

Package ‘youthu’

August 8, 2021

Title Youth Outcomes to Health Utility

Version 0.0.0.9095

Description Tools for mapping measures routinely collected in youth mental health services to Quality Adjusted Life Years (QALYs). Part of the First Bounce model of primary youth mental health services. This development version of the youthu package has been made available as part of the process of testing and documenting the package. If you have any questions, please contact the authors (matthew.hamilton@orygen.org.au). The documentation for this package has been automatically generated by the ready4fun package and is therefore quite rudimentary. Further human authored documentation will follow in 2021.

License GPL-3 + file LICENSE

URL <https://ready4-dev.github.io/youthu/>,
<https://github.com/ready4-dev/youthu>, <https://www.ready4-dev.com/>

Encoding UTF-8

LazyData true

Roxygen list(markdown = TRUE)

RoxygenNote 7.1.1

Imports assertthat,
BCEA,
boot,
dataverse (>= 0.3.9),
dplyr,
knitr,
knitrBootstrap,
lifecycle,
lubridate,
magrittr,
MatchIt,
methods,
purrr,
ready4fun (>= 0.0.0.9298),
ready4show (>= 0.0.0.9038),
ready4use (>= 0.0.0.9133),
rlang,
stats,

stringr,
 testthat,
 tibble,
 tidyr,
 tidyselect,
 truncnorm,
 TTU ($\geq 0.0.0.9317$),
 utils,
 youthvars ($\geq 0.0.0.9064$)

VignetteBuilder knitr

Depends R (≥ 2.10)

Suggests rmarkdown

Remotes ready4-dev/ready4show,
 ready4-dev/ready4use,
 ready4-dev/youthvars,
 ready4-dev/TTU,
 iqss/dataverse-client-r,
 ready4-dev/ready4fun

R topics documented:

youthu-package	2
abbreviations_lup	3
add_qalys_to_ds	4
add_utl_predn	4
fns_dmt_tb	5
fn_type_lup_tb	6
get_md1_from_dv	7
get_tfmn_from_lup	7
make_hlth_ec_smry	8
make_matched_ds	9
make_sngl_grp_ds	9

Index **10**

youthu-package	<i>youthu: Youth Outcomes to Health Utility</i>
----------------	---

Description

Tools for mapping measures routinely collected in youth mental health services to Quality Adjusted Life Years (QALYs). Part of the First Bounce model of primary youth mental health services. This development version of the youthu package has been made available as part of the process of testing and documenting the package. If you have any questions, please contact the authors (matthew.hamilton@orygen.org.au). The documentation for this package has been automatically generated by the ready4fun package and is therefore quite rudimentary. Further human authored documentation will follow in 2021.

Details

To learn more about youthu, start with the vignettes: `browseVignettes(package = "youthu")`

Author(s)

Maintainer: Matthew Hamilton <matthew.hamilton@orygen.org.au> ([ORCID](#))

Authors:

- Caroline Gao <caroline.gao@orygen.org.au> ([ORCID](#))

Other contributors:

- Orygen [copyright holder, funder]
- Headspace [funder]
- National Health and Medical Research Council [funder]

See Also

Useful links:

- <https://ready4-dev.github.io/youthu/>
- <https://github.com/ready4-dev/youthu>
- <https://www.ready4-dev.com/>

abbreviations_lup *Common abbreviations lookup table*

Description

A lookup table for abbreviations commonly used in object names in the youthupackage.

Usage

```
abbreviations_lup
```

Format

An object of class `tbl_df` (inherits from `tbl`, `data.frame`) with 503 rows and 3 columns.

Details

A tibble

short_name_chr Short name (a character vector)

long_name_chr Long name (a character vector)

plural_lgl Plural (a logical vector)

Source

<https://doi.org/10.7910/DVN/2Y9VF9>

add_qalys_to_ds	<i>Add Quality Adjusted Life Years to dataset</i>
-----------------	---

Description

add_qalys_to_ds() is an Add function that updates an object by adding data to that object. Specifically, this function implements an algorithm to add quality adjusted life years to dataset. Function argument ds_tb specifies the object to be updated. The function returns Dataset (a tibble).

