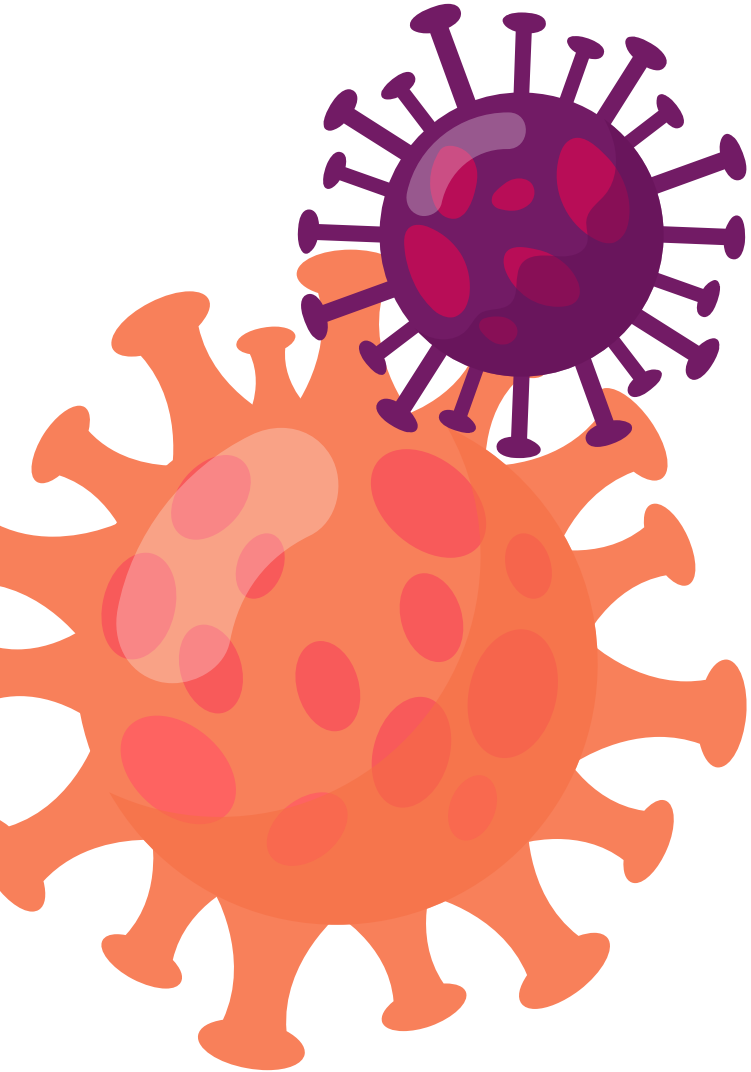


Coviders

Renan Hiroki Bastos - 176573

Vinicius Alves Mancine Dantas - 188092

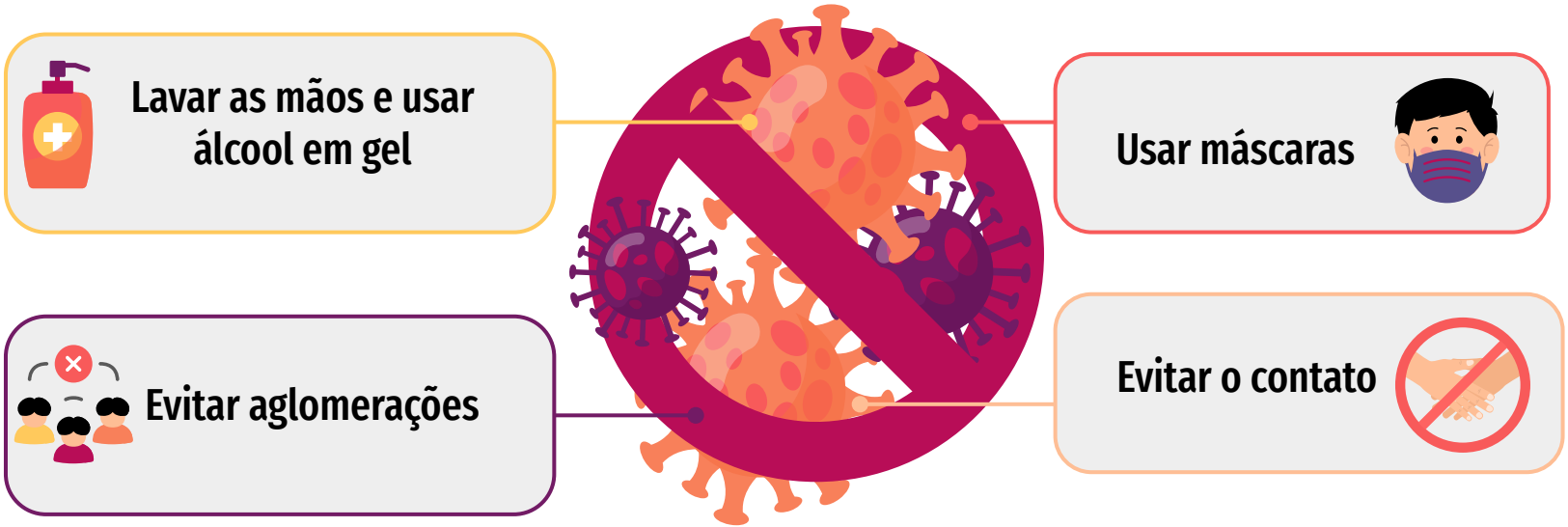
Fernando dos Reis Santos Filho - 234471

01

Tema

Descrição do tema do dataset,
motivo e contexto gerador

