Package ‘cvdprevent’

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Type Package

Title Wrapper for the 'CVD Prevent' Application Programming Interface

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Maintainer Craig Parylo <craig.parylo2@nhs.net>

Description Provides an R wrapper to the 'CVD Prevent' application programming interface (API). Users can make API requests through built-in R functions. The Cardiovascular Disease Prevention Audit (CVDPREVENT) is an England-wide primary care audit that automatically extracts routinely held GP health data. <https://bmchealthdocs.atlassian.net/wiki/spaces/CP/pages/317882369/CVDPREVENT+API+Documentation>.

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URL https://github.com/craig-parylo/cvdprevent, https://craig-parylo.github.io/cvdprevent/

BugReports https://github.com/craig-parylo/cvdprevent/issues

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Author Craig Parylo [aut, cre, cph] (ORCID: <https://orcid.org/0000-0003-4297-7808>), Cardiovascular Disease Prevention Audit (CVDPREVENT) [ant]

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`cvd_area_details` *Area details*

Description

Returns details of a specific area at a given time period, including details about any parent and child areas.

Usage

```
cvd_area_details(time_period_id = 1, area_id = 1)
```

Arguments

`time_period_id`	integer - specified time period for which to return details for, i.e. population and participation rate (compulsory)
`area_id`	integer - specified area id for which to return details for.

Details

CVD Prevent API documentation: Area details

Value

Named list of tibbles containing area 'area_details', child 'area_child_details' (where appropriate) and parent 'area_parent_details' (where appropriate)

See Also

`cvd_area_list()`, `cvd_area_unassigned()`, `cvd_area_search()`, `cvd_area_nested_subsystems()`, `cvd_area_flat_subsystems()`

Examples

```
# to see details for '3 Centres PCN' (area_id = 1103) use the following:
# get the list of tibbles from the function
returned_list <- cvd_area_details(time_period_id = 17, area_id = 1103)

# view area details
returned_list$area_details |>
  dplyr::select(AreaCode, AreaName)

# view details for the parent of this area
returned_list$area_parent_details |>
  dplyr::select(AreaID, AreaName, SystemLevelID)

# view details for the children of this area
returned_list$area_child_details |>
  dplyr::select(AreaID, AreaName, SystemLevelID)
```

`cvd_area_flat_subsystems` *Area flat subsystems*

Description

Similar to `cvd_area_nested_subsystems()` but the sub-areas are grouped based on their system level.

Usage

```
cvd_area_flat_subsystems(area_id = 5)
```

Arguments

area_id	integer - the area to return data for (compulsory)

Details

CVD Prevent API documentation: Area flat subsystems

Value

Tibble of details for the area and its child areas (where applicable)

See Also

cvd_area_list(), cvd_area_details(), cvd_area_unassigned(), cvd_area_search(), cvd_area_nested_subsystem

Examples

```
# View details for for Somerset STP
cvd_area_flat_subsystems(area_id = 5) |>
  dplyr::glimpse()

# View details for Leicester Central PCN
cvd_area_flat_subsystems(area_id = 701) |>
  dplyr::glimpse()
```

---

cvd_area_list *List areas*

Description

Returns all areas for a given time period and parent area or system level. Only areas which have data for the specified time period will be returned.

Usage

```
cvd_area_list(time_period_id = 1, parent_area_id, system_level_id)
```

Arguments

time_period_id	integer - specifies time period for which to return areas (compulsory)
parent_area_id	integer - specifies the area of which children will be returned (optional)
system_level_id	integer - specifies which system levels to return areas for (optional)

Details

Either parent area or system level must be specified: If parent area is specified, all children areas of that parent will be returned. If system level is specified, all areas within that system level will be returned.

Parent area takes precedence over system level - if parent area is specified, system level is ignored.

CVD Prevent API documentation: Area lists

Value

Tibble of area details

See Also

cvd_area_details(), cvd_area_unassigned(), cvd_area_search(), cvd_area_nested_subsystems(), cvd_area_flat_subsystems()

Examples

```
# list four PCNs with data available at time period 17
cvd_area_list(time_period_id = 17, system_level_id = 4) |>
  dplyr::select(SystemLevelName, AreaID, AreaCode, AreaName) |>
  dplyr::slice_head(n = 4)
```

---

cvd_area_nested_subsystems

Area nested sub systems

Description

Returns given area and children areas in a nested structure

Usage

```
cvd_area_nested_subsystems(area_id = 5)
```

Arguments

area_id	integer - the area to return data for (compulsory)

Details

CVD Prevent API documentation: Area nested subsystems

Value

List of named tibbles containing details for the area and each sub-level areas

See Also

cvd_area_list(), cvd_area_details(), cvd_area_unassigned(), cvd_area_search(), cvd_area_flat_subsystems(

Examples

```
# View details for for Somerset STP
returned_list <- cvd_area_nested_subsystems(area_id = 5)
returned_list |> summary()

# see details for five of the immediate children of Somerset STP
returned_list$level_2 |>
  dplyr::slice_head(n = 5)

# View details for Leicester Central PCN
returned_list <- cvd_area_nested_subsystems(area_id = 701)
returned_list |> summary()

# see details for the GP practice children of the PCN
returned_list$level_2
```

---

cvd_area_search *Search for matching areas*

Description

Returns a list of Areas that match a partial name for a given time period. Uses simple LIKE '%<partial_area_name>%' comparison.

