Package: selfdestructin5 (via r-universe)

September 9, 2024

Title Creates SI OHA Mission Director Briefers

Version 0.4.0

Description Creates a series of data frames that can be passed to a
gt() to create the PEPFAR summary tables.

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Encoding UTF-8

LazyData true

URL https://github.com/USAID-OHA-SI/selfdestructin5

BugReports https://github.com/USAID-OHA-SI/selfdestructin5/issues

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RoxygenNote 7.3.1

Imports crayon, dplyr, glue, magrittr, purrr, stringr, tidyr, glitr,
glamr, gophr, gt, tidyselect, fontawesome

Suggests forcats, knitr, rmarkdown, qpdf

Remotes USAID-OHA-SI/glamr, USAID-OHA-SI/glitr, USAID-OHA-SI/gophr,
USAID-OHA-SI/gagglr

BuildVignettes true

VignetteBuilder knitr

Depends R (>= 2.10)

Repository https://usaid-oha-si.r-universe.dev

RemoteUrl https://github.com/USAID-OHA-SI/selfdestructin5

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RemoteSha bd60b2047801b602ac9b7c019060ef2672e6e413

Contents

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bold_column   *Bold columns inside gt objects Helper function to quickly make columns within table bold*

Description

Bold columns inside gt objects Helper function to quickly make columns within table bold

Usage

```
bold_column(gt_obj, col, wt = 700)
```

Arguments

gt_obj	gt object to be bolded
col	column or columns to be bolded
wt	weight of boldness can be lighter, normal, bold, or bolder or 0-1000

Value

a modified gt object

Examples

```
## Not run:
 mtcars %>%
 gt(groupname_col  = "cyl") %>%
 bold_column(c(mpg, hp, drat, carb), wt = "bolder")

## End(Not run)
```

---

bold_rowgroup	*Make all text larger Bold Agency names - used to increase stroke on row group label*

Description

Make all text larger Bold Agency names - used to increase stroke on row group label

Usage

```
bold_rowgroup(gt_obj, wt = 700)
```

Arguments

gt_obj	gt object pass through
wt	size (0-1000) of embiggening

Value

a modified gt object

See Also

Other gt helpers: authors_footnote(), caveats_footnote(), change_footnote(), dedup_footnote(), delta_footnote(), extract_num_colnames(), legend, legend_q1, legend_q2, legend_q3, legend_snapshot, past_fy(), present_fy(), present_qtr(), vlc_footnote()

Examples

```
## Not run:
 mtcars %>% gt(groupname_col = "cyl") %>% bold_rowgroup(wt = 500)

## End(Not run)
```

calc_growth   *Calculate growth between two metrics that are positive*

Description

Helper function for calculating growth. Returns NA_real_ if the

Usage

```
calc_growth(x, y)
```

Arguments

x	numerator to calculate growth - most recent metric
y	denominator to calculate growth - lagged metric

See Also

Other MDB helper functions: format_indicator(), label_aggregation(), make_achv_shape(), make_chg_shape()

Examples

```
## Not run:
 calc_growth(110, 100) #should give 10%
 df %>% mutate(z_change = calc_growth(results_cumulative, dplyr::lag(results_cumulative, n = 4)))
## End(Not run)
```

collapse_base_tbl   *Collapse base MSD down to a desired level for main MDB table*

Description

Helper function to collapse data down by a provided grouping. Used in the creation of the main MDB table.

Usage

```
collapse_base_tbl(df, indic_list, ...)
```

Arguments

df	MSD or Genie data frame
indic_list	list of indicators to be filter on
...	dot-dot-dot that can be passed to the group_by step

See Also

collapse_vlc_tbl to see equivalent collapse sequence for VLC/VLCS variables

Other data frame munging: collapse_vlc_tbl(), make_mdb_df(), make_mdb_tx_df(), reshape_mdb_df(), reshape_mdb_tx_df()

---

collapse_vlc_tbl	*Collapse base MSD down to a desired level for core treatment indicators*

Description

Helper function to collapse data down by a provided grouping. Used in the creation of the treatment / viral load coverage MDB table.

Usage

```
collapse_vlc_tbl(df, ...)
```

Arguments

df	MSD or Genie data frame
...	dot-dot-dot to be used in the grouping option

Value

collapsed data frame of TX_CURR and TX_PVLS indicators

See Also

collapse_base_tbl to see equivalent collapse sequence for core indicators.

