Setting up custom treatment patterns study

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This vignette describes how to set up a custom treatment patterns study.

Study specification

If you like to use this package to design a study follow the following steps:

1. Define target/event cohorts and add to package.

This package is build to work on the OMOP-CDM, but it can also be run on other types of databases.

For 'OMOP-CDM' databases:

- Specify all cohorts in ATLAS.
- Set 'baseUrl' (e.g. http://atlas-demo.ohdsi.org/WebAPI) parameter and loadCohorts = TRUE to load cohort definitios automatically from ATLAS WebAPI.
- Alternatively, specify a concept set and create re-use or create a new inst/Settings/CohortTemplate.sql. Specify concept sets in inst/Settings/eventcohorts_custom.csv:

cohortName	count	conceptSet
Descriptive name cohort	Number of concept IDs in conceptSet	List of unique concept IDs to be included

For 'Other' databases:

- Import the target/event cohorts from a csv file into the package. Add cohorts in inst/Settings/input_cohorts.csv:

cohortId	personId	startDate	endDate
Unique ID number	Unique person ID number	Entry date cohort	Exit date cohort

In both cases, specify the target/event cohorts in inst/Settings/cohorts_to_create.csv:

cohortId	cohortName	cohortDefinition	cohortType	atlasID
Unique ID number	Descriptive name cohort	'ATLAS' or 'Custom'	'target' or 'event'	Cohort ID ATLAS

2. Define study settings (mandatory) and characterization (optional).

A default list of study settings:

param	values	description
studyName	default	Unique name identifying the set of study parameters below
targetCohortId	1	Select one study population
eventCohortIds	"10,11,12	Select all treatments of interest
includeTreatmentsPriorToIndex	0	Number of days prior to the index date of the target cohort that event cohorts are allowed to start
minEraDuration	0	Minimum time an event era should last to be included in analysis
splitEventCohorts		Specify event cohort to split in acute (< 30 days) and therapy (>= 30 days)
eraCollapseSize	0	Window of time between which two eras of the same event cohort are collapsed into one era
combinationWindow	30	Window of time two event cohorts need to overlap to be considered a combination treatment
minStepDuration	30	Minimum time an event era before or after a generated combination treatment should last to be included in analysis
filterTreatments	First	Select first occurrences of / changes between / all event cohorts
maxPathLength	5	Maximum number of steps included in treatment pathway
minCellCount	0	Minimum number of persons with a specific treatment pathway for the pathway to be included in analysis
minCellMethod	Remove	Select to completely remove / sequentially adjust (by removing last step as often as necessary) treatment pathways below minCellCount
groupCombinations	10	Select to group all non-fixed combinations in one category 'other' in the sunburst plot
addNoPaths	FALSE	Select to include untreated persons without treatment pathway in the sunburst plot

Change these parameters according to the needs of your study in inst/Settings/study_settings.csv.

3. Add custom analysis parts (optional).

If desired, one can add addional output functions. Need to add R code and adjust shiny application.

Files in Package

To do.

Detailed description of Package

To do.