Usage

```
cvd_area_search(partial_area_name = "Surgery", time_period_id = 1)
```

Arguments

partial_area_name	string - string to use to search for an Area (compulsory)
time_period_id	integer - limits the search to Areas which have data in specified time period (compulsory)

Details

CVD Prevent API documentation: Area search

Value

Tibble of details for areas matching the search term

See Also

cvd_area_list(), cvd_area_details(), cvd_area_unassigned(), cvd_area_nested_subsystems(), cvd_area_flat_subsystems()

Examples

```
# NB, the following examples are not tested because they take longer than
# expected to return the results

# search for areas matching the term 'practice'
cvd_area_search(partial_area_name = 'practice', time_period_id = 17) |>
  dplyr::select(AreaID, AreaName, AreaCode)

# search for areas matching the term 'PCN'
cvd_area_search(partial_area_name = 'PCN', time_period_id = 17) |>
  dplyr::select(AreaID, AreaName, AreaCode)
```

---

cvd_area_system_level *List system levels per time period*

Description

Returns all available system levels for a specified time period.

Usage

```
cvd_area_system_level(time_period_id = 1)
```

Arguments

`time_period_id` integer - the time period to return data for (compulsory)

Details

CVD Prevent API documentation: System levels per time period

Value

tibble of system levels available for the time period

See Also

cvd_area_details(), cvd_area_unassigned(), cvd_area_search(), cvd_area_nested_subsystems(), cvd_area_flat_subsystems()

Examples

```
# list system levels for time period 4
cvd_area_system_level(time_period_id = 4) |>
  dplyr::select(SystemLevelID, SystemLevelName)
```

cvd_area_system_level_time_periods

List all system levels and available time periods

Description

Returns all available system levels along with the time periods where the system levels occur.

Usage

```
cvd_area_system_level_time_periods()
```

Details

Note: this is the inverse of `cvd_time_period_system_levels()`.

CVD Prevent API documentation: All system levels and time periods

Value

tibble of system levels and reporting periods

See Also

`cvd_time_period_system_levels()`, `cvd_area_details()`, `cvd_area_unassigned()`, `cvd_area_search()`, `cvd_area_nested_subsystems()`, `cvd_area_flat_subsystems()`

Examples

```
# list the latest four reporting periods at GP practice level
cvd_area_system_level_time_periods() |>
  dplyr::filter(SystemLevelName == 'Practice') |>
  dplyr::slice_max(order_by = TimePeriodID, n = 4) |>
  dplyr::select(SystemLevelName, TimePeriodID, TimePeriodName)
```

cvd_area_unassigned

Unassigned areas

Description

Returns a list of all areas which have data in the selected time period, but do not have any parent areas assigned, and therefore are unreachable.

Usage

```
cvd_area_unassigned(time_period_id = 1, system_level_id)
```

Arguments

`time_period_id` integer - time period for which Area must have data for (compulsory)

`system_level_id` integer - system level of areas in the unassigned list (optional)

Details

CVD Prevent API documentation: Areas unassigned

Value

Tibble of details for areas without parent details

See Also

`cvd_area_list()`, `cvd_area_details()`, `cvd_area_search()`, `cvd_area_nested_subsystems()`, `cvd_area_flat_subsystems()`

Examples

```
# Report four GP practices (ID = 5) without parent PCN details:
cvd_area_unassigned(time_period_id = 17, system_level_id = 5) |>
  dplyr::slice_head(n = 4) |>
  dplyr::select(SystemLevelName, AreaID, AreaName)

# England, as the highest system_level (ID = 1) does not have parent details
cvd_area_unassigned(time_period_id = 17, system_level_id = 1) |>
  dplyr::select(SystemLevelName, AreaID, AreaName)
```

`cvd_data_availability` *Data availability*

Description

Returns the data availability. Response: `DataAvailabilityID` - ID of the resource as found in the database `DataAvailabilityName` - explanation for the data availability `IsAvailable` - `Y` for data is available, `N` for data is unavailable, and NULL for unknown data

Usage

```
cvd_data_availability(
  time_period_id = 1,
  system_level_id = 1,
  indicator_id,
  metric_category_type_id
)
```

Arguments

`time_period_id` integer - the time period to return data for (compulsory)

`system_level_id` integer - the system level to return data for (compulsory)

`indicator_id` integer - the indicator to return data for (optional)

`metric_category_type_id` integer - the metric category to return data for (optional)

Details

CVD Prevent API documentation: Data availability

Value

Tibble of data availability

See Also

`cvd_external_resource()`

Examples

```
cvd_data_availability(time_period_id = 3, system_level_id = 5)
```

---

cvd_external_resource *External resource*

Description

Returns a list of all external resources

Usage

```
cvd_external_resource()
```

Details

CVD Prevent API documentation: External resources

Value

Tibble of details for external resources

See Also

`cvd_data_availability()`

Examples

```
# Here we show the first five external resources:
cvd_external_resource() |>
  dplyr::filter(ExternalResourceID < 10) |>
 dplyr::select(ExternalResourceCategory, ExternalResourceSource, ExternalResourceTitle) |>
  dplyr::group_by(ExternalResourceCategory)
```

`cvd_indicator` *Indicators*

Description

Returns all indicators and data for a given time period and area. Also returns time series data for all time periods available. If tags are specified, only indicators which have one of the specified tags will be returned.