COVID-19 E OS CUIDADOS NECESSÁRIOS

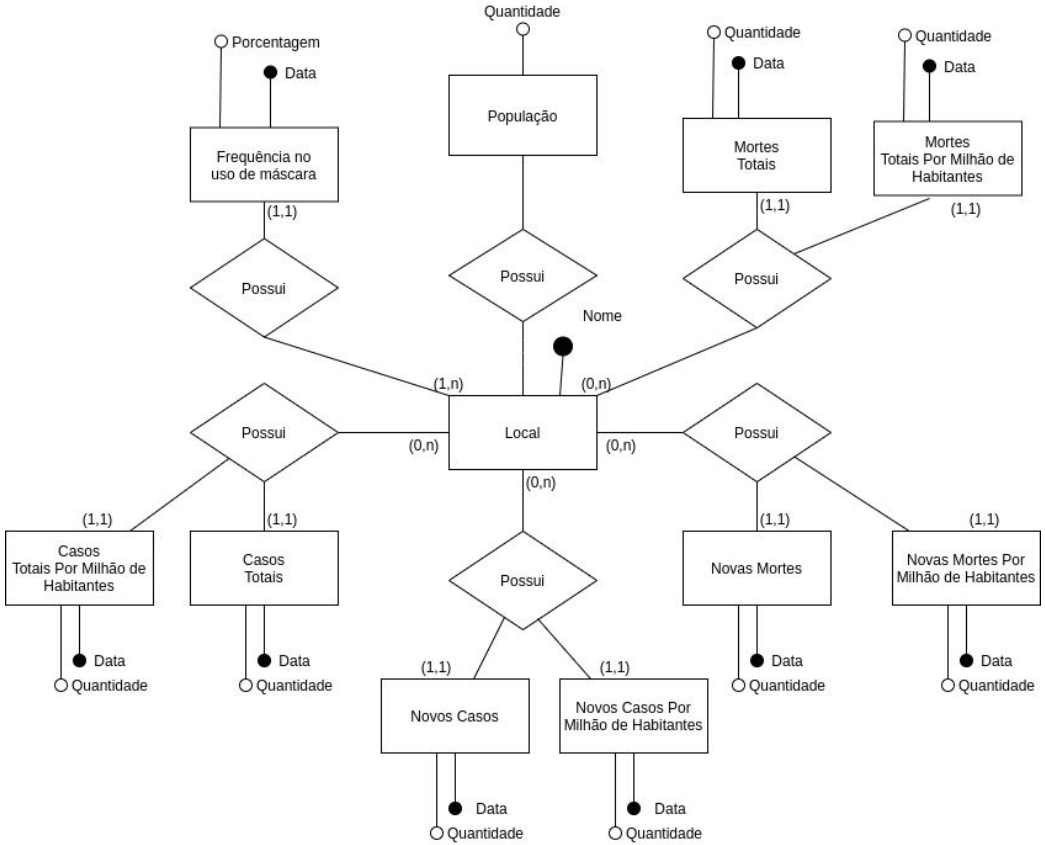


02

Modelos

Modelos conceitual e lógicos escolhidos

Modelo conceitual



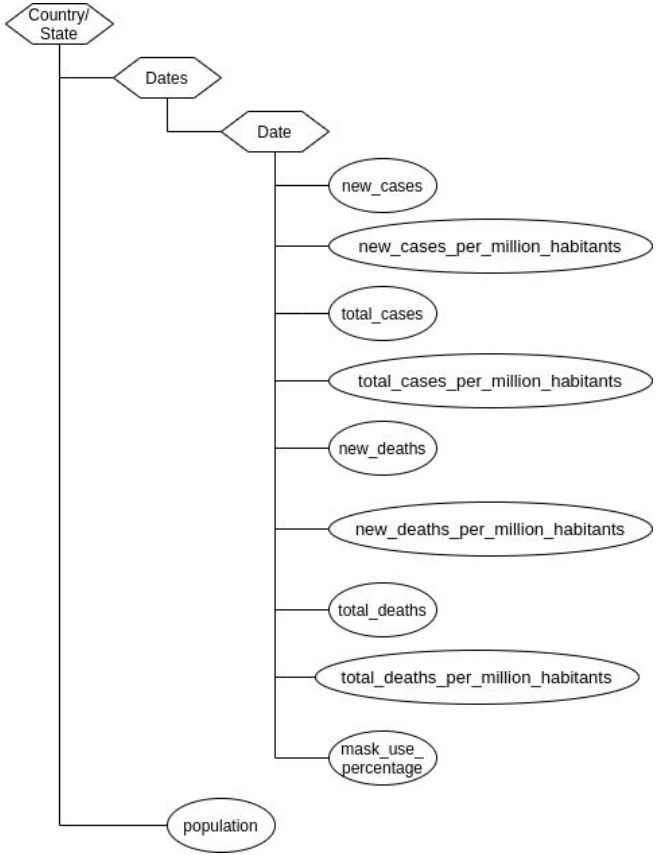
Modelos lógicos - Relacional

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

Location chave estrangeira -> POPULACAO(location)

POPULACAO(_location_, população);

Modelos lógicos - Hierárquico



03

Fontes e Tratamentos

Fontes de dados utilizados e
tratamentos realizados

Data on COVID-19 (coronavirus)

