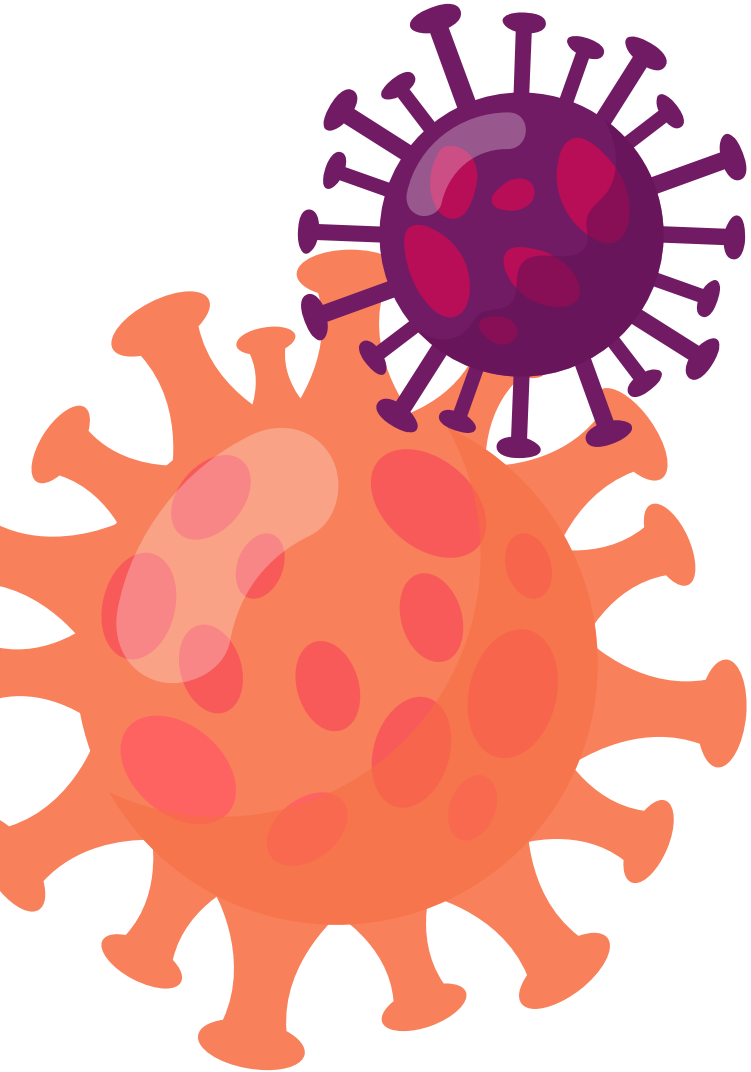
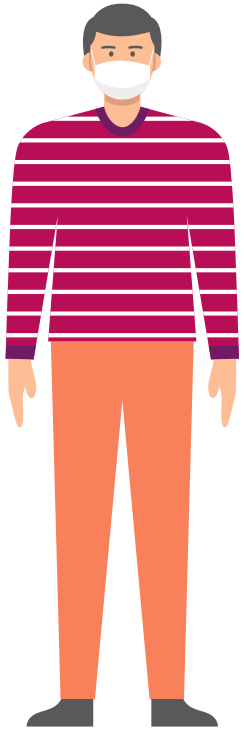


Coviders

Renan Hiroki Bastos - 176573

Vinicius Alves Mancine Dantas - 188092

Fernando dos Reis Santos Filho - 234471



Tema

Descrição do tema do dataset, motivo e contexto gerador

1

Modelos

Modelos conceitual e lógicos escolhidos

2

Fontes e tratamentos

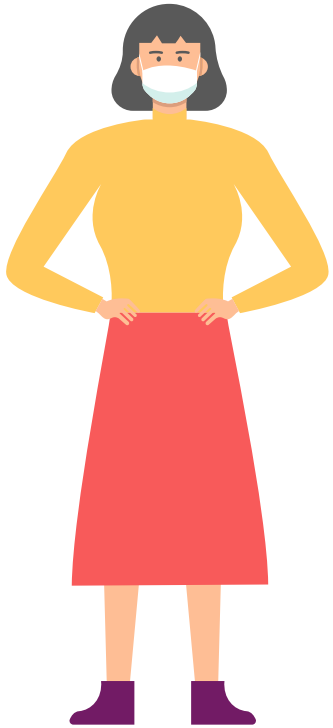
Fontes de dados utilizados e tratamentos realizados