Usage

```
cvd_indicator(time_period_id = 1, area_id = 1, tag_id)
```

Arguments

`time_period_id`	integer - time period to return data for (compulsory)
`area_id`	integer - area to return data for (compulsory)
`tag_id`	numeric vector - allows filtering indicators by one or more tags (optional, array)

Details

CVD Prevent API documentation: Indicator

Value

List of named tibbles (indicators, categories, category_data, timeseries_data, all_data)

See Also

`cvd_indicator_list()`, `cvd_indicator_metric_list()`, `cvd_indicator_tags()`, `cvd_indicator_details()`, `cvd_indicator_sibling()`, `cvd_indicator_child_data()`, `cvd_indicator_data()`, `cvd_indicator_metric_data()`, `cvd_indicator_raw_data()`, `cvd_indicator_nationalarea_metric_data()`, `cvd_indicator_priority_groups()`, `cvd_indicator_pathway_group()`, # `cvd_indicator_group()`, `cvd_indicator_metric_timeseries()`, `cvd_indicator_person_timeseries()`, `cvd_indicator_metric_systemlevel_comparison()`, `cvd_indicator_metric_area_breakdown()`

Examples

```
# Returns a list of named tibbles. To use we need to unpack the list:
return_list <- cvd_indicator(time_period_id = 17, area_id = 1103)

# See what the list contains
return_list |> summary()

# extract the indicators
indicators <- return_list$indicators
indicators |>
  dplyr::select(IndicatorID, IndicatorCode, IndicatorShortName) |>
  dplyr::arrange(IndicatorID) |>
  dplyr::slice_head(n = 4)

# extract the metric categories
categories <- return_list$metric_categories
categories |>
  dplyr::filter(IndicatorID == 7, MetricCategoryID %in% c(7, 8)) |>
  dplyr::select(IndicatorID, MetricCategoryTypeName,
  CategoryAttribute, MetricCategoryName, MetricID)

# extract metric data
metric_data <- return_list$metric_data
metric_data |>
  dplyr::filter(MetricID %in% c(126, 132)) |>
  dplyr::select(MetricID, Value, Numerator, Denominator)

# extract the time series data
timeseries_data <- return_list$timeseries_data
timeseries_data |>
  dplyr::filter(MetricID %in% c(126, 132), !is.na(Value))

# indicators are searcheable by one or more Tag.
return_list <-
  cvd_indicator(time_period_id = 17, area_id = 3, tag_id = c(3, 4))
```

---

cvd_indicator_child_data

Indicator child data

Description

Returns all children areas and their data for specified time period, area and metric. This endpoint is intended to only return data for selected metric, and not all metrics for indicators, hence the metricID query parameter.

Usage

```
cvd_indicator_child_data(time_period_id = 17, area_id = 74, metric_id = 1)
```

Arguments

`time_period_id`	integer - time period for which to return data (compulsory)
`area_id`	integer - area for which all children data will be returned (compulsory)
`metric_id`	integer - metric for which to return data (compulsory)

Details

CVD Prevent API documentation: Indicator child data

Value

Tibble of details for the specified metric in the child areas of the specified area

See Also

`cvd_indicator_list()`, `cvd_indicator_metric_list()`, `cvd_indicator()`, `cvd_indicator_tags()`, `cvd_indicator_details()`, `cvd_indicator_sibling()`, `cvd_indicator_data()`, `cvd_indicator_metric_data()`, `cvd_indicator_raw_data()`, `cvd_indicator_nationalarea_metric_data()`, `cvd_indicator_priority_groups()`, `cvd_indicator_pathway_group()`, # `cvd_indicator_group()`, `cvd_indicator_metric_timeseries()`, `cvd_indicator_person_timeseries()`, `cvd_indicator_metric_systemlevel_comparison()`, `cvd_indicator_metric_area_breakdown()`

Examples

```
cvd_indicator_child_data(time_period_id = 17, area_id = 74, metric_id = 126) |>
  dplyr::select(AreaID, AreaName, Value, LowerConfidenceLimit, UpperConfidenceLimit)
```

`cvd_indicator_data` *Indicator data*

Description

Returns all metric data for a specified indicator. Data will include values for both selected area, and organisation at National Level (usually England).

Usage

```
cvd_indicator_data(indicator_id = 1, time_period_id = 1, area_id = 1)
```

Arguments

`indicator_id`	integer - indicator for which to return data (compulsory)
`time_period_id`	integer - time period for which to return data for (compulsory)
`area_id`	integer - area for which to return data for (compulsory)

Details

CVD Prevent API documentation: Indicator data

Value

Tibble of details for the indicator in the area and a national comparison

See Also

cvd_indicator_list(), cvd_indicator_metric_list(), cvd_indicator(), cvd_indicator_tags(), cvd_indicator_details(), cvd_indicator_sibling(), cvd_indicator_child_data(), cvd_indicator_metric_data cvd_indicator_raw_data(), cvd_indicator_nationalarea_metric_data(), cvd_indicator_priority_groups(), cvd_indicator_pathway_group(), # cvd_indicator_group(), cvd_indicator_metric_timeseries(), cvd_indicator_person_timeseries(), cvd_indicator_metric_systemlevel_comparison(), cvd_indicator_metric_area_breakdown()