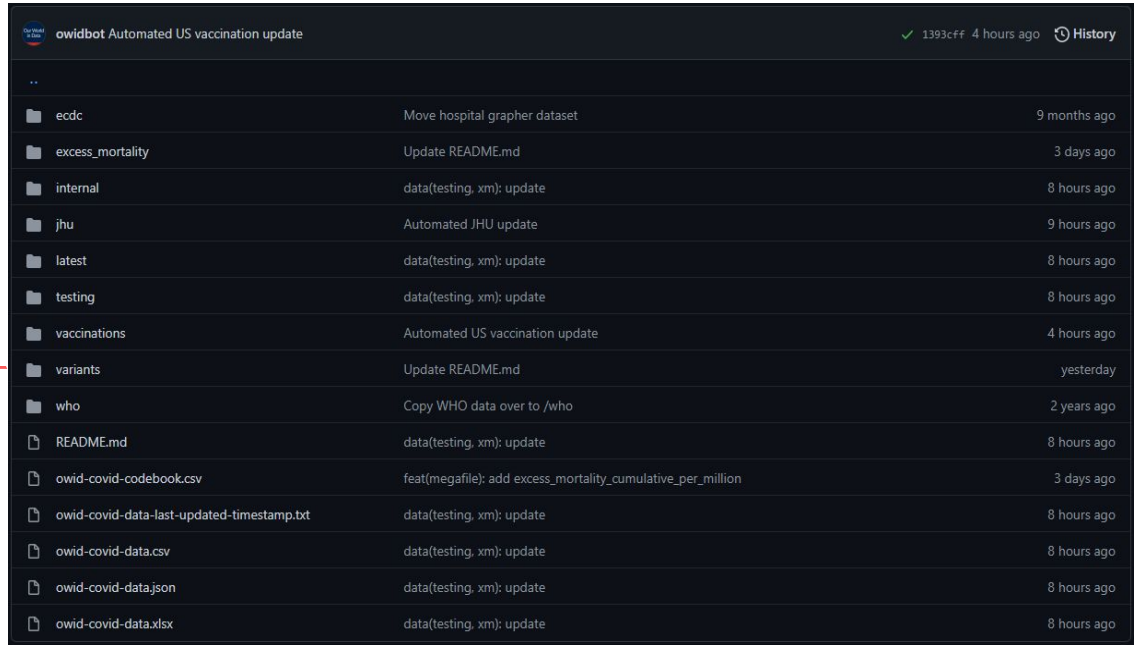
by Our World in Data

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

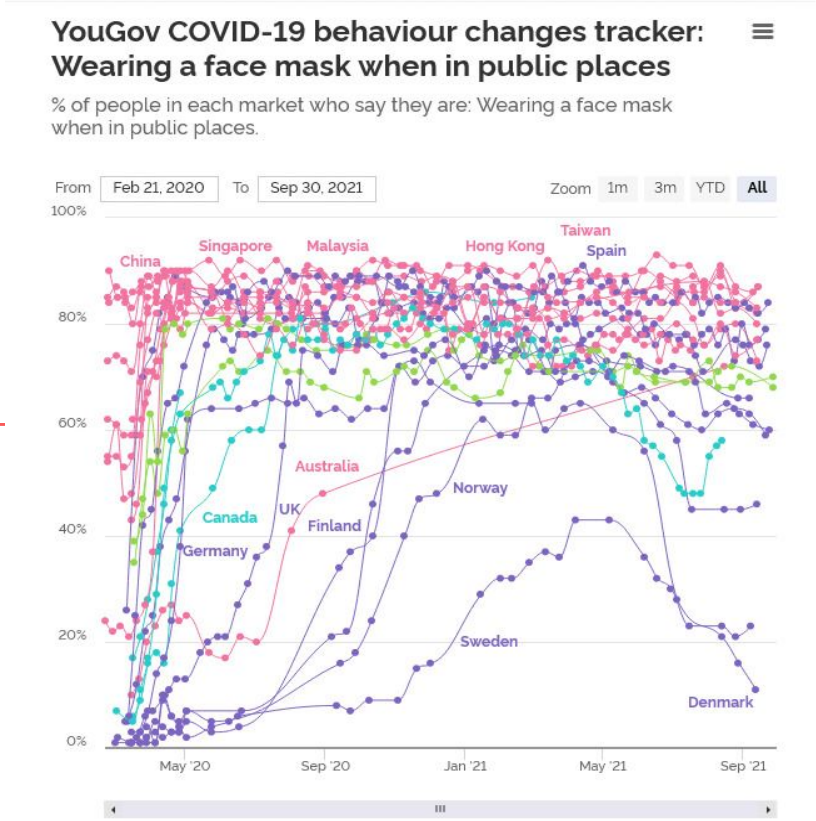
Personal measures taken to avoid COVID-19