3

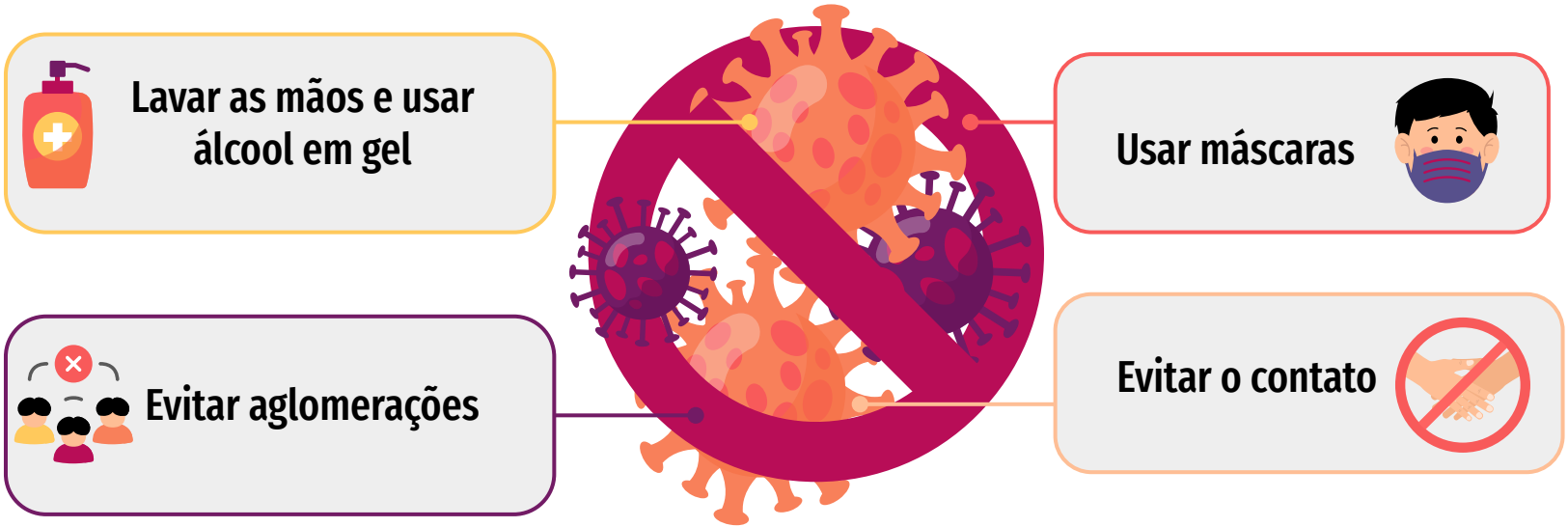
Análises

Algumas perguntas que podem ser respondidas pelo dataset

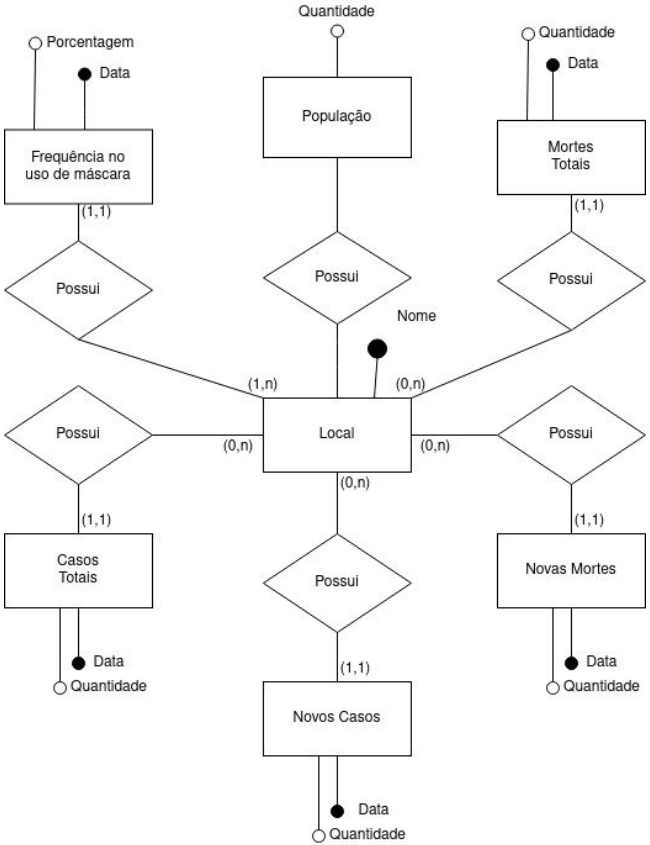
4



Covid-19 e os cuidados necessários



Modelo conceitual



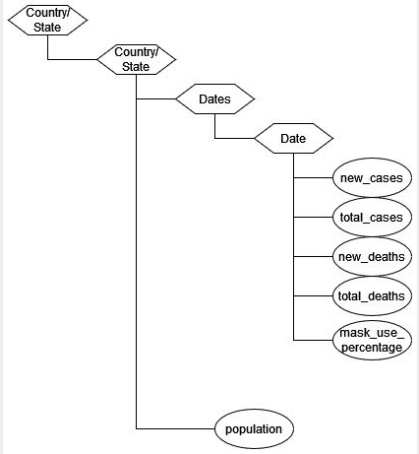
