>	Named list that specifies how to style the different parts of the table generated. It can either be a pre-defined style ("default" or "darwin" - the latter just for gt and flextable), NULL to get the table default style, or custom. Keep in mind that styling code is different for all table styles. To see the different styles see <code>visOmapResults::tableStyle()</code> .
<code>.options</code>	A named list with additional formatting options. <code>visOmapResults::tableOptions()</code> shows allowed arguments and their default values.

Value

A formatted table.

Examples

```
library(CohortCharacteristics)

cdm <- mockCohortCharacteristics()

overlap <- summariseCohortOverlap(cdm$cohort2)

tableCohortOverlap(overlap)
```

<code>tableCohortTiming</code>	<i>Format a summariseCohortTiming result into a visual table.</i>
--------------------------------	---

Description

[Experimental]

Usage

```
tableCohortTiming(
  result,
  timeScale = "days",
  uniqueCombinations = TRUE,
  type = "gt",
  header = strataColumns(result),
  groupColumn = c("cdm_name"),
  hide = c("variable_level", settingsColumns(result)),
  style = "default",
  .options = list()
)
```

Arguments

<code>result</code>	A summarised_result object.
<code>timeScale</code>	Time scale to show, it can be "days" or "years".
<code>uniqueCombinations</code>	Whether to restrict to unique reference and comparator comparisons.
<code>type</code>	Type of table. Check supported types with <code>visOmoResults::tableType()</code> .
<code>header</code>	Columns to use as header. See options with <code>availableTableColumns(result)</code> .
<code>groupColumn</code>	Columns to group by. See options with <code>availableTableColumns(result)</code> .
<code>hide</code>	Columns to hide from the visualisation. See options with <code>availableTableColumns(result)</code> .
<code>style</code>	Named list that specifies how to style the different parts of the table generated. It can either be a pre-defined style ("default" or "darwin" - the latter just for gt and flextable), NULL to get the table default style, or custom. Keep in mind that styling code is different for all table styles. To see the different styles see <code>visOmoResults::tableStyle()</code> .
<code>.options</code>	A named list with additional formatting options. <code>visOmoResults::tableOptions()</code> shows allowed arguments and their default values.

Value

A formatted table.

Examples

```
## Not run:
library(CohortCharacteristics)
library(omock)
library(DrugUtilisation)

cdm <- mockCdmFromDataset(datasetName = "GiBleed", source = "duckdb")

cdm <- generateIngredientCohortSet(
  cdm = cdm,
  name = "my_cohort",
```

```

    ingredient = c("acetaminophen", "morphine", "warfarin")
  )

  timings <- summariseCohortTiming(cdm$my_cohort)

  tableCohortTiming(timings, timeScale = "years")

  cdmDisconnect(cdm)

  ## End(Not run)

```

tableLargeScaleCharacteristics

Explore and compare the large scale characteristics of cohorts

Description

Explore and compare the large scale characteristics of cohorts

Usage

```

tableLargeScaleCharacteristics(
  result,
  compareBy = NULL,
  hide = c("type"),
  smdReference = NULL,
  type = "reactable"
)

```

Arguments

result	A summarised_result object.
compareBy	A column to compare by it can be a choice between "cdm_name", "cohort_name", strata columns, "variable_level" (window) and "type". It can be left NULL for no comparison.
hide	Columns to hide.
smdReference	Level of reference for the Standardised Mean Differences (SMD), it has to be one of the values of compareBy column. If NULL no SMDs are displayed.
type	Type of table to generate, it can be either DT or reactable.

Value

A visual table.

Examples

```
## Not run:
library(CohortCharacteristics)
library(omock)
library(CDMConnector)
library(dplyr, warn.conflicts = FALSE)

cdm <- mockCdmFromDataset(datasetName = "GiBleed", source = "duckdb")

cdm <- generateConceptCohortSet(
  cdm = cdm,
  conceptSet = list(viral_pharyngitis = 4112343),
  name = "my_cohort"
)

result <- summariseLargeScaleCharacteristics(
  cohort = cdm$my_cohort,
  window = list(c(-Inf, -1), c(0, 0), c(1, Inf)),
  episodeInWindow = "drug_exposure"
)

tableLargeScaleCharacteristics(result)

tableLargeScaleCharacteristics(result,
                                compareBy = "variable_level")

tableLargeScaleCharacteristics(result,
                                compareBy = "variable_level",
                                smdReference = "-inf to -1")

cdmDisconnect(cdm)

## End(Not run)
```

tableTopLargeScaleCharacteristics

Visualise the top concepts per each cdm name, cohort, stratification and window.

Description

Visualise the top concepts per each cdm name, cohort, stratification and window.

Usage

```
tableTopLargeScaleCharacteristics(
  result,
  topConcepts = 10,
```

```

    type = "gt",
    style = "default"
  )

```

Arguments

result	A summarised_result object.
topConcepts	Number of concepts to restrict the table.
type	Type of table, it can be any of the supported visOmoResults::tableType() formats.
style	Named list that specifies how to style the different parts of the table generated. It can either be a pre-defined style ("default" or "darwin" - the latter just for gt and flextable), NULL to get the table default style, or custom. Keep in mind that styling code is different for all table styles. To see the different styles see visOmoResults::tableStyle().

Value

A formatted table.

Examples

```

## Not run:
library(CohortCharacteristics)
library(omock)
library(CDMConnector)
library(dplyr, warn.conflicts = FALSE)

cdm <- mockCdmFromDataset(datasetName = "GiBleed", source = "duckdb")

cdm <- generateConceptCohortSet(
  cdm = cdm,
  conceptSet = list(viral_pharyngitis = 4112343),
  name = "my_cohort"
)

result <- summariseLargeScaleCharacteristics(
  cohort = cdm$my_cohort,
  window = list(c(-Inf, -1), c(0, 0), c(1, Inf)),
  episodeInWindow = "drug_exposure"
)

tableTopLargeScaleCharacteristics(result)

cdmDisconnect(cdm)

## End(Not run)

```

Index

`availablePlotColumns`, [3](#)
`availableTableColumns`, [3](#)

`benchmarkCohortCharacteristics`, [4](#)

`mockCohortCharacteristics`, [5](#)

`plotCharacteristics`, [6](#)
`plotCohortAttrition`, [7](#)
`plotCohortCount`, [9](#)
`plotCohortOverlap`, [10](#)
`plotCohortTiming`, [11](#)
`plotComparedLargeScaleCharacteristics`,
 [12](#)
`plotLargeScaleCharacteristics`, [14](#)

`summariseCharacteristics`, [15](#)
`summariseCohortAttrition`, [18](#)
`summariseCohortCodelist`, [19](#)
`summariseCohortCount`, [20](#)
`summariseCohortOverlap`, [20](#)
`summariseCohortTiming`, [21](#)
`summariseLargeScaleCharacteristics`, [22](#)

`tableCharacteristics`, [24](#)
`tableCohortAttrition`, [25](#)
`tableCohortCodelist`, [26](#)
`tableCohortCount`, [27](#)
`tableCohortOverlap`, [28](#)
`tableCohortTiming`, [29](#)
`tableLargeScaleCharacteristics`, [31](#)
`tableTopLargeScaleCharacteristics`, [32](#)