Link

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

Formatos

CSV
XLS



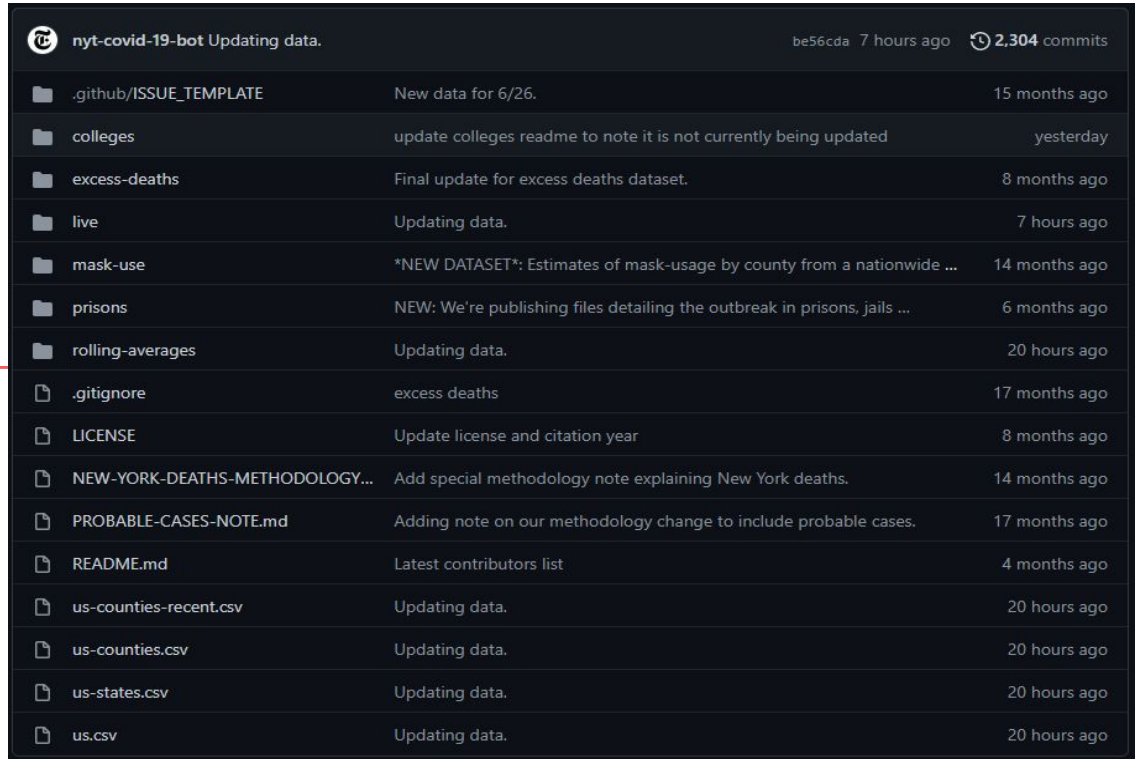
Coronavirus (Covid-19) Data in the United States

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

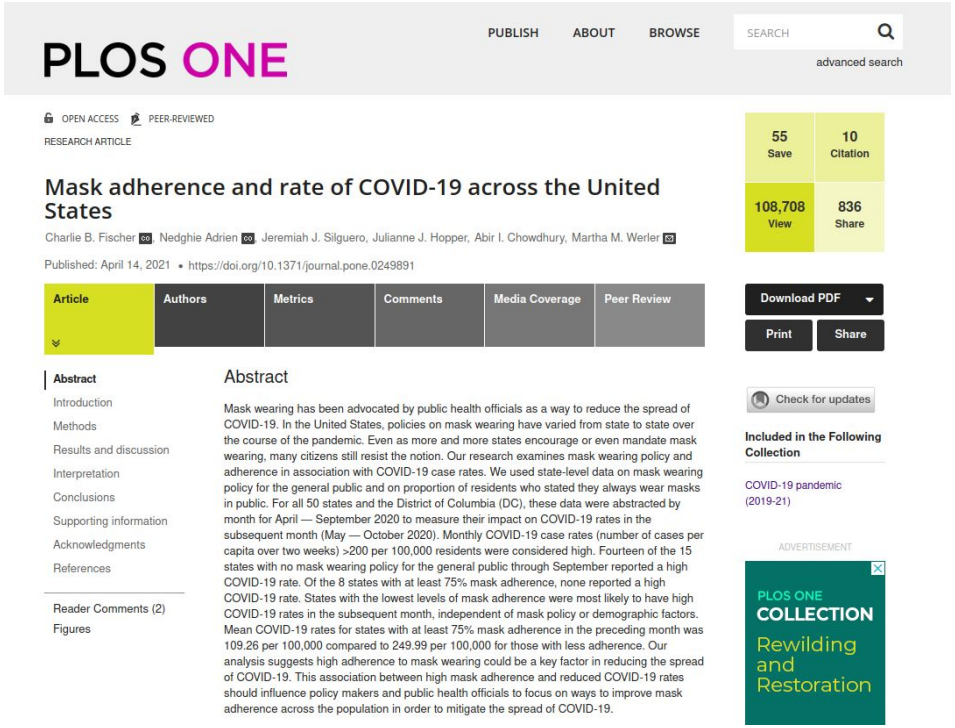
Mask adherence and rate of COVID-19 across the United States