Other data frame munging: collapse_base_tbl(), make_mdb_df(), make_mdb_tx_df(), reshape_mdb_df(), reshape_mdb_tx_df()

---

create_mdb	*Wrapper function to create a MDB table*

Description

Creates a MDB table for a specified OU or list of OUS. Can be called in a purrr statement for batch creating

Usage

```
create_mdb(df, ou, type = "main", legend = NULL, legend_height = 20)
```

Arguments

df	data frame resulting from running reshape_mdb_df() or reshape_mdb_tx_df()
ou	operating unit for which table is to be returned
type	type of table to be created, main or treatment
legend	can pass a legend to subtitle if desired, default is NULL
legend_height	adjusts the height of the preset legend

Value

mdb_gt a gt object formatted as the main or treatment table

Examples

```
## Not run:
 create_mdb(mdb_tbl, "Global")
 create_mdb(mdb_tbl_tx, "Zambia", type = "treatment")

 # Batch produce tables

 ou_batch <- mdb_tbl_tx %>%
 filter(agg_type == "OU") %>%
 distinct(operatingunit) %>% pull()

 purrr::map(ou_batch, ~create_mdb(mdb_tbl, ou = .x))

 # More advanced example selecting single indicator across numerous OUS

 create_mdb(mdb_tbl_tx %>% filter(indicator == "VLC"),
 c("Malawi", "Zambia"), type = "treatment") %>%
 cols_unhide(operatingunit)
## End(Not run)
```

---

embiggen	*Embiggen parts of mdb table A noble spirit embiggens the smallest man*

Description

Embiggen parts of mdb table A noble spirit embiggens the smallest man

Usage

```
embiggen(gt_obj, tbl_size = 15, ftnote_size = 10, source_size = 10)
```

Arguments

`gt_obj`	gt object to be embiggened
`tbl_size`	font size for the core table
`ftnote_size`	font size for the footnotes
`source_size`	font size for the source notes

Value

a modified gt object

Examples

```
## Not run:
# embiggen
mtcars %>% gt(groupname_col = "cyl") %>% embiggen(tbl_size = 15)

# de-embiggen
mtcars %>% gt(groupname_col = "cyl") %>% embiggen(tbl_size = 8)

## End(Not run)
```

---

extract_num_colnames   *Extract a vector of numeric column names*

Description

This helper function is used to extract the names of all the numeric columns in the TX mdb table. The result is passed to the treatment theme for use in formatting columns.

Usage

```
extract_num_colnames(df)
```

Arguments

df	data frame from the [reshape_mdb_tx_df()](#) call

Value

vector of column names for all numeric vars

See Also

Other gt helpers: [authors_footnote()](#), [bold_rowgroup()](#), [caveats_footnote()](#), [change_footnote()](#), [dedup_footnote()](#), [delta_footnote()](#), [legend](#), [legend_q1](#), [legend_q2](#), [legend_q3](#), [legend_snapshot](#), [past_fy()](#), [present_fy()](#), [present_qtr()](#), [vlc_footnote()](#)

---

fetch_indicators   *Fetches indicators used to make tables, accounting for quarter of MSD and semi-annual indicators*

Description

MDB indicators are stored on google drive. This helper function fetches a desired tab. Used to create filters, sort factor levels, and apply plain labels to indicators.

Usage

```
fetch_indicators(tab = "main")
```

Arguments

tab   which table is being created, main or treatment

Value

dataframe of indicators

Examples

```
## Not run:
 fetch_indicators(ou_im, tab = "main")
 fetch_indicators(ou_im, tab = "treatment")
## End(Not run)
```

---

fetch_metadata   *Fetch metadata*

Description

Retrieves the metadata set for the package.

Usage

```
fetch_metadata()
```

Value

A list containing metadata information.

Examples

```
## Not run:
 meta <- get_metadata()

## End(Not run)
```

---

format_indicator   *Formats PEPFAR indicators for MDB tables*

Description

Formats a string containing the main PEPFAR abbrevation and plain text. The PEPFAR abbreviation is listed first and the plain text in a line below. Used to create the upper portion of the MDB tables.