Examples

```
# Look at 'AF: treatment with anticoagulants' (indicator ID 7) in time
# period 17 for  'Leicester Central PCN' (area_id 701) focussed on metrics
# by gender:
cvd_indicator_data(time_period_id = 17, indicator_id = 7, area_id = 701) |>
  dplyr::filter(MetricCategoryTypeName == 'Sex') |>
  dplyr::select(MetricID, MetricCategoryName, AreaData.AreaName,
  AreaData.Value, NationalData.AreaName, NationalData.Value)
```

---

cvd_indicator_details *Indicator details*

Description

Returns details of a single indicator

Usage

```
cvd_indicator_details(indicator_id = 1)
```

Arguments

indicator_id	integer - the ID for the indicator (compulsory)

Details

CVD Prevent API documentation: Indicator details

Value

Tibble of details for the specified indicator

See Also

cvd_indicator_list(), cvd_indicator_metric_list(), cvd_indicator(), cvd_indicator_tags(), cvd_indicator_sibling(), cvd_indicator_child_data(), cvd_indicator_data(), cvd_indicator_metric_data(), cvd_indicator_raw_data(), cvd_indicator_nationalarea_metric_data(), cvd_indicator_priority_groups(), cvd_indicator_pathway_group(), # cvd_indicator_group(), cvd_indicator_metric_timeseries(), cvd_indicator_person_timeseries(), cvd_indicator_metric_systemlevel_comparison(), cvd_indicator_metric_area_breakdown()

Examples

```
cvd_indicator_details(indicator_id = 7) |>
  dplyr::select(IndicatorID, MetaDataTitle, MetaData) |>
  dplyr::slice_head(n=5)
```

---

cvd_indicator_group *Indicator group*

Description

Returns a single indicator group for a given group ID. An error will be returned if there is no indicator group associated with the given ID. `IndicatorGroup` is the primary key in the IndicatorGroup table, which also contains `IndicatorGroupName` and `IndicatorGroupTypeID`. The group type ID tells you what type of indicator group you're dealing with, e.g. a Priority Group. `IndicatorGroupTypeID` is the primary key of IndicatorGroupType and so `IndicatorGroupTypeName` is the associated name for the given group type ID. Finally, there is the array of indicators which are contained in this group, including display orders for the given group.

Usage

```
cvd_indicator_group(indicator_group_id = 15)
```

Arguments

`indicator_group_id`
: integer - the group to return data for (compulsory)

Details

CVD Prevent API documentation: Indicator group

Value

Tibble of indicators grouped by indicator group

See Also

cvd_indicator_list(), cvd_indicator_metric_list(), cvd_indicator(), cvd_indicator_tags(), cvd_indicator_details(), cvd_indicator_sibling(), cvd_indicator_child_data(), cvd_indicator_data(), cvd_indicator_metric_data(), cvd_indicator_raw_data(), cvd_indicator_nationalarea_metric_data(), cvd_indicator_priority_groups(), cvd_indicator_pathway_group(), # cvd_indicator_metric_timeseries(), cvd_indicator_person_timeseries(), cvd_indicator_metric_systemlevel_comparison(), cvd_indicator_metric_area_breakdown()

Examples

```
#  list the indicators under Indicator Group ID 13 (Monitoring) which lists
# 'Key Question' Indicator Group indicators:
cvd_indicator_group(indicator_group_id = 13) |>
  dplyr::select(IndicatorGroupID, IndicatorGroupName, IndicatorGroupTypeName,
  IndicatorID, IndicatorName)
```

---

cvd_indicator_list *List indicators*

Description

Returns basic details of all indicators for a given system level and time period. Only returns indicators for which data exists in selected time period, and on selected system level. Used to populate available indicator list in Data Explorer.

Usage

```
cvd_indicator_list(time_period_id = 1, system_level_id = 2)
```

Arguments

`time_period_id` integer - time period to reutrn data for (compulsory)

`system_level_id` integer - system level to return data for (compulsory)

Details

CVD Prevent API documentation: Indicator list

Value

Tibble of details for indicators for the time period and system level

See Also

cvd_indicator_metric_list(), cvd_indicator(), cvd_indicator_tags(), cvd_indicator_details(), cvd_indicator_sibling(), cvd_indicator_child_data(), cvd_indicator_data(), cvd_indicator_metric_data(), cvd_indicator_raw_data(), cvd_indicator_nationalarea_metric_data(), cvd_indicator_priority_groups(), cvd_indicator_pathway_group(), # cvd_indicator_group(), cvd_indicator_metric_timeseries(), cvd_indicator_person_timeseries(), cvd_indicator_metric_systemlevel_comparison(), cvd_indicator_metric_area_breakdown()

Examples

```
# List four indicators for time point 17 and GP practice level (system level 5)
cvd_indicator_list(time_period_id = 17, system_level_id = 5) |>
  dplyr::select(IndicatorID, IndicatorCode, IndicatorShortName) |>
  dplyr::slice_head(n = 4)
```

---

cvd_indicator_metric_area_breakdown

Indicator metric area breakdown

Description

Returns data for the Area Breakdown chart for provided metric, area and time period. `Data` contains the target value as well as an array `SystemLevels` which contains data grouped by system level.