Link

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

Formatos

CSV
XLS



PLOS ONE

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OPEN ACCESS PEER-REVIEWED
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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Included in the Following Collection

COVID-19 pandemic (2019-21)

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PLOS ONE COLLECTION Rewilding and Restoration

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;
```

```
# IMPORTANDO A TABELA POPULACAO

DROP TABLE IF EXISTS populacoes;

CREATE TABLE populacoes (
        location VARCHAR(20),
        population INTEGER
);

COPY populacoes
FROM '../data/processed/populacao.csv'
DELIMITER ','
CSV HEADER;
```

Tratamento dos dados: Our World In Data

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

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

DROP TABLE IF EXISTS table_europa;
DROP VIEW IF EXISTS view_europa;

CREATE VIEW view_europa AS
SELECT id,
          location,
          date,
          total_cases,
          LAG(total_cases) OVER (
                 ORDER BY id) AS old_total_cases,
          total_deaths,
          LAG(total_deaths) OVER (
                 ORDER BY id) AS old_total_deaths
FROM tabela_original
WHERE (location='Denmark' OR location='Finland' OR location='France' OR location='Germany' OR location='Italy' OR location='Norway' OR location='Spain'
               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

CREATE TABLE table_europa 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 table_europa
SET new_cases = total_cases
WHERE (date = '2020-02-01' AND new_cases < 0) OR (date = '2020-03-01' AND new_cases < 0);

SELECT * FROM table_europa ORDER BY id;
```

União de dados: Europa

```
# JOIN DAS TABELAS DE NUMEROS DE CASOS E USO DE MÁSCARA PARA A EUROPA

DROP TABLE IF EXISTS europa_final;

CREATE TABLE europa_final AS
SELECT eu.*, um.mask_use_percentage
FROM table_europa eu
INNER JOIN uso_mascara_original um ON (eu.date = um.date) AND (eu.location = um.location);

SELECT * FROM europa_final;
```

Tratamento dos dados: New York Times

```
# TRATAR DADOS DO NYT (EUA)

DROP VIEW IF EXISTS view_eua;
DROP TABLE IF EXISTS table_eua;

CREATE VIEW view_eua AS
SELECT temp_data.id,
          temp_data.location,
          temp_data.date,
          temp_data.cases as total_cases,
          LAG(temp_data.cases) OVER (
                ORDER BY temp_data.location, temp_data.id) AS old_total_cases,
          temp_data.deaths as total_deaths,
          LAG(temp_data.deaths) OVER (
                ORDER BY temp_data.location, temp_data.id) AS old_total_deaths
FROM (SELECT id,
                state as location,
                date,
                cases,
                deaths
                FROM dados_nyt
                ORDER BY state, id) as temp_data
WHERE (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'

CREATE TABLE table_eua 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_eua;

UPDATE table_eua
SET new_cases = total_cases,
       new_deaths = total_deaths
WHERE (date = '2020-02-01' AND new_cases < 0) OR (date = '2020-03-01' AND new_cases < 0) OR (date = '2020-04-01' AND new_cases < 0) OR (date = '2020-05

SELECT * FROM table_eua;
```

Tratamento dos dados: Plos One

```
# TRATAR DADOS DO PLOS ONE (USO DE MÁSCARA NOS EUA)

DROP TABLE IF EXISTS mascara_eua;

CREATE TABLE mascara_eua (
        date VARCHAR(10),
        location VARCHAR(40),
        mask_use_percentage DEC(4, 2)
);

INSERT INTO mascara_eua (location, date, mask_use_percentage)
SELECT State, '2020-04-01', adh_APRavg
FROM plosone_data;

INSERT INTO mascara_eua (location, date, mask_use_percentage)
SELECT State, '2020-05-01', adh_MAYavg
FROM plosone_data;

INSERT INTO mascara_eua (location, date, mask_use_percentage)
SELECT State, '2020-06-01', adh_JUNEavg
FROM plosone_data;

INSERT INTO mascara_eua (location, date, mask_use_percentage)
SELECT State, '2020-07-01', adh_JULavg
FROM plosone_data;

INSERT INTO mascara_eua (location, date, mask_use_percentage)
SELECT State, '2020-08-01', adh_AUGavg
FROM plosone_data;

INSERT INTO mascara_eua (location, date, mask_use_percentage)
SELECT State, '2020-09-01', AdhSEPavg
FROM plosone_data;
```