Usage

```
format_indicator(x)
```

Arguments

x   PEPFAR indicator name as an abbreviation and the full definition

Value

html formatted string that can be rendered in gt

See Also

Other MDB helper functions: calc_growth(), label_aggregation(), make_achv_shape(), make_chg_shape()

Examples

```
## Not run:
 format_indicator("HTS_TST Received HIV testing service and results") %>%
 gt::html() %>%  htmltools::html_print()
 df %>% mutate(indicator2 = format_indicator(indicator2))
## End(Not run)
```

---

label_aggregation   *Label aggregation level*

Description

Labels the level of aggregation using regiona, agency or operating unit Used to apply a filter column to the single data frame returned from table operations

Usage

```
label_aggregation(df, type = "OU")
```

Arguments

df	MSD or genie data frame that has been ran through collapse_base_tbl()
type	Level of aggregation to be labeled

See Also

Other MDB helper functions: calc_growth(), format_indicator(), make_achv_shape(), make_chg_shape()

---

legend   *Object pointing to github location of legend for Q1*

Description

This helper object returns the location of the new legend. Use this version The object is passed to a legend_chunk f() that creates md for the legend. This can then be inserted into the subtitle as an image.

Usage

```
legend
```

Format

An object of class character of length 1.

See Also

Other gt helpers: authors_footnote(), bold_rowgroup(), caveats_footnote(), change_footnote(), dedup_footnote(), delta_footnote(), extract_num_colnames(), legend_q1, legend_q2, legend_q3, legend_snapshot, past_fy(), present_fy(), present_qtr(), vlc_footnote()

---

legend_q1 *Object pointing to github location of legend for Q1*

Description

Use legend instead as quarterly legends are no longer necessary

Usage

```
legend_q1
```

Format

An object of class character of length 1.

See Also

Other gt helpers: authors_footnote(), bold_rowgroup(), caveats_footnote(), change_footnote(), dedup_footnote(), delta_footnote(), extract_num_colnames(), legend, legend_q2, legend_q3, legend_snapshot, past_fy(), present_fy(), present_qtr(), vlc_footnote()

---

legend_q2 *Object pointing to github location of legend for Q2*

Description

Use legend instead as quarterly legends are no longer necessary

Usage

```
legend_q2
```

Format

An object of class character of length 1.

See Also

Other gt helpers: authors_footnote(), bold_rowgroup(), caveats_footnote(), change_footnote(), dedup_footnote(), delta_footnote(), extract_num_colnames(), legend, legend_q1, legend_q3, legend_snapshot, past_fy(), present_fy(), present_qtr(), vlc_footnote()

---

legend_q3   *Object pointing to github location of legend for Q3*

Description

Use legend instead as quarterly legends are no longer necessary

Usage

```
legend_q3
```

Format

An object of class character of length 1.

See Also

Other gt helpers: authors_footnote(), bold_rowgroup(), caveats_footnote(), change_footnote(),
dedup_footnote(), delta_footnote(), extract_num_colnames(), legend, legend_q1, legend_q2,
legend_snapshot, past_fy(), present_fy(), present_qtr(), vlc_footnote()

---

legend_snapshot   *Object pointing to github location of legend for snapshot indicators
                                     and Q4*

Description

Use legend instead as quarterly legends are no longer necessary

Usage

```
legend_snapshot
```

Format

An object of class character of length 1.

See Also

Other gt helpers: authors_footnote(), bold_rowgroup(), caveats_footnote(), change_footnote(),
dedup_footnote(), delta_footnote(), extract_num_colnames(), legend, legend_q1, legend_q2,
legend_q3, past_fy(), present_fy(), present_qtr(), vlc_footnote()

---

make_achv_shape *Generate colored circle as an svg*

Description

Description Function to create and color achievement circles. The circles are placed next to the most recent achievement level in the main MDB table.