Modelos lógicos

Relacional

CONTÁGIO(_id_, location, date, new_cases, total_cases, new_deaths, total_deaths, mask_use_percentage);

POPULAÇÃO(_location_, população);

Hierárquico



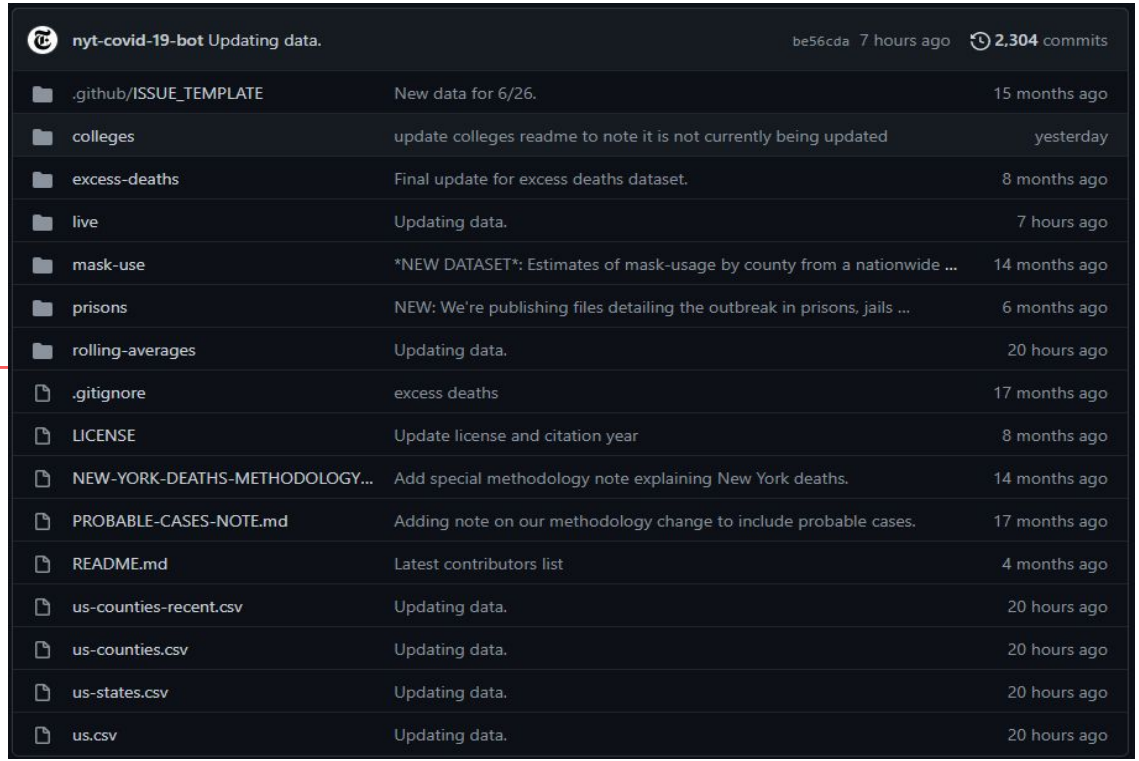
Coronavirus (Covid-19) Data in the United States

