Package 'covid19sf'

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Title The Covid19 San Francisco Dataset

Version 0.1.2

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Description Provides a verity of summary tables of the Covid19 cases in San Francisco. Data source: San Francisco, Department of Public Health - Population Health Division <https://datasf.org/opendata/>.

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Encoding UTF-8

LazyData true

Depends R (>= 2.10)

Imports devtools, dplyr, lubridate, magrittr, mapview, plotly, sf

Suggests testthat, knitr, rmarkdown

RoxygenNote 7.1.2

VignetteBuilder knitr

URL https://github.com/RamiKrispin/covid19sf

BugReports https://github.com/RamiKrispin/covid19sf/issues

NeedsCompilation no

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Repository CRAN

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Contents

`covid19sf_geo` *San Francisco COVID-19 Cases and Deaths Summarized by Geography*

Description

Medical provider confirmed COVID-19 cases and confirmed COVID-19 related deaths in San Francisco, CA aggregated by several different geographic areas and normalized by 2018 American Community Survey (ACS) 5-year estimates for population data to calculate rate per 10,000 residents. More information about the data available here

Usage

```
covid19sf_geo
```

Format

An object class sf and data.frame with 8 variables.

area_type Area type, c("ZCTA", "Analysis Neighborhood", "Census Tract", "Citywide")

id area id

count The count of cases in the area

rate The rate of cases in the area, calculated as (count/acs_population) * 10000 which is a rate per 10,000 residents

deaths The number of cases in the area

acs_population The population from the latest 5-year estimates from the American Community Survey (2014-2018))

last_updated Last update of the data in POSIXc format)

geometry The area polygon data)

Details

The dataset contains a summary of covid19 cases in San Francisco by geographic area

Source

San Francisco, Department of Public Health - Population Health Division through San Francisco Opne Data protal website.

Examples

```
data(covid19sf_geo)

head(covid19sf_geo)

library(sf)
# Ploting SF Covid19 counts using base plot function
plot(covid19sf_geo[which(covid19sf_geo$area_type == "Census Tract"),
                   c("rate", "geometry")],
     main = "Covid19 Cases Rate per 10,000 by Census Tract")
```

`covid19sf_hospital` *San Francisco COVID-19 Hospital Capacity*

Description

Data on daily hospital bed use and available capacity at San Francisco acute care hospitals from April 2020 onward. Long Term Care facilities (like Laguna Honda and Kentfield) are not included in this data as acute care patients cannot be admitted to these facilities. More information about the data available here

Usage

```
covid19sf_hospital
```

Format

An object class data.frame with 5 variables

hospital The hospital name, currently a single categorical variable, c("All SF Acute Hospitals")

date Date which the data was recorded in YYYY-MM-DD format

bed_type The bed type, c("Intensive Care Surge", "Acute Care", "Acute Care Surge", "Intensive Care")

status The bed category status, c("Available", "COVID-19 (Confirmed & Suspected)", "Other Patients")

count The bed count

Details

The dataset contains a summary of San Francisco hospital bed status

Source

San Francisco, Department of Public Health - Population Health Division through San Francisco Opne Data protal website.

Examples

```
data(covid19sf_hospital)

head(covid19sf_hospital)
```

`covid19sf_hospitalizations`

San Francisco COVID-19 Hospitalizations

Description

Count of COVID+ patients admitted to the hospital. Patients who are hospitalized and test positive for COVID-19 may be admitted to an acute care bed (a regular hospital bed), or an intensive care unit (ICU) bed. This data shows the daily total count of COVID+ patients in these two bed types, and the data reflects totals from all San Francisco Hospitals. More information about the data available here

Usage

```
covid19sf_hospitalizations
```

Format

An object class data.frame with 5 variables

reportdate date which case was recorded in YYYY-MM-DD format.

hospital The hospital which patients were admitted, currently it labeled under "All SF Hospitals"

dphcategory The type of hospitalization bed, either an acute care bed (a regular hospital bed), or an intensive care unit (ICU) bed

covidstatus The patient diagnostic, either PUI (Patient Under Investigation) or COVID+ (positive case)

patientcount Daily cases count

Details

Each record represents how many people were hospitalized on the date recorded in either an ICU bed or acute care bed (shown as Med/Surg under DPHCategory field)

Source

San Francisco, Department of Public Health - Population Health Division through San Francisco Opne Data protal website.

