Package 'Covid19HcqSccs'

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Type Package

Title Self-Controlled Case Series Analysis of the Safety of Hydroxychloroquine

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Description Hydroxychloroquine is being considered for use in treatment and prophylaxis of COVID-19 in rapid clinical trials across the world. However, the full safety profiles of this drugs is unknown, and the current trials are unlikely to be powered or have sufficient follow-up time to evaluate most safety outcomes. The aim of this OHDSI study is to use existing retrospective data to evaluate the safety of Hydroxychloroquine, using the self-controlled case series (SCCS) design.

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Depends DatabaseConnector

Imports SqlRender,
SelfControlledCaseSeries (>= 1.4.2),
ParallelLogger,
Cyclops,
EmpiricalCalibration (>= 2.0.2),
ff,
dplyr,
tibble,
readr

Remotes ohdsi/ParallelLogger@develop
ohdsi/Cyclops
ohdsi/SelfControlledCaseSeries

NeedsCompilation no

RoxygenNote 7.1.0

Encoding UTF-8

R topics documented:

createCohorts *Create the exposure and outcome cohorts*

Description

Create the exposure and outcome cohorts

Usage

```
createCohorts(
  connectionDetails,
  cdmDatabaseSchema,
  cohortDatabaseSchema,
  cohortTable = "cohort",
  oracleTempSchema,
  outputFolder
)
```

Arguments

connectionDetails	An object of type connectionDetails as created using the createConnectionDetails function in the DatabaseConnector package.
cdmDatabaseSchema	Schema name where your patient-level data in OMOP CDM format resides. Note that for SQL Server, this should include both the database and schema name, for example 'cdm_data.dbo'.
cohortDatabaseSchema	Schema name where intermediate data can be stored. You will need to have write privileges in this schema. Note that for SQL Server, this should include both the database and schema name, for example 'cdm_data.dbo'.
cohortTable	The name of the table that will be created in the work database schema. This table will hold the exposure and outcome cohorts used in this study.
oracleTempSchema	Should be used in Oracle to specify a schema where the user has write privileges for storing temporary tables.
outputFolder	Name of local folder to place results; make sure to use forward slashes (/)

Details

This function will create the exposure and outcome cohorts following the definitions included in this package.

`execute` *Execute the Study*

Description

Execute the Study

Usage

```
execute(
  connectionDetails,
  cdmDatabaseSchema,
  cohortDatabaseSchema = cdmDatabaseSchema,
  cohortTable = "cohort",
  oracleTempSchema = cohortDatabaseSchema,
  outputFolder,
  databaseId,
  createCohorts = TRUE,
  runSccs = TRUE,
  runSccsDiagnostics = TRUE,
  generateBasicOutputTable = TRUE,
  maxCores = 4
)
```

Arguments

`connectionDetails`
: An object of type `connectionDetails` as created using the `createConnectionDetails` function in the DatabaseConnector package.

`cdmDatabaseSchema`
: Schema name where your patient-level data in OMOP CDM format resides. Note that for SQL Server, this should include both the database and schema name, for example 'cdm_data.dbo'.

`cohortDatabaseSchema`
: Schema name where intermediate data can be stored. You will need to have write priviliges in this schema. Note that for SQL Server, this should include both the database and schema name, for example 'cdm_data.dbo'.

`cohortTable`
: The name of the table that will be created in the work database schema. This table will hold the exposure and outcome cohorts used in this study.

`oracleTempSchema`
: Should be used in Oracle to specify a schema where the user has write privileges for storing temporary tables.

`outputFolder`
: Name of local folder to place results; make sure to use forward slashes (/). Do not use a folder on a network drive since this greatly impacts performance.

`databaseId`
: A short unique identifier for the database. Will be used to generate file names.

`createCohorts`
: Create the cohortTable table with the exposure and outcome cohorts?

`runSccs`
: Perform the SCCS analyses? Requires the cohorts have been created.

`runSccsDiagnostics`
: Generate SCCSdiagnostics?

`generateBasicOutputTable`
: Generate a basic table with effect size estimates?

`maxCores`
: How many parallel cores should be used? If more cores are made available this can speed up the analyses.

Details

This function executes the Covid19HcqSccs Study.

The `createCohorts`, `synthesizePositiveControls`, `runAnalyses`, and `runDiagnostics` arguments are intended to be used to run parts of the full study at a time, but none of the parts are considered to be optional.

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runSelfControlledCaseSeries

Execute the Self-Controlled Case Series analyses

Description

Execute the Self-Controlled Case Series analyses

Usage

```
runSelfControlledCaseSeries(
  connectionDetails,
  cdmDatabaseSchema,
  oracleTempSchema = NULL,
  outcomeDatabaseSchema = cdmDatabaseSchema,
  outcomeTable = "cohort",
  exposureDatabaseSchema = cdmDatabaseSchema,
  exposureTable = "drug_era",
  outputFolder,
  maxCores
)
```

Arguments

`connectionDetails`
: An object of type `connectionDetails` as created using the `createConnectionDetails` function in the DatabaseConnector package.

`cdmDatabaseSchema`
: Schema name where your patient-level data in OMOP CDM format resides. Note that for SQL Server, this should include both the database and schema name, for example 'cdm_data.dbo'.

`oracleTempSchema`
: Should be used in Oracle to specify a schema where the user has write priviliges for storing temporary tables.

`outcomeDatabaseSchema`
: Schema name where the outcome cohorts are stored. Note that for SQL Server, this should include both the database and schema name, for example 'cdm_data.dbo'.

`outcomeTable`	The name of the table in the outcome database schema that holds the outcome cohorts,
`exposureDatabaseSchema`	Schema name where the exposure cohorts are stored. Note that for SQL Server, this should include both the database and schema name, for example 'cdm_data.dbo'.
`exposureTable`	The name of the table in the exposure database schema that holds the exposure cohorts,
`outputFolder`	Name of local folder to place results; make sure to use forward slashes (/). Do not use a folder on a network drive since this greatly impacts performance.
`maxCores`	How many parallel cores should be used? If more cores are made available this can speed up the analyses.

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