Usage

```
cvd_indicator_metric_area_breakdown(
  metric_id = 1,
  time_period_id = 1,
  area_id = 1
)
```

Arguments

`metric_id`	integer - the metric to return data for (compulsory)
`time_period_id`	integer - the time period to return data for (compulsory)
`area_id`	integer - the area to return data for (compulsory)

Details

CVD Prevent API documentation: Indicator metric area breakdown

Value

Tibble of metric performance for the specified area compared with National level

See Also

cvd_indicator_list(), cvd_indicator_metric_list(), cvd_indicator(), cvd_indicator_tags(), cvd_indicator_details(), cvd_indicator_sibling(), cvd_indicator_child_data(), cvd_indicator_data(), cvd_indicator_metric_data(), cvd_indicator_raw_data(), cvd_indicator_nationalarea_metric_data(), cvd_indicator_priority_groups(), cvd_indicator_pathway_group(), # cvd_indicator_group(), cvd_indicator_metric_timeseries(), cvd_indicator_person_timeseries(), cvd_indicator_metric_systemlevel

Examples

```
# Return performance for metric 'AF: DOAC & VitK' in men aged 60-79 years
# (metric ID 128) in time period 17 for Salford South East PCN (area ID 705):
cvd_indicator_metric_area_breakdown(metric_id = 128, time_period_id = 17,
  area_id = 705) |>
  dplyr::select(SystemLevelName, AreaID, AreaName, Value)
```

---

cvd_indicator_metric_data *Metric data*

Description

Returns all metric data for a specified metric. Data will include values for both selected area and organisation at National Level (usually England).

Usage

```
cvd_indicator_metric_data(metric_id = 7, time_period_id = 1, area_id = 2)
```

Arguments

metric_id	integer - metric for which to return data for (compulsory)
time_period_id	integer - time period for which to return data for (compulsory)
area_id	integer - area for which to return data for (compulsory)

Details

CVD Prevent API documentation: Indicator metric data

Value

Tibble of details for metric performance in the area and time period

See Also

cvd_indicator_list(), cvd_indicator_metric_list(), cvd_indicator(), cvd_indicator_tags(), cvd_indicator_details(), cvd_indicator_sibling(), cvd_indicator_child_data(), cvd_indicator_data(), cvd_indicator_raw_data(), cvd_indicator_nationalarea_metric_data(), cvd_indicator_priority_groups(), cvd_indicator_pathway_group(), # cvd_indicator_group(), cvd_indicator_metric_timeseries(), cvd_indicator_person_timeseries(), cvd_indicator_metric_systemlevel_comparison(), cvd_indicator_metric_area_breakdown()

Examples

```
# Retrieve metric data for AF: treatment with anticoagulants for 'Alliance
# PCN' (area ID 399) in time period 1 for metric 126 (breakdown by age group:
# males aged 40-59):
cvd_indicator_metric_data(metric_id = 126, time_period_id = 1, area_id = 399) |>
  dplyr::select(IndicatorShortName, CategoryAttribute, MetricCategoryName,
  AreaData.Value, NationalData.Value)
```

---

cvd_indicator_metric_list

List metrics for indicators

Description

Returns same data as cvd_indicator_list() but adds a 'MetricList' array for each indicator, containing details of the relevant metrics. Only returns indicators for which data exists in selected time period, and on selected system level.

Usage

```
cvd_indicator_metric_list(time_period_id = 1, system_level_id = 1)
```

Arguments

`time_period_id` integer - time period to return data for (compulsory)

`system_level_id` integer - system level to return data for (compulsory)

Details

CVD Prevent API documentation: Indicator metric list

Value

Tibble of details for indicators and associated metrics

See Also

cvd_indicator_list(), cvd_indicator(), cvd_indicator_tags(), cvd_indicator_details(), cvd_indicator_sibling(), cvd_indicator_child_data(), cvd_indicator_data(), cvd_indicator_metric_data(), cvd_indicator_raw_data(), cvd_indicator_nationalarea_metric_data(), cvd_indicator_priority_groups(), cvd_indicator_pathway_group(), cvd_indicator_group(), cvd_indicator_metric_timeseries(), cvd_indicator_person_timeseries(), cvd_indicator_metric_systemlevel_comparison(), cvd_indicator_metric_area_breakdown()

Examples

```
# List metrics for the prevalence of atrial fibrillation (indicator ID 1),
# focussing on just those metrics for the 40-59 years age group:
cvd_indicator_metric_list(time_period_id = 17, system_level_id = 1) |>
  dplyr::filter(IndicatorID == 1, MetricCategoryName == '40-59') |>
 dplyr::count(IndicatorID, IndicatorShortName, MetricID, MetricCategoryName, CategoryAttribute) |>
  dplyr::select(-n)
```

---

cvd_indicator_metric_systemlevel_comparison

Indicator metric system level comparison

Description

Returns data for the SystemLevel Comparison chart for provided metric, area and time period. `Data` contains the target value as well as an array `SystemLevels` which contains data grouped by system level.