Examples

```
data(covid19sf_hospitalizations)

head(covid19sf_hospitalizations)
```

`covid19sf_housing` *San Francisco COVID-19 Alternative Housing Sites*

Description

This dataset includes aggregate data on the type, status, population served, and individuals placed at each alternative housing site under contract with HSA. More information about the data available here

Usage

```
covid19sf_housing
```

Format

An object class data.frame with 8 variables

site_id Site ID

status The site status, c("Active", "In Preparation")

facility_type The facility type, c("Hotel", "Safe Sleep", "Congregate", "RV")

site_type The site type, c(""SIP: COVID-Negative/Unknown", "I/Q", "SS: COVID-Negative/Unknown", "SIP: Post-COVID")

units_occupied Number of units occupied per site

total_units Total number of units available

population_covid_status The population covid status, c("COVID Negative/Unknown", "COVID Positive", "Post-COVID")

date_updated Date which data was updated in YYYY-MM-DD format)

Details

The dataset contains a summary of covid19 housing site in San Francisco by site, facility and covid19 status

Source

San Francisco, Department of Public Health - Population Health Division through San Francisco Opne Data protal website.

Examples

```
data(covid19sf_housing)

head(covid19sf_housing)
```

`covid19sf_population` *COVID-19 Cases by Population Characteristics Over Time*

Description

TThis dataset shows San Francisco COVID-19 cases by population characteristics and by specimen collection date. Cases are included on the date the positive test was collected. Population characteristics are subgroups, or demographic cross-sections, like age, race, or gender. The City tracks how cases have been distributed among different subgroups. This information can reveal trends and disparities among groups. Data is lagged by five days, meaning the most recent specimen collection date included is 5 days prior to today. Tests take time to process and report, so more recent data is less reliable. More details available here

Usage

```
covid19sf_population
```

Format

An object class data.frame with 7 variables

specimen_collection_date Date which case was recorded in YYYY-MM-DD format.

characteristic_type Overall topic area for a given population characteristic. These are subgroups or demographic cross-sections, like age

characteristic_group Each group or category within a characteristic type or topic area. ex 0-4 yrs, 5-10 yrs

characteristic_group_sort_order Sort order of characteristic group to aid in visualizing data

new_cases Cases are counted as confirmed on the date of specimen collection after a positive lab test result

cumulative_cases Cumulative Cases

population_estimate Population estimate for a given characteristic type and characteristic group

Details

The dataset contains a summary of COVID-19 cases overtime by population characteristics

Source

San Francisco, Department of Public Health - Population Health Division through San Francisco Opne Data protal website.

Examples

```
data(covid19sf_population)

head(covid19sf_population)
```

covid19sf_refresh *Refreshing the covid19sf Pakcage Datasets*

Description

The function enables to keep the package datasets with most recent data available on the package main repository. The main repository is refreshed on a daily basis.

Usage

```
covid19sf_refresh(force = FALSE)
```

Arguments

force	A boolean, if set to TRUE will update the package if new data is available automatically

covid19sf_tests *San Francisco COVID-19 Tests*

Description

Case information on COVID-19 Laboratory testing. This data includes a daily count of test results reported, and how many of those were positive, negative, and indeterminate. Reported tests include tests with a positive, negative or indeterminate result. Indeterminate results, which could not conclusively determine whether COVID-19 virus was present, are not included in the calculation of percent positive. Testing for the novel coronavirus is available through commercial, clinical, and hospital laboratories, as well as the SFDPH Public Health Laboratory. More information about the data available here

Usage

```
covid19sf_tests
```

Format

An object class data.frame with 6 variables

specimen_collection_date date which case was recorded in YYYY-MM-DD format.

tests Daily tests count

pos Number of positive cases

pct Percentage of positive cases

neg Number of negative cases

indeterminate Number of indeterminate cases

Details

A daily COVID-19 testing results report

Source

San Francisco, Department of Public Health - Population Health Division through San Francisco Opne Data protal website.

