

# Package ‘Characterization’

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**Type** Package

**Title** Characterizations of Cohorts

**Version** 0.0.1

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**Description** Various characterizations of a target and outcome cohort.

**License** Apache License 2.0

**URL** <https://ohdsi.github.io/Characterization>, <https://github.com/OHDSI/Characterization>

**BugReports** <https://github.com/OHDSI/Characterization/issues>

**Depends** R (>= 4.0.0),  
DatabaseConnector (>= 5.0.0),  
FeatureExtraction (>= 3.0.0)

**Imports** SqlRender (>= 1.9.0),  
ParallelLogger (>= 3.0.0),  
checkmate,  
readr,  
dplyr,  
rlang

**Suggests** testthat,  
Eunomia,  
withr

**Remotes** ohdsi/FeatureExtraction,  
ohdsi/Eunomia

**NeedsCompilation** no

**RoxygenNote** 7.1.2

**Roxygen** list(markdown = TRUE)

**Encoding** UTF-8

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computeIncidenceRates	<i>Compute incidence rates</i>
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## Description

Compute incidence rates

## Usage

```
computeIncidenceRates(
  connection = NULL,
  connectionDetails = NULL,
  targetDatabaseSchema,
  targetTable,
  comparatorDatabaseSchema,
  comparatorTable,
  tempEmulationSchema = getOption("sqlRenderTempEmulationSchema"),
  targetOutcomes,
  riskWindowStart = 0,
  startAnchor = "cohort start",
  riskWindowEnd = 0,
  endAnchor = "cohort end"
)
```

## Arguments

connection	An object of type connection as created using the <a href="#">DatabaseConnector::connect()</a> function. Can be left NULL if connectionDetails is provided, in which case a new connection will be opened at the start of the function, and closed when the function finishes.
connectionDetails	An object of type connectionDetails as created using the <a href="#">DatabaseConnector::createConnectionDetails()</a> function. Can be left NULL if connection is provided.
targetDatabaseSchema	Schema name where your target cohort table resides. Note that for SQL Server, this should include both the database and schema name, for example 'scratch.dbo'.
targetTable	Name of the target cohort table.
comparatorDatabaseSchema	Schema name where your comparator cohort table resides. Note that for SQL Server, this should include both the database and schema name, for example 'scratch.dbo'.
comparatorTable	Name of the target cohort table.

tempEmulationSchema	Some database platforms like Oracle and Impala do not truly support temp tables. To emulate temp tables, provide a schema with write privileges where temp tables can be created
targetOutcomes	A data frame with two columns: targetId and outcomeId. These columns correspond to cohort IDs in the target and comparator cohort tables.
riskWindowStart	The start of the risk window (in days) relative to the startAnchor.
startAnchor	The anchor point for the start of the risk window. Can be "cohort start" or "cohort end".
riskWindowEnd	The end of the risk window (in days) relative to the endAnchor.
endAnchor	The anchor point for the end of the risk window. Can be "cohort start" or "cohort end".

**Value**

The incidence rates of the outcome cohorts in the target cohorts.

---

```
createCharacterizationAnalysisList
```

*Create a list of characterization analyses*

---

**Description**

Create a list of characterization analyses

**Usage**

```
createCharacterizationAnalysisList(...)
```

**Arguments**

... Objects generated using 'create...Args()' functions, for example createComputeIncidenceRatesArgs

---

```
createComputeIncidenceRatesArgs
```

*Create a parameter object for the function computeIncidenceRates*

---

**Description**

Create a parameter object for the function computeIncidenceRates

**Usage**

```
createComputeIncidenceRatesArgs(
  targetOutcomes,
  riskWindowStart = 0,
  startAnchor = "cohort start",
  riskWindowEnd = 0,
  endAnchor = "cohort end"
)
```

**Arguments**

targetOutcomes	A data frame with two columns: targetId and outcomeId. These columns correspond to cohort IDs in the target and comparator cohort tables.
riskWindowStart	The start of the risk window (in days) relative to the startAnchor.
startAnchor	The anchor point for the start of the risk window. Can be "cohort start" or "cohort end".
riskWindowEnd	The end of the risk window (in days) relative to the endAnchor.
endAnchor	The anchor point for the end of the risk window. Can be "cohort start" or "cohort end".

**Details**

Create an object defining the parameter values.

---

loadCharacterizationAnalysisList  
*Load a characterization analysis list from file*

---

**Description**

Load a CharacterizationAnalysisList object from file. The file is in JSON format.

**Usage**

```
loadCharacterizationAnalysisList(file)
```

**Arguments**

file	The name of the file
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**Value**

A CharacterizationAnalysisList object.

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runCharacterizationAnalyses  
*Run multiple characterization analyses*

---

**Description**

Run multiple characterization analyses

**Usage**

```
runCharacterizationAnalyses(
  connection = NULL,
  connectionDetails = NULL,
  targetDatabaseSchema,
  targetTable,
  comparatorDatabaseSchema,
  comparatorTable,
  tempEmulationSchema = getOption("sqlRenderTempEmulationSchema"),
  characterizationAnalysisList,
  exportFolder
)
```

**Arguments**

connection	An object of type connection as created using the <a href="#">DatabaseConnector::connect()</a> function. Can be left NULL if connectionDetails is provided, in which case a new connection will be opened at the start of the function, and closed when the function finishes.
connectionDetails	An object of type connectionDetails as created using the <a href="#">DatabaseConnector::createConnectionDetails()</a> function. Can be left NULL if connection is provided.
targetDatabaseSchema	Schema name where your target cohort table resides. Note that for SQL Server, this should include both the database and schema name, for example 'scratch.dbo'.
targetTable	Name of the target cohort table.
comparatorDatabaseSchema	Schema name where your comparator cohort table resides. Note that for SQL Server, this should include both the database and schema name, for example 'scratch.dbo'.
comparatorTable	Name of the target cohort table.
tempEmulationSchema	Some database platforms like Oracle and Impala do not truly support temp tables. To emulate temp tables, provide a schema with write privileges where temp tables can be created
characterizationAnalysisList	An object of type CharacterizationAnalysisList as created using the <a href="#">createCharacterizationAnalysisList()</a> function.
exportFolder	A folder where results will be written.

---

saveCharacterizationAnalysisList

*Save a characterization analysis list to file*


---

**Description**

Write a CharacterizationAnalysisList object to file. The file is in JSON format.

**Usage**

```
saveCharacterizationAnalysisList(characterizationAnalysisList, file)
```

**Arguments**

`characterizationAnalysisList`

An object of type `CharacterizationAnalysisList` as created using the `createCharacterization` function to be written to file.

`file`

The name of the file where the results will be written

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