Link

https://github.com/nytimes/covid-19-data

Formato

CSV



nyt-covid-19-bot Updating data.	be56cda 7 hours ago	2,304 commits
.github/ISSUE_TEMPLATE	New data for 6/26.	15 months ago
colleges	update colleges readme to note it is not currently being updated	yesterday
excess-deaths	Final update for excess deaths dataset.	8 months ago
live	Updating data.	7 hours ago
mask-use	*NEW DATASET*: Estimates of mask-usage by county from a nationwide ...	14 months ago
prisons	NEW: We're publishing files detailing the outbreak in prisons, jails ...	6 months ago
rolling-averages	Updating data.	20 hours ago
.gitignore	excess deaths	17 months ago
LICENSE	Update license and citation year	8 months ago
NEW-YORK-DEATHS-METHODOLOGY...	Add special methodology note explaining New York deaths.	14 months ago
PROBABLE-CASES-NOTE.md	Adding note on our methodology change to include probable cases.	17 months ago
README.md	Latest contributors list	4 months ago
us-counties-recent.csv	Updating data.	20 hours ago
us-counties.csv	Updating data.	20 hours ago
us-states.csv	Updating data.	20 hours ago
us.csv	Updating data.	20 hours ago

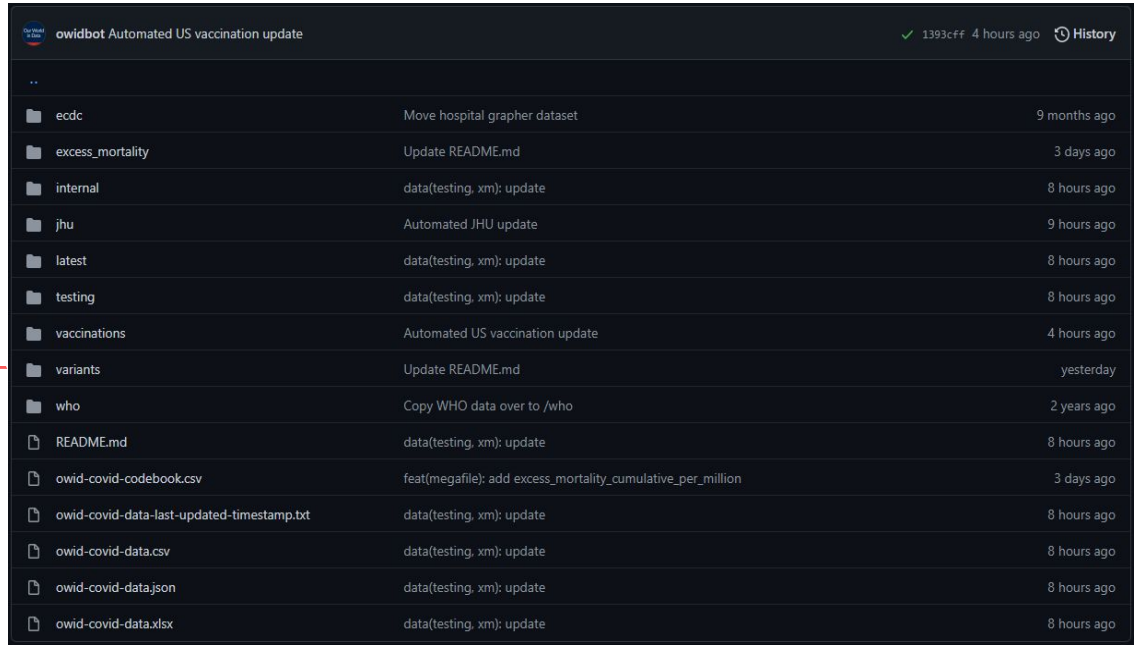
Data on COVID-19 (coronavirus) by Our World in Data