União de dados: EUA

```
# 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 table_eua eua
INNER JOIN mascara_eua 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, date, new_cases, total_cases, new_deaths, total_deaths,  NULL
FROM table_eua te
WHERE NOT EXISTS (SELECT 1 FROM mascara_eua mask where mask.date = te.date limit 1);

SELECT * FROM eua_final ORDER BY (location, id);
```

União das tabelas da Europa e dos EUA

```
# 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;
```

União das tabelas com a população

```
# UNINDO DADOS SOBRE POPULACAO A TABELA FINAL

DROP TABLE IF EXISTS tabela_final_final;

CREATE TABLE tabela_final_final AS
SELECT tf.*,
           tf.new_cases*10^6/po.population AS new_cases_per_million_habitants,
           tf.new_deaths*10^6/po.population AS new_deaths_per_million_habitants,
           tf.total_cases*10^6/po.population AS total_cases_per_million_habitants,
           tf.total_deaths*10^6/po.population AS total_deaths_per_million_habitants
FROM tabela_final tf
INNER JOIN populacoes po ON (tf.location = po.location);
```

Tratamento e transformação do CSV final para JSON

```python
import pandas as pd
import json
import math

casos_pd = pd.read_csv('../data/processed/casos.csv')
```

```python
locations = []
dates = []
for index, row in casos_pd.iterrows():
  if(row.location not in locations):
    locations.append(row.location)
  if(row.date not in dates):
    dates.append(row.date)

datesDic = {}
for date in dates:
  datesDic[date] = {}
```

```python
final = {}
for location in locations:
    final[location] = {}
    dates_ = datesDic.copy()
    final[location]["dates"] = dates_
```

```python
import csv

casos = '../data/processed/casos.csv'

with open(casos, 'r') as csvfile:
    datareader = csv.reader(csvfile)
    for row in datareader:
        if row[1] != 'location':
            final[row[1]]['dates'][row[2]] = {'total_cases': row[3]}
            final[row[1]]['dates'][row[2]].update({'new_cases': row[4]})
            final[row[1]]['dates'][row[2]].update({'total_deaths': row[5]})
            final[row[1]]['dates'][row[2]].update({'new_deaths': row[6]})
            final[row[1]]['dates'][row[2]].update({'mask_use_percentage': row[7]})
            final[row[1]]['dates'][row[2]].update({'new_cases_per_million_habitants': row[8]})
            final[row[1]]['dates'][row[2]].update({'new_deaths_per_million_habitants': row[9]})
            final[row[1]]['dates'][row[2]].update({'total_cases_per_million_habitants': row[10]})
            final[row[1]]['dates'][row[2]].update({'total_deaths_per_million_habitants': row[11]})
    # print(final)

populacao = '../data/processed/populacao.csv'

with open(populacao, 'r') as csvfile:
    datareader = csv.reader(csvfile)
    for row in datareader:
        if row[0] != 'location':
            final[row[0]].update({'populacao': row[1]})

jsonFinal = json.dumps(final)

print(jsonFinal)
```

04

Análises

Algumas perguntas que podem ser respondidas pelo dataset

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_per_million_habitants),
       avg(new_cases_per_million_habitants)
FROM casos,
WHERE mask_use_percentage < 25;

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

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

SELECT sum(new_cases_per_million_habitants),
       avg(new_cases_per_million_habitants)
FROM casos,
WHERE mask_use_percentage >= 75;
```

sum	avg
72193.92	949.92
350075.25	2652.08
654052.02	3574.05
332372.74	5035.95

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