Usage

```
add_qalys_to_ds(
  ds_tb,
  predn_ds_ls,
  include_predrs_1L_lgl = T,
  reshape_1L_lgl = T
)
```

Arguments

ds_tb	Dataset (a tibble)
predn_ds_ls	Prediction dataset (a list)
include_predrs_1L_lgl	Include predictors (a logical vector of length one), Default: T
reshape_1L_lgl	Reshape (a logical vector of length one), Default: T

Value

Dataset (a tibble)

add_utl_predn	<i>Add utility prediction</i>
---------------	-------------------------------

Description

add_utl_predn() is an Add function that updates an object by adding data to that object. Specifically, this function implements an algorithm to add utility prediction. Function argument data_tb specifies the object to be updated. The function returns Updated (a tibble).

Usage

```
add_utl_predn(
  data_tb,
  predn_ds_ls,
  deterministic_1L_lgl = T,
  force_min_max_1L_lgl = T,
  key_1L_chr = NULL,
  make_from_tbl_1L_lgl = T,
  model_md1 = NULL,
```

```

  new_data_is_1L_chr = "Simulated",
  server_1L_chr = "dataverse.harvard.edu",
  utl_cls_fn = NULL
)

```

Arguments

data_tb Data (a tibble)
predn_ds_ls Prediction dataset (a list)
deterministic_1L_lgl Deterministic (a logical vector of length one), Default: T
force_min_max_1L_lgl Force minimum maximum (a logical vector of length one), Default: T
key_1L_chr Key (a character vector of length one), Default: NULL
make_from_tbl_1L_lgl Make from table (a logical vector of length one), Default: T
model_md1 Model (a model), Default: NULL
new_data_is_1L_chr New data is (a character vector of length one), Default: 'Simulated'
server_1L_chr Server (a character vector of length one), Default: 'dataverse.harvard.edu'
utl_cls_fn Utility class (a function), Default: NULL

Value

Updated (a tibble)

fns_dmt_tb	<i>youthu function documentation table</i>
------------	--

Description

Meta-data on each youthu function used to create package documentation

Usage

```
fns_dmt_tb
```

Format

An object of class `tbl_df` (inherits from `tbl`, `data.frame`) with 39 rows and 10 columns.

Details

A tibble

fns_chr Functions (a character vector)

title_chr Title (a character vector)

desc_chr Description (a character vector)

details_chr Details (a character vector)

inc_for_main_user_lgl Include for main user (a logical vector)

output_chr Output (a character vector)

example_lgl Example (a logical vector)

args_ls Arguments (a list)

file_nm_chr File name (a character vector)

file_pfx_chr File prefix (a character vector)

Source

<https://ready4-dev.github.io/youthu/>

fn_type_lup_tb	<i>Function type lookup table</i>
----------------	-----------------------------------

Description

A lookup table to find descriptions for different types of functions used within the youthu package suite.

Usage

```
fn_type_lup_tb
```

Format

An object of class `tbl_df` (inherits from `tbl`, `data.frame`) with 46 rows and 6 columns.

Details

A tibble

fn_type_nm_chr Function type name (a character vector)

fn_type_desc_chr Function type description (a character vector)

first_arg_desc_chr First argument description (a character vector)

second_arg_desc_chr Second argument description (a character vector)

is_generic_lgl Is generic (a logical vector)

is_method_lgl Is method (a logical vector)

Source

<https://doi.org/10.7910/DVN/2Y9VF9>

get_md1_from_dv	<i>Get model from dataverse</i>
-----------------	---------------------------------

Description

get_md1_from_dv() is a Get function that retrieves a pre-existing data object from memory, local file system or online repository. Specifically, this function implements an algorithm to get model from dataverse. Function argument mdl_nm_1L_chr specifies the where to look for the required object. The function returns Model (a model).