Link

https://github.com/owid/covid-19-data/tree/master/public/data

Formatos

CSV
Json



owidbot Automated US vaccination update — 1393cff 4 hours ago — History

ecdc	Move hospital grapher dataset	9 months ago
excess_mortality	Update README.md	3 days ago
internal	data(testing, xm): update	8 hours ago
jhu	Automated JHU update	9 hours ago
latest	data(testing, xm): update	8 hours ago
testing	data(testing, xm): update	8 hours ago
vaccinations	Automated US vaccination update	4 hours ago
variants	Update README.md	yesterday
who	Copy WHO data over to /who	2 years ago
README.md	data(testing, xm): update	8 hours ago
owid-covid-codebook.csv	feat(megafile): add excess_mortality_cumulative_per_million	3 days ago
owid-covid-data-last-updated-timestamp.txt	data(testing, xm): update	8 hours ago
owid-covid-data.csv	data(testing, xm): update	8 hours ago
owid-covid-data.json	data(testing, xm): update	8 hours ago
owid-covid-data.xlsx	data(testing, xm): update	8 hours ago

Mask adherence and rate of COVID-19 across the United States

Link
https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0249891#sec011

Formatos

CSV
XLS

PLOS ONE

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RESEARCH ARTICLE

Mask adherence and rate of COVID-19 across the United States

Charlie B. Fischer, Nedghie Adrien, Jeremiah J. Silguero, Julianne J. Hopper, Abir I. Chowdhury, Martha M. Werler

Published: April 14, 2021 • https://doi.org/10.1371/journal.pone.0249891

Article | Authors | Metrics | Comments | Media Coverage | Peer Review

Abstract
Introduction
Methods
Results and discussion
Interpretation
Conclusions
Supporting information
Acknowledgments
References

Reader Comments (2)
Figures

Abstract

Mask wearing has been advocated by public health officials as a way to reduce the spread of COVID-19. In the United States, policies on mask wearing have varied from state to state over the course of the pandemic. Even as more and more states encourage or even mandate mask wearing, many citizens still resist the notion. Our research examines mask wearing policy and adherence in association with COVID-19 case rates. We used state-level data on mask wearing policy for the general public and on proportion of residents who stated they always wear masks in public. For all 50 states and the District of Columbia (DC), these data were abstracted by month for April — September 2020 to measure their impact on COVID-19 rates in the subsequent month (May — October 2020). Monthly COVID-19 case rates (number of cases per capita over two weeks) >200 per 100,000 residents were considered high. Fourteen of the 15 states with no mask wearing policy for the general public through September reported a high COVID-19 rate. Of the 8 states with at least 75% mask adherence, none reported a high COVID-19 rate. States with the lowest levels of mask adherence were most likely to have high COVID-19 rates in the subsequent month, independent of mask policy or demographic factors. Mean COVID-19 rates for states with at least 75% mask adherence in the preceding month was 109.26 per 100,000 compared to 249.99 per 100,000 for those with less adherence. Our analysis suggests high adherence to mask wearing could be a key factor in reducing the spread of COVID-19. This association between high mask adherence and reduced COVID-19 rates should influence policy makers and public health officials to focus on ways to improve mask adherence across the population in order to mitigate the spread of COVID-19.

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COVID-19 pandemic (2019-21)