Usage

```
cvd_indicator_metric_systemlevel_comparison(
  metric_id = 1,
  time_period_id = 1,
  area_id = 50
)
```

Arguments

`metric_id`	integer - the metric to return data for (compulsory)
`time_period_id`	integer - the time period to return data for (compulsory)
`area_id`	integer - the area to return data for (compulsory)

Details

CVD Prevent API documentation: Indicator metric system level comparison

Value

Tibble of metric performance for the specified area and all other areas in the same system level in the time period

See Also

cvd_indicator_list(), cvd_indicator_metric_list(), cvd_indicator(), cvd_indicator_tags(), cvd_indicator_details(), cvd_indicator_sibling(), cvd_indicator_child_data(), cvd_indicator_data(), cvd_indicator_metric_data(), cvd_indicator_raw_data(), cvd_indicator_nationalarea_metric_data(), cvd_indicator_priority_groups(), cvd_indicator_pathway_group(), # cvd_indicator_group(), cvd_indicator_metric_timeseries(), cvd_indicator_person_timeseries(), cvd_indicator_metric_area_break

Examples

```
# return performance for metric 'AF: DOAC & VitK' in people aged 40-59 years
# (metric ID 1270) in time period 17 for Salford South East PCN (area ID 705)
# and all other PCNs - truncated to a sample of four PCN performances:
cvd_indicator_metric_systemlevel_comparison(metric_id = 1270,
time_period_id = 17, area_id = 705) |>
  dplyr::filter(AreaID %in% c(705:709), !is.na(Value)) |>
  dplyr::select(SystemLevelName, AreaID, AreaName, Value)
```

---

cvd_indicator_metric_timeseries

Indicator time series by metric

Description

Returns data for the time series chart for specified metric ID and area ID. Contains an array of two areas in `Areas`, one of which is the National data with the other corresponding to the provided area ID. `TargetValue` is also returned in the `Data` dictionary.

Usage

```
cvd_indicator_metric_timeseries(metric_id = 1, area_id = 50)
```

Arguments

`metric_id`	integer - the metric to return data for (compulsory)
`area_id`	integer - the area to return data for (compulsory)

Details

CVD Prevent API documentation: Indicator time series metrics

Value

Tibble of time-series data for the specified metric in the area

See Also

cvd_indicator_list(), cvd_indicator_metric_list(), cvd_indicator(), cvd_indicator_tags(), cvd_indicator_details(), cvd_indicator_sibling(), cvd_indicator_child_data(), cvd_indicator_data(), cvd_indicator_metric_data(), cvd_indicator_raw_data(), cvd_indicator_nationalarea_metric_data(), cvd_indicator_priority_groups(), cvd_indicator_pathway_group(), # cvd_indicator_group(), cvd_indicator_person_timeseries(), cvd_indicator_metric_systemlevel_comparison(), cvd_indicator_metric_area_breakdown()

Examples

```
# List data for Salford South East PCN (area ID 705) for 'AF: treatment with
# anticoagulants' for women people aged 60-79 years (metric ID 130):
cvd_indicator_metric_timeseries(metric_id = 130, area_id = 705) |>
  dplyr::select(AreaName, TimePeriodName, TimePeriodID, Value) |>
  tidyr::pivot_wider(
    names_from = AreaName,
    values_from = Value
  )
```

---

cvd_indicator_nationalarea_metric_data

Indicator national vs area metric data

Description

Returns national and area data for the provided metric, area, and time period.

Usage

```
cvd_indicator_nationalarea_metric_data(
  metric_id = 1,
  time_period_id = 17,
  area_id = 739
)
```

Arguments

metric_id	integer - metric for which to return data (compulsory)
time_period_id	integer - time period for which to return data (compulsory)
area_id	integer - area for which to return data (compulsory)

Details

The returned object is a list containing named tibbles. The two possible tibbles are:

- area: contains metric data for the specified area in comparison with national metric data.
- target: contains details on how to reach target values, including:

- target value as a percentage (stored as a whole number up to 100)
- target patients (the number of additional patients needed to reach the target percentage)

Note that the `target` tibble is only provided if data is available for both national and the chosen area.

CVD Prevent API documentation: Indicator national vs area metric data

Value

List of named tibbles (`area`, `target`) where `target` is only provided if data is available.

See Also

`cvd_indicator_list()`, `cvd_indicator_metric_list()`, `cvd_indicator()`, `cvd_indicator_tags()`, `cvd_indicator_details()`, `cvd_indicator_sibling()`, `cvd_indicator_child_data()`, `cvd_indicator_data()`, `cvd_indicator_metric_data()`, `cvd_indicator_raw_data()`, `cvd_indicator_priority_groups()`, `cvd_indicator_pathway_group()`, `cvd_indicator_group()`, `cvd_indicator_metric_timeseries()`, `cvd_indicator_person_timeseries()`, `cvd_indicator_metric_systemlevel_comparison()`, `cvd_indicator_metric_area_breakdown()`

Examples

```
# Compare performance against metric 150  (AF: treatment with anticoagulants
# - all people) in 'Chester South PCN' (area ID 553) with national
# performance:
return_list <- cvd_indicator_nationalarea_metric_data(
    metric_id = 150,
    time_period_id = 17,
    area_id = 553
)

# See what the list contains
return_list |> summary()

# Extract the `area` details
area_data <- return_list$area
area_data |> gt::gt()

# Extract `target` details
target_data <- return_list$target
target_data |> gt::gt()
```

`cvd_indicator_pathway_group`
Pathway groups

Description

Pathway groups are sub-groupings of Priority Groups, visible in the Regional & ICS Insights page. This endpoint returns a single pathway group for a given group ID. An error will be returned if there is no pathway group associated with the given ID. For a valid request, Pathway Group ID and named are returned as key value pairs and the Indicators populate an array.