Examples

```
data(covid19sf_tests)

head(covid19sf_tests)
```

---

covid19sf_test_loc *San Francisco COVID-19 Testing Locations*

Description

A list of testing locations including address and coordinates for mapping. More information about the data available here

Usage

```
covid19sf_test_loc
```

Format

An object class sf and data.frame with 17 variables

id Location ID
medical_home Medical home
name The medical name
address The medical address
phone_number The medical phone number
phone_number_formatted The medical phone number formatted
testing_hours The medical testing hours
popup_or_permanent The medical testing type, c("Permanent", "Pop-Up")
location_type The medical location type, c("Private", "Public")
eligibility Eligibility information for accessing testing at this location
cta_text The call to action used for the web map
cta_link The call to action link for the button on the web map
sample_collection_method The method for collecting samples at the lab
lap The lab name
latitude The medical latitude point
longitude The medical longitude point
geometry The medical geometry details

Details

The dataset contains the San Francisco testing location information

Source

San Francisco, Department of Public Health - Population Health Division through San Francisco Opne Data protal website.

Examples

```
data(covid19sf_test_loc)

head(covid19sf_test_loc)
```

`covid19sf_vaccine_demo`

COVID-19 Vaccine Doses Given to San Franciscans by Demographics

---

Description

This dataset represents doses of COVID-19 vaccine administered in California to residents of San Francisco. The data is broken down by multiple demographic slices. The three dose types are counted separately, i.e. (1) first doses administered as a part of a two-dose vaccination, (2) second doses administered as part of a two-dose vaccination, and (3) single-dose vaccines administered. here

NOTE: This dataset is no longer supported and will be deprecated on the next release (v0.1.3). The covid19sf_population dataset is an alternative for covid19sf_vaccine_demo.

Usage

```
covid19sf_vaccine_demo
```

Format

An object class data.frame with 15 variables

overall_segment Segment (universe) of analysis. Unique combination of administering_provider_type, age_group, and demographic_group. Filter to a single option to derive meaningful totals.

administering_provider_type Providers included in a given overall_segment. Two possible values: 'All' (including SF DPH) or 'DPH Only'

age_group Age range included in a given overall_segment

demographic_group Type of demographic group included in a given overall_segment (e.g. Age, Race/Ethnicity)

demographic_subgroup Specific demographic group counted in a given record (e.g. 16-24, Asian)

demographic_subgroup_sort_order Numeric sort order for all demographic_subgroups. Convenient for maintaining consistent ordering across multiple data visualizations.

total_1st_doses Total number of first doses administered

total_2nd_doses Total number of second doses administered

total_single_doses Total number of single dose vaccines administered

total_recipients Total number of unique vaccine recipients

total_series_completed Total number of individuals fully vaccinated (those having received the second dose of a two-dose vaccine or one dose of a single-dose vaccine)

subgroup_population 2018 5-year American Community Survey population estimates for given DEMOGRAPHIC_SUBGROUP

age_group_population 2018 5-year American Community Survey population estimates for overall AGE_GROUP

data_as_of Timestamp for last update date in source system

data_loaded_at Timestamp when the record (row) was most recently updated in Socrata

Details

The dataset contains a summary of COVID-19 vaccine doses given to San Franciscans by demographics

Source

San Francisco, Department of Public Health - Population Health Division through San Francisco Opne Data protal website.