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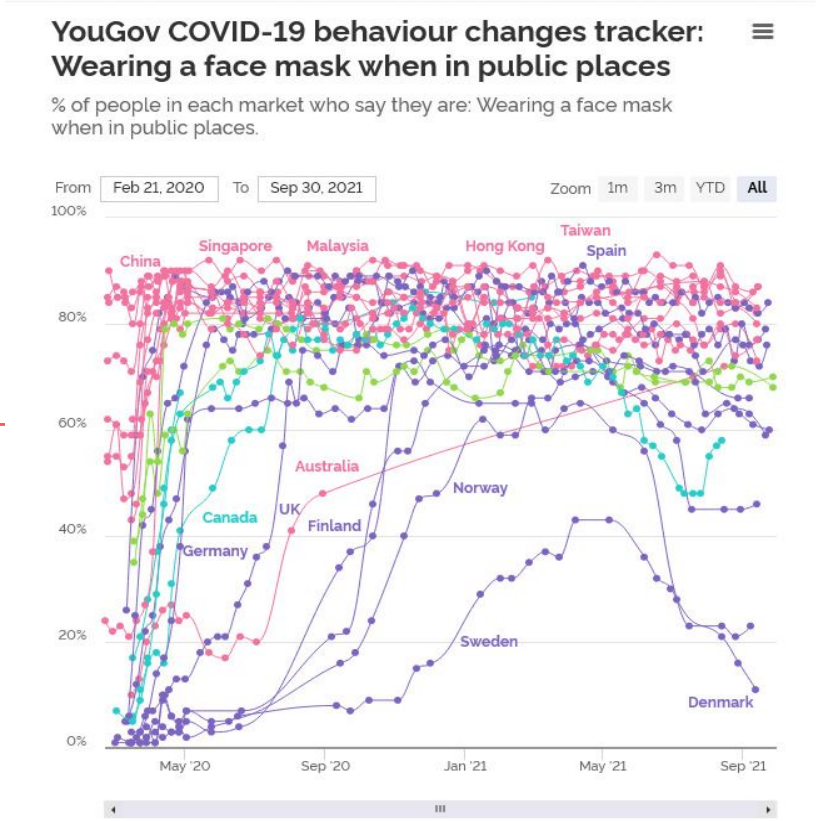
Personal measures taken to avoid COVID-19

Link

https://today.yougov.com/topics/international/articles-reports/2020/03/17/personal-measures-taken-avoid-covid-19

Formatos

CSV
XLS



Importação dos dados

```
CREATE TABLE dados_yougov (
        id INTEGER NOT NULL,
        date VARCHAR(10),
        location VARCHAR(20),
        mask_use_percentage DEC(4, 2),
        PRIMARY KEY(ID)
);

COPY dados_yougov
FROM '../data/external/yougov-chart.csv'
DELIMITER ','
CSV HEADER;
```

```
# IMPORTAR ARQUIVOS CSV PARA OS EUA

DROP TABLE IF EXISTS dados_nyt;

CREATE TABLE dados_nyt (
        id INTEGER NOT NULL,
        date VARCHAR(10),
        state VARCHAR(40),
        fips INTEGER,
        cases INTEGER,
        deaths INTEGER,
        PRIMARY KEY(ID)
);

COPY dados_nyt
FROM '../data/external/nyt.csv'
DELIMITER ','
CSV HEADER;
```

Tratamento dos dados

```
# TRATAR DADOS DA OUR WORLD IN DATA (EUROPA)

DROP VIEW IF EXISTS view_europa;
DROP TABLE IF EXISTS dados_owid_tratados;

CREATE VIEW view_europa AS
SELECT id,
           location,
           date,
           total_cases,
           LAG(total_cases) OVER (
                  ORDER BY id) old_total_cases,
           total_deaths,
           LAG(total_deaths) OVER (
                  ORDER BY id) old_total_deaths
FROM dados_owid
WHERE (location='Denmark' OR location='Finland' OR location='France' OR location='Germany' OR location='Italy' OR location='Norway' OR lo
cation='Spain' OR location='Sweden' OR location='United Kingdom')
                AND (date='2020-02-01' OR date='2020-03-01' OR date='2020-04-01' OR date='2020-05-01' OR date='2020-06-01' OR date='2020-
07-01' OR date='2020-08-01' OR date='2020-09-01' OR date='2020-10-01' OR date='2020-11-01' OR date='2020-12-01' OR date='2021-01-01' OR d
ate='2021-02-01' OR date='2021-03-01' OR date='2021-04-01' OR date='2021-05-01' OR date='2021-06-01' OR date='2021-07-01' OR date='2021-0
8-01');

CREATE TABLE dados_owid_tratados AS
        SELECT id,
           location,
           date,
           total_cases,
           total_cases - old_total_cases as new_cases,
           total_deaths,
           total_deaths - old_total_deaths as new_deaths
FROM view_europa;

UPDATE dados_owid_tratados
SET new_cases = total_cases
WHERE (date = '2020-02-01' AND new_cases < 0) OR (date = '2020-03-01' AND new_cases < 0);
```