Usage

```
make_achv_shape(x)
```

Arguments

x   color hex code created by adorn_achievement function

Details

Returns a html formatting circle that can be embedded in gt object

Value

return gt html() code for an svg

See Also

Other MDB helper functions: calc_growth(), format_indicator(), label_aggregation(), make_chg_shape()

Examples

```
## Not run:
 achv_circle(glitr::scooter) %>% htmltools::html_print()
 df %>% mutate(achv_color = achv_circle(achv_color))
## End(Not run)
```

---

make_chg_shape *Create fontawesome performance arrow*

Description

Creates an svg object based on the direction of change of a performance variable. The svg code can be embedded in a data frame and passed to gt() for prettifying a table. Appears to work well when applied with purrr::map()

Usage

```
make_chg_shape(change_dir)
```

Arguments

change_dir   variable indicating direction of change or not applicable

Value

gt html() code for an svg

See Also

Other MDB helper functions: [calc_growth()](), [format_indicator()](), [label_aggregation()](),
[make_achv_shape]()

Examples

```
## Not run:
 rank_chg("increase") %>% htmltools::html_print()
 rank_chg("decrease") %>% htmltools::html_print()
 df %>% mutate(chg_dir = purrr::map(present_z_direction, rank_chg))

## End(Not run)
```

---

make_mdb_df   *Create a base table of MDB indicators stacked long*

Description

Makes a single table of core MDB indicators for all OUs, countries and USAID. Uses [fetch_indicators()]()
to filter indicators and resolves known issues as a default. Output from this function feeds into
[reshape_mdb_df()]()

Usage

```
make_mdb_df(df, resolve_issues = T)
```

Arguments

df   data frame from which MDB tables will be constructed for core indicators

resolve_issues logical that fetches troublesome mechs and omits them from df

Value

data frame

See Also

reshape_mdb_df() to reshape into gt ready data frame; fetch_indicators() to filter indicators

Other data frame munging: collapse_base_tbl(), collapse_vlc_tbl(), make_mdb_tx_df(), reshape_mdb_df(), reshape_mdb_tx_df()

Examples

```
## Not run:
 mdb_df <- make_mdb_df(ou_im, resolve_issues = F)
## End(Not run)
```

---

make_mdb_tx_df   *Creates the base table for the treatment / VLS MDB tables*

Description

Uses the collapse_vlc_tbl() to combine different data frames needed to calculate VLS and VLC. Filters for mechs with known issues by default, can be controlled with resolve_issues argument. Wrapper function to create three core tables needed for the treatment MDB data frame.

First, it creates a TX_CURR table and excludes South Africa from the USAID Global table. Second, collapse_vlc_tbl() is called to create the VLS/VLC table needed for derived indicators. Third, Three month + MMD is calculated from the TX_CURR table. Finally, the tables are combined to be used in creation of the VLS/VLC and MMD+ Share calculations.

Usage

```
make_mdb_tx_df(df, resolve_issues = "TRUE", tx_indic = "TX_CURR")
```

Arguments

df   usually and ou_im data frame

resolve_issues   logical indicating whether or not known issues are removed

tx_indic   TX_CURR is only valid value

Value

data frame of the combined TX and VLS/VLC indicator

See Also

reshape_mdb_tx_df() used to reshape the resulting output into gt ready data frame;

Other data frame munging: collapse_base_tbl(), collapse_vlc_tbl(), make_mdb_df(), reshape_mdb_df(), reshape_mdb_tx_df()

---

mdb_main_theme   *GT theme for main MDB tables*

Description

A gt theme to be applied to a reshaped data frame for the creation of MDB tables. The theme
formats all columns and rows for the main MDB tables. A different theme exists for the treatment
tables as the layout is different.

Usage

```
mdb_main_theme(df, ...)
```

Arguments

df	reshape_mdb_df() output
...	dot-dot-dot option to pass additional formatting to gt object

Value

formatted gt object

See Also

Other MDB gt themes: mdb_treatment_theme()

Examples

```
## Not run:
 mdb_df <- make_mdb_df(ou_im, resolve_issues = F)
 mdb_tbl <- reshape_mdb_df(mdb_df)
mdb_tbl %>% filter(operatingunit == "Zambia") %>% gt(groupname_col = "agency") %>% mdb_main_theme()


## End(Not run)
```

---

mdb_tbl   *mdb_tbl: Example Data Set*

Description

This dataset contains information about various indicators related to prevention, testing, and treat-
ment of HIV/AIDS. The dataset includes information on the indicator category, specific indicators,
their plain text descriptions, frequency, type, and the table they belong to.

Usage

```
mdb_tbl
```

Format

A data frame with 16 rows and 7 variables:

indic_category Indicator category, such as prevention, testing, or treatment.

indicator Short code for the indicator.

indicator_plain Plain text description of the indicator.

frequency Frequency of data collection, either quarterly or semi-annual.

type Type of data collected, such as cumulative, snapshot, or derived.

mdb_table Table the indicator belongs to, either main or treatment.