Usage

```
get_md1_from_dv(
  mdl_nm_1L_chr,
  dv_ds_nm_1L_chr = "https://doi.org/10.7910/DVN/JC6PTV",
  server_1L_chr = "dataverse.harvard.edu",
  key_1L_chr = NULL
)
```

Arguments

mdl_nm_1L_chr	Model name (a character vector of length one)
dv_ds_nm_1L_chr	Dataverse dataset name (a character vector of length one), Default: 'https://doi.org/10.7910/DVN/JC6PTV'
server_1L_chr	Server (a character vector of length one), Default: 'dataverse.harvard.edu'
key_1L_chr	Key (a character vector of length one), Default: NULL

Value

Model (a model)

get_tfmn_from_lup	<i>Get transformation from</i>
-------------------	--------------------------------

Description

get_tfmn_from_lup() is a Get function that retrieves a pre-existing data object from memory, local file system or online repository. Specifically, this function implements an algorithm to get transformation from lookup table. Function argument mdl_nm_1L_chr specifies the where to look for the required object. The function returns Transformation (a character vector of length one).

Usage

```
get_tfmn_from_lup(mdl_nm_1L_chr, mdls_lup = NULL)
```

Arguments

mdl_nm_1L_chr	Model name (a character vector of length one)
mdls_lup	Models (a lookup table), Default: NULL

Value

Transformation (a character vector of length one)

make_hlth_ec_smry	<i>Make health economic summary</i>
-------------------	-------------------------------------

Description

make_hlth_ec_smry() is a Make function that creates a new R object. Specifically, this function implements an algorithm to make health economic summary. The function returns He summary (a list).

Usage

```
make_hlth_ec_smry(
  ds_tb,
  predn_ds_ls,
  wtp_dbl = 50000,
  bootstrap_iters_1L_int = 1000,
  benefits_pfx_1L_chr = "qalys_dbl",
  benefits_var_nm_1L_chr = "qalys",
  costs_var_nm_1L_chr = "costs",
  change_sfx_1L_chr = "change"
)
```

Arguments

ds_tb	Dataset (a tibble)
predn_ds_ls	Prediction dataset (a list)
wtp_dbl	Willingness to pay (a double vector), Default: 50000
bootstrap_iters_1L_int	Bootstrap iterations (an integer vector of length one), Default: 1000
benefits_pfx_1L_chr	Benefits prefix (a character vector of length one), Default: 'qalys_dbl'
benefits_var_nm_1L_chr	Benefits variable name (a character vector of length one), Default: 'qalys'
costs_var_nm_1L_chr	Costs variable name (a character vector of length one), Default: 'costs'
change_sfx_1L_chr	Change suffix (a character vector of length one), Default: 'change'

Value

He summary (a list)

make_matched_ds	<i>Make matched dataset</i>
-----------------	-----------------------------

Description

make_matched_ds() is a Make function that creates a new R object. Specifically, this function implements an algorithm to make matched dataset. The function returns Matched dataset (a tibble).

Usage

```
make_matched_ds(sngl_grp_ds_tb, cmprsn_smry_tb, ds_smry_ls)
```

Arguments

sngl_grp_ds_tb Single group dataset (a tibble)
cmprsn_smry_tb Comparison summary (a tibble)
ds_smry_ls Dataset summary (a list)

Value

Matched dataset (a tibble)

make_sngl_grp_ds	<i>Make single group dataset</i>
------------------	----------------------------------

Description

make_sngl_grp_ds() is a Make function that creates a new R object. Specifically, this function implements an algorithm to make single group dataset. The function returns Single group dataset (a tibble).

Usage

```
make_sngl_grp_ds(seed_ds_tb = NULL, ds_smry_ls)
```

Arguments

seed_ds_tb Seed dataset (a tibble), Default: NULL
ds_smry_ls Dataset summary (a list)

Value

Single group dataset (a tibble)

Index

* datasets

- abbreviations_lup, [3](#)
- fn_type_lup_tb, [6](#)
- fns_dmt_tb, [5](#)

- abbreviations_lup, [3](#)
- add_qalys_to_ds, [4](#)
- add_utl_predn, [4](#)

- fn_type_lup_tb, [6](#)
- fns_dmt_tb, [5](#)

- get_md1_from_dv, [7](#)
- get_tfmn_from_lup, [7](#)

- make_hlth_ec_smry, [8](#)
- make_matched_ds, [9](#)
- make_sngl_grp_ds, [9](#)

- youthu (youthu-package), [2](#)
- youthu-package, [2](#)