União das tabelas

```
# JOIN DAS TABELAS DE NUMERO DE CASOS E DE USO DE MÁSCARA PARA OS EUA

DROP TABLE IF EXISTS eua_final;

CREATE TABLE eua_final AS
SELECT eua.*, mask.mask_use_percentage
FROM dados_nyt_tratados eua
INNER JOIN dados_plosone_tratados mask ON ((eua.date = mask.date) AND (eua.location = mask.location));

INSERT INTO eua_final (id, location, date, new_cases, total_cases, new_deaths, total_deaths, mask_use_percentage)
SELECT id, location, '2020-04-01', new_cases, total_cases, new_deaths, total_deaths,  NULL
FROM dados_nyt_tratados;
```

```
# UNINDO AS TABELAS FINAIS DA EUROPA E DOS EUA

DROP TABLE IF EXISTS tabela_final;

CREATE TABLE tabela_final AS
SELECT *
FROM europa_final;

INSERT INTO tabela_final(id, location, date, new_cases, total_cases, new_deaths, total_deaths, mask_use_percentage)
    SELECT id, location, date, new_cases, total_cases, new_deaths, total_deaths, mask_use_percentage
    FROM eua_final;
```

Perguntas

Os locais com maior número de casos são também os lugares com menor índice de uso de máscaras?

1

2

Quais são os locais com maior número de casos por índice de uso de máscaras?

Há algum indício de que a frequência de uso de máscara influência na taxa de mortalidade?

3

4

Locais na mesma faixa de porcentagem de uso de máscara possuem taxas de infecções parecidas?

Os locais com maior número de casos são também os lugares com menor índice de uso de máscaras?

```
SELECT sum(new_cases),
       avg(new_cases)
FROM Tabela_final,
WHERE mask_use_percentage < 25;

SELECT sum(new_cases),
       avg(new_cases)
FROM Tabela_final,
WHERE mask_use_percentage >= 25 AND mask_use_percentage < 50;

SELECT sum(new_cases),
       avg(new_cases)
FROM Tabela_final,
WHERE mask_use_percentage >= 50 AND mask_use_percentage < 75;

SELECT sum(new_cases),
       avg(new_cases)
FROM Tabela_final,
WHERE mask_use_percentage >= 75;
```

Há algum indício de que a frequência de uso de máscara influência na taxa de mortalidade?

```
SELECT  location,
        date,
        mask_use_percentage,
        new_deaths/new_cases as monthly_death_rate,
        total_deaths/total_cases as overall_death_rate
FROM tabela_final
ORDER BY mask_use_percentage, monthly_death_rate;
```

Locais na mesma faixa de porcentagem de uso de máscara possuem taxas de infecções parecidas?

```
SELECT location,
       new_cases
FROM Tabela_final,
WHERE mask_use_percentage < 10;

SELECT location,
       new_cases
FROM Tabela_final,
WHERE mask_use_percentage >= 10 AND mask_user_percentage < 20;

SELECT location,
       new_cases
FROM Tabela_final,
WHERE mask_use_percentage >= 20 AND mask_user_percentage < 30;

SELECT location,
       new_cases
FROM Tabela_final,
WHERE mask_use_percentage >= 30 AND mask_user_percentage < 40;

SELECT location,
       new_cases
FROM Tabela_final,
WHERE mask_use_percentage >= 40 AND mask_user_percentage < 50;

SELECT location,
       new_cases
FROM Tabela_final,
WHERE mask_use_percentage >= 50 AND mask_user_percentage < 60;

SELECT location,
       new_cases
FROM Tabela_final,
WHERE mask_use_percentage >= 60 AND mask_user_percentage < 70;
SELECT location,
       new_cases
FROM Tabela_final,
WHERE mask_use_percentage >= 70 AND mask_user_percentage < 80;

SELECT location,
       new_cases
FROM Tabela_final,
WHERE mask_use_percentage >= 80 AND mask_user_percentage < 90;

SELECT location,
       new_cases
FROM Tabela_final,
WHERE mask_use_percentage >= 90;
```