Usage

```
cvd_indicator_pathway_group(pathway_group_id = 10)
```

Arguments

`pathway_group_id`
: integer - the pathway to return data for (compulsory)

Details

CVD Prevent API documentation: Indicator pathway group

Value

Tibble of indicators grouped by pathway groups

See Also

`cvd_indicator_list()`, `cvd_indicator_metric_list()`, `cvd_indicator()`, `cvd_indicator_tags()`, `cvd_indicator_details()`, `cvd_indicator_sibling()`, `cvd_indicator_child_data()`, `cvd_indicator_data()`, `cvd_indicator_metric_data()`, `cvd_indicator_raw_data()`, `cvd_indicator_nationalarea_metric_data()`, `cvd_indicator_priority_groups()`, `cvd_indicator_group()`, `cvd_indicator_metric_timeseries()`, `cvd_indicator_person_timeseries()`, `cvd_indicator_metric_systemlevel_comparison()`, `cvd_indicator_metric_area_breakdown()`

Examples

```
# Return indicators for the 'Chronic Kidney Disease' Pathway Group (ID 9):
cvd_indicator_pathway_group(pathway_group_id = 9) |>
  dplyr::select(PathwayGroupName, PathwayGroupID, IndicatorCode, IndicatorID, IndicatorName)
```

---

cvd_indicator_person_timeseries

Indicator persons time series by indicator

Description

Returns data for the Inequalities Markers Time Series chart for the provided indicator ID and area ID. `Data` contains information about the chosen target value as well as an array `InequalityMarkers` which contains all the time series data grouped into metric category types e.g. age group, ethnicity, etc.

Usage

```
cvd_indicator_person_timeseries(indicator_id = 1, area_id = 1)
```

Arguments

`indicator_id`	integer - the indicator to return data for (compulsory)
`area_id`	integer - the area to return data for (compulsory)

Details

CVD Prevent API documentation: Indicator person time series

Value

Tibble of metric performance for the specified indicator in the area

See Also

`cvd_indicator_list()`, `cvd_indicator_metric_list()`, `cvd_indicator()`, `cvd_indicator_tags()`, `cvd_indicator_details()`, `cvd_indicator_sibling()`, `cvd_indicator_child_data()`, `cvd_indicator_data()`, `cvd_indicator_metric_data()`, `cvd_indicator_raw_data()`, `cvd_indicator_nationalarea_metric_data()`, `cvd_indicator_priority_groups()`, `cvd_indicator_pathway_group()`, # `cvd_indicator_group()`, `cvd_indicator_metric_timeseries()`, `cvd_indicator_metric_systemlevel_comparison()`, `cvd_indicator_metric_area_breakdown()`

Examples

```
# View the details of the time-series performance for indicator 'AF:
# treatment with anticoagulants' (ID 7) in Salford South East PCN (area ID
# 705), focussed just on the age group inequalities metrics:
cvd_indicator_person_timeseries(indicator_id = 7, area_id = 705) |>
  dplyr::filter(
    MetricCategoryTypeName == 'Age group',
    !is.na(Value)
  ) |>
  dplyr::select(MetricCategoryName, TimePeriodName, TimePeriodID, Value) |>
  tidyr::pivot_wider(
    names_from = MetricCategoryName,
    values_from = Value
  )
```

`cvd_indicator_priority_groups` *Indicator priority groups*

Description

Returns the list of top-level groupings (Priority Groups) displayed in the Regional & ICS Insights page. Returns a dictionary called 'PriorityGroups' with each key being a Priority Group name, and each value being the array of indicators contained in that group. The 'PriorityGroupDisplayOrder' indicates the order in which it should be displayed for the given Priority Group.

Usage

```
cvd_indicator_priority_groups()
```

Details

CVD Prevent API documentation: Indicator priority groups

Value

Tibble of indicators grouped by priority group

See Also

cvd_indicator_list(), cvd_indicator_metric_list(), cvd_indicator(), cvd_indicator_tags(), cvd_indicator_details(), cvd_indicator_sibling(), cvd_indicator_child_data(), cvd_indicator_data(), cvd_indicator_metric_data(), cvd_indicator_raw_data(), cvd_indicator_nationalarea_metric_data(), cvd_indicator_pathway_group(), cvd_indicator_group(), cvd_indicator_metric_timeseries(), cvd_indicator_person_timeseries(), cvd_indicator_metric_systemlevel_comparison(), cvd_indicator_metric_area_breakdown()

Examples

```
# Return one indicator from each of the priority groups:
cvd_indicator_priority_groups() |>
  dplyr::select(PriorityGroup, PathwayGroupName, PathwayGroupID,
  IndicatorCode, IndicatorID, IndicatorName) |>
  dplyr::slice_head(by = PathwayGroupID)
```

---

cvd_indicator_raw_data

Indicator raw data (JSON)

Description

Returns all metric data for a specified indicator, system level and time period.

Usage

```
cvd_indicator_raw_data(
  indicator_id = 1,
  time_period_id = 1,
  system_level_id = 1
)
```

Arguments

`indicator_id`	integer - indicator for which to return data for (compulsory)
`time_period_id`	integer - time period for which to return data for (compulsory)
`system_level_id`	integer - system level for which to return data for (compulsory)

Details

CVD Prevent API documentation: Indicator raw data JSON

Value

Tibble of metric performance details for a specified indicator across the system level

See Also

`cvd_indicator_list()`, `cvd_indicator_metric_list()`, `cvd_indicator()`, `cvd_indicator_tags()`, `cvd_indicator_details()`, `cvd_indicator_sibling()`, `cvd_indicator_child_data()`, `cvd_indicator_data()`, `cvd_indicator_metric_data()`, `cvd_indicator_nationalarea_metric_data()`, `cvd_indicator_priority_groups()`, `cvd_indicator_pathway_group()`, # `cvd_indicator_group()`, `cvd_indicator_metric_timeseries()`, `cvd_indicator_person_timeseries()`, `cvd_indicator_metric_systemlevel_comparison()`, `cvd_indicator_metric_area_breakdown()`