Examples

```
data(covid19sf_vaccine_demo)

head(covid19sf_vaccine_demo)
```

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covid19sf_vaccine_demo_ts

COVID-19 Vaccine Doses Given to San Franciscans by Demographics Over Time

---

Description

This dataset represents doses of COVID-19 vaccine administered in California to San Francisco residents over time. The data is broken down by multiple demographic slices. The three dose types are counted separately, i.e. (1) first doses administered as a part of a two-dose vaccination, (2) second doses administered as part of a two-dose vaccination, and (3) single-dose vaccines administered. here

Usage

```
covid19sf_vaccine_demo_ts
```

Format

An object class data.frame with 19 variables

date_administered Date vaccination administered

overall_segment Segment (universe) of analysis. Unique combination of administering_provider_type, age_group, and demographic_group. Filter to a single option to derive meaningful totals.

administering_provider_type Providers included in a given overall_segment. Two possible values: 'All' (including SF DPH) or 'DPH Only'

age_group Age range included in a given overall_segment

demographic_group Type of demographic group included in a given overall_segment (e.g. Age, Race/Ethnicity)

demographic_subgroup Specific demographic group counted in a given record (e.g. 16-24, Asian)

demographic_subgroup_sort_order Numeric sort order for all demographic_subgroup. Convenient for maintaining consistent ordering across multiple data visualizations.

new_1st_doses Count of 1st doses administered for vaccines that take two doses to complete

new_2nd_doses Count of 2nd doses administered for vaccines that take two doses to complete

new_single_doses Count of doses administered for vaccines that take one dose to complete

new_series_completed Count of individuals newly fully vaccinated on a given day (given the 2nd dose of a two-dose vaccine or one dose of a single dose vaccine)

new_recipients Count of individuals vaccinated (with any dose) for the first time according to CA's records

cumulative_1st_doses Cumulative total of 1st doses administered for vaccines that take two doses to complete

cumulative_2nd_doses Cumulative total of 2nd doses administered for vaccines that take two doses to complete

cumulative_single_doses Cumulative total of doses administered for vaccines that take one dose to complete

cumulative_series_completed Cumulative total individuals fully vaccinated (given the 2nd dose of a two-dose vaccine or one dose of a single dose vaccine)

cumulative_recipients Cumulative total individuals vaccinated (with any dose) according to CA's records

subgroup_population American Community Survey population estimates for given demographic_subgroup

age_group_population American Community Survey population estimates for overall age_group

Details

The dataset contains a time series of COVID-19 vaccine doses given to San Franciscans by demographics

Source

San Francisco, Department of Public Health - Population Health Division through San Francisco Opne Data protal website.

Examples

```
data(covid19sf_vaccine_demo_ts)

head(covid19sf_vaccine_demo_ts)
```

---

covid19sf_vaccine_geo *San Francisco COVID-19 Vaccines Given to San Franciscans by Geography*

Description

This dataset represents the COVID-19 vaccinations given to SF residents summarized by the geographic region of their residential address. All vaccines given to SF residents are included, no matter where the vaccination took place (the vaccine may have been administered in San Francisco or outside of San Francisco). Data provides counts for people who have received at least one dose and people who have completed a vaccine series. A vaccine series is complete after an individual has received both doses of a two-dose vaccine or one dose of a one-dose vaccine. More information about the data available here

Usage

```
covid19sf_vaccine_geo
```

Format

An object class sf and data.frame with 8 variables.

id area id

area_type Area type, c("Analysis Neighborhood", "Summary")

count_vaccinated_by_dph Count of residents in the given geographic region who have received at least one dose administered by DPH

count_vaccinated Count of residents in the given geographic region who have received at least one dose regardless of who administered the vaccine

count_series_completed Count of residents in the given geographic region who have completed a vaccine series

acs_population 2019 5-year American Community Survey population estimate for the given geographic region (all ages)

percent_pop_series_completed The total count of population that have complated a vaccine series by population estimate (acs_population)

last_updated Last update of the data in POSIXc format)

geometry The area polygon data)

Details

The dataset contains a summary of covid19 vaccination in San Francisco by neighborhood

Source

San Francisco, Department of Public Health - Population Health Division through San Francisco Opne Data protal website.

Examples

```
data(covid19sf_vaccine_geo)

head(covid19sf_vaccine_geo)

library(sf)
library(dplyr)

df <- covid19sf_vaccine_geo %>% filter(area_type == "Analysis Neighborhood")

plot(df[, c("percent_pop_series_completed", "geometry")],
     main = "San Francisco - Percentage of Fully Vaccinated Population")
```

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