Source

<http://example.com>

Examples

```
## Not run:
# Example of accessing the dataset
data(mdb_tbl)
head(mdb_tbl)

## End(Not run)
```

---

mdb_treatment_theme   *GT theme for main MDB tables*

Description

A gt theme to be applied to a reshaped data frame for the creation of MDB tables. The theme formats all columns and rows for the main MDB tables. A different theme exists for the main tables as the layout is different.

Usage

```
mdb_treatment_theme(df, ...)
```

Arguments

df	a dataframe from [reshape_mdb_tx_df()](reshape_mdb_tx_df) output
...	dot-dot-dot option to pass additional formatting to gt object

Value

formatted gt object

See Also

Other MDB gt themes: mdb_main_theme()

Examples

```
## Not run:
 mdb_df <- make_mdb_tx_df(ou_im, resolve_issues = F)
 mdb_tbl <- reshape_mdb_tx_df(mdb_df)
 numeric_cols <- mdb_tbl %>% select_if(is.numeric) %>% names()
 mdb_tbl %>% filter(operatingunit == "Zambia") %>%
 gt(groupname_col = "agency") %>%
 mdb_treatment_theme(numeric_cols)


## End(Not run)
```

---

msd_period   *Identify MSD Period and Type*

Description

requires having si_path setup from glamr

Usage

```
msd_period(type = "OU_IM", period = NULL)
```

Arguments

type	Type of MSD (OU_IM, PSNU, PSNU_IM, NAT_SUBNAT)
period	can provide period from ICPIutilities::identifypd(), or it will run if NULL

Value

FY00Q0t MSD

---

reshape_mdb_df   *Prepare filtered data frame for MSD briefer formatting*

Description

reshape_mdb_df takes the output from make_mdb_df() and creates a gt ready data frame. The transformed data frame retains the most recent quarter and previous year's performance. The resulting table can be passed directly to the mdb_main_theme() to create a MDB table. Helper functions format certain columns as svgs to be rendered in the gt call.

Usage

```
reshape_mdb_df(df)
```

Arguments

df   takes the make_mdb_df() results as an input

Value

returns a wide formatted data frame (table) of all OUs, countries and USAID

See Also

make_mdb_df() to see input required and mdb_main_theme() to see the gt theme used to format the table make_chg_shape() creates an svg based on the direction of change make_achv_shape() creates a colored circle based on achievement level

Other data frame munging: collapse_base_tbl(), collapse_vlc_tbl(), make_mdb_df(), make_mdb_tx_df(), reshape_mdb_tx_df()

Examples

```
## Not run:
 mdb_df <- make_mdb_df(ou_im, resolve_issues = F)
 mdb_tbl <- reshape_mdb_df(mdb_df)

## End(Not run)
```

---

reshape_mdb_tx_df   *Prepare filtered data frame of treatment indicators for MDB format-*
                           ting

Description

reshape_mdb_tx_df takes the output from `make_mdb_tx_df()` and creates a gt ready data frame.
The transformed data frame retains the most recent quarter and previous year performance. Viral
load coverage and viral load suppression percentages are calculated along with TX MMD shares.
The resulting table can be passed directly to the `mdb_treatment_theme()` to create a MDB table.
Helper functions format certain columns as svgs to be rendered in the gt call.

Usage

```
reshape_mdb_tx_df(df)
```

Arguments

df   dataframe that is the result of running make_mdb_tx_df()

Details

Create a wide formatted and sorted table for treatment indicators

Value

data frame that is pivoted wide for passing to gt() call

See Also

Other data frame munging: `collapse_base_tbl()`, `collapse_vlc_tbl()`, `make_mdb_df()`, `make_mdb_tx_df()`,
`reshape_mdb_df()`

Examples

```
## Not run:
 mdb_df <- make_mdb_tx_df(ou_im, resolve_issues = F)
 mdb_tbl <- reshape_mdb_tx_df(mdb_df)

## End(Not run)
```

---

set_metadata *Set metadata*

Description

Sets the metadata for the package, which can be used across various functions.

Usage

```
set_metadata(meta)
```

Arguments

meta   A list containing metadata information.

Examples

```
## Not run:
 metadata <- gophr::get_metadata(file_path)
 set_metadata(metadata)

## End(Not run)
```

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