Examples

```
# return all metric data for indicator 'AF: treatment with anticoagulants'
# (indicator ID 7) in time period 17 at GP practice level (system level ID 5):
cvd_indicator_raw_data(indicator_id = 7, time_period_id = 17, system_level_id = 5) |>
  dplyr::slice_head(n = 5) |>
  dplyr::select(AreaCode, AreaName, Value)
```

`cvd_indicator_sibling` *Indicator sibling data*

Description

Returns all sibling areas and their data for specified time period, area and metric. This endpoint is intended to only return data for selected metric, and not all metrics for a chosen indicator, hence the metric_id query parameter.

Usage

```
cvd_indicator_sibling(time_period_id = 17, area_id = 30, metric_id = 1)
```

Arguments

`time_period_id`	integer - time period for which to return data (compulsory)
`area_id`	integer - area for which all sibling data will be returned (compulsory)
`metric_id`	integer - metric for which to return data (compulsory)

Details

CVD Prevent API documentation: Indicator sibling data

Value

Tibble of data for indicators for the area and its siblings in the time period

See Also

`cvd_indicator_list()`, `cvd_indicator_metric_list()`, `cvd_indicator()`, `cvd_indicator_tags()`, `cvd_indicator_details()`, `cvd_indicator_child_data()`, `cvd_indicator_data()`, `cvd_indicator_metric_data()`, `cvd_indicator_raw_data()`, `cvd_indicator_nationalarea_metric_data()`, `cvd_indicator_priority_groups()`, `cvd_indicator_pathway_group()`, # `cvd_indicator_group()`, `cvd_indicator_metric_timeseries()`, `cvd_indicator_person_timeseries()`, `cvd_indicator_metric_systemlevel_comparison()`, `cvd_indicator_metric_area_breakdown()`

Examples

```
cvd_indicator_sibling(time_period_id = 17, area_id = 1103, metric_id = 126) |>
  dplyr::select(AreaID, AreaName, Value, LowerConfidenceLimit, UpperConfidenceLimit)
```

`cvd_indicator_tags` *Indicator tags*

Description

Returns a list of all available tags, which can be used to filter indicators.

Usage

```
cvd_indicator_tags()
```

Details

CVD Prevent API documentation: Indicator tags

Value

Tibble of details for indicator tags

See Also

cvd_indicator_list(), cvd_indicator_metric_list(), cvd_indicator(), cvd_indicator_details(), cvd_indicator_sibling(), cvd_indicator_child_data(), cvd_indicator_data(), cvd_indicator_metric_data(), cvd_indicator_raw_data(), cvd_indicator_nationalarea_metric_data(), cvd_indicator_priority_groups(), cvd_indicator_pathway_group(), # cvd_indicator_group(), cvd_indicator_metric_timeseries(), cvd_indicator_person_timeseries(), cvd_indicator_metric_systemlevel_comparison(), cvd_indicator_metric_area_breakdown()

Examples

```
cvd_indicator_tags() |>
  dplyr::arrange(IndicatorTagID) |>
  dplyr::slice_head(n = 5)
```

---

cvd_indicator_types *List indicator types*

Description

Returns IDs and descriptions for indicator types. This is a helper function for the `cvd_time_period_list()` which permits the optional parameter of `indicator_type_id`.

Usage

```
cvd_indicator_types()
```

Value

Tibble of indicator types

See Also

cvd_time_period_list()

Examples

```
# NB, the following example is not tested because it takes longer than
# expected to return the results

# List available indicator types
cvd_indicator_types()
```

cvd_time_period_list *List time periods*

Description

Returns all available time periods

Usage

```
cvd_time_period_list(indicator_type_id)
```

Arguments

`indicator_type_id`
: integer - Indicator type ID, e.g. standard or outcome indicator type. If passed will show time periods containing data of the given type (optional)

Details

CVD Prevent API documentation: Time period

Value

Tibble of time period details

See Also

`cvd_indicator_types()`, `cvd_time_period_system_levels()`

Examples

```
# NB, the following examples are not tested because they take longer than
# expected to return the results

# get a tibble of all periods
cvd_time_periods <- cvd_time_period_list()

# filter for the latest four periods
cvd_time_period_list() |>
  dplyr::filter(IndicatorTypeName == 'Standard') |>
  dplyr::slice_max(order_by = TimePeriodID, n = 4) |>
  dplyr::select(TimePeriodID, TimePeriodName)
```

cvd_time_period_system_levels

Time periods and system levels

Description

Returns all available time periods along with the systems levels included in each time period.

Usage

```
cvd_time_period_system_levels()
```

Details

CVD Prevent API documentation: Time period system levels

Value

tibble of time periods and associated system levels

See Also

cvd_time_period_list()

Examples

```
# get a tibble of all periods and levels
periods_levels <- cvd_time_period_system_levels()

# see which levels are available for the latest period
periods_levels |>
  dplyr::filter(TimePeriodID == max(TimePeriodID)) |>
  dplyr::select(TimePeriodID, TimePeriodName, SystemLevelID, SystemLevelName)
```

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