```
SELECT location,
          date,
          mask_use_percentage,
          new_cases_per_million_habitants,
          new_cases_per_million_habitants/mask_use_percentage as case_mask_use_rate
FROM casos
WHERE mask_use_percentage > 0 AND new_cases > 0
ORDER BY case_mask_rate DESC
LIMIT 20;
```

	location character varying (35)	date character varying (20)	mask_use_percentage numeric (4,2)	new_cases_per_million_habitants double precision	case_mask_use_rate double precision
1	Sweden	2020-12-01	16.00	13389.911335999084	836.8694584999428
2	Sweden	2021-01-01	29.00	17337.885017745168	597.8581040601782
3	Sweden	2020-05-01	3.00	1650.4371552836271	550.1457184278757
4	Sweden	2021-02-01	33.00	12719.939672119304	385.45271733694864
5	Sweden	2021-05-01	43.00	15746.837292006929	366.2055184187658
6	Sweden	2021-04-01	43.00	15302.05463866784	355.861735782973
7	Sweden	2020-06-01	5.50	1686.0708130108596	306.55832963833814
8	Sweden	2021-06-01	32.67	9312.753374448488	285.0551997076366
9	Denmark	2020-05-01	4.00	1068.470966333114	267.1177415832785
10	Sweden	2020-11-01	12.00	3017.5720069838044	251.46433391531704
11	United Kingdom	2021-02-01	75.50	18969.387495455667	251.25016550272406
12	New York	2020-05-01	46.16	11346.377642293306	245.8054081952623
13	Sweden	2021-03-01	36.50	8869.345021958383	242.99575402625706
14	United Kingdom	2021-08-01	64.00	15539.939978233993	242.81156215990615
15	Denmark	2021-01-01	65.00	14448.497002044682	222.2845692622259
16	Denmark	2021-08-01	18.50	4093.657776944702	221.2787987537677
17	Spain	2021-02-01	87.00	19122.389750190458	219.7975833355225
18	New Jersey	2020-05-01	50.03	10650.776607240785	212.88779946513662
19	Florida	2020-08-01	71.65	14905.20070236181	208.02792327092544
20	Louisiana	2020-08-01	58.06	12046.14152262559	207.4774633590353

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

```sql
SELECT  location,
        date,
        mask_use_percentage,
        new_deaths*100/new_cases as monthly_death_rate,
        total_deaths*100/total_cases as overall_death_rate
FROM tabela_final_final
WHERE new_cases != 0 AND total_cases != 0 AND mask_use_percentage IS NOT NULL
ORDER BY mask_use_percentage DESC;

SELECT avg(new_deaths*100/new_cases) as avarage_death_rate
FROM casos
WHERE mask_use_percentage < 25;

SELECT avg(new_deaths*100/new_cases) as avarage_death_rate
FROM casos
WHERE mask_use_percentage >= 25 AND mask_use_percentage < 50;

SELECT avg(new_deaths*100/new_cases) as avarage_death_rate
FROM casos
WHERE mask_use_percentage >= 50 AND mask_use_percentage < 75;

SELECT avg(new_deaths*100/new_cases) as avarage_death_rate
FROM casos
WHERE mask_use_percentage >= 75;
```

3.89
1.96
2.18
4.06

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

```
dictionary = json.loads(jsonFinal)
new_deaths_25 = 0
new_cases_25 = 0
new_deaths_50 = 0
new_cases_50 = 0
new_deaths_75 = 0
new_cases_75 = 0
new_deaths_100 = 0
new_cases_100 = 0
for location in final:
    for date in dictionary[location]['dates']:
        if ('mask_use_percentage' in dictionary[location]['dates'][date] and dictionary[location]['dates'][date]['mask_use_percentage'] != '') and \
        ('new_deaths_per_million_habitants' in dictionary[location]['dates'][date] and dictionary[location]['dates'][date]['new_deaths_per_million_habi
        ('new_cases_per_million_habitants' in dictionary[location]['dates'][date] and dictionary[location]['dates'][date]['new_cases_per_million_habita
            if(float(dictionary[location]['dates'][date]['mask_use_percentage']) < 25):
                new_deaths_25 += float(dictionary[location]['dates'][date]['new_deaths_per_million_habitants'])
                new_cases_25 += float(dictionary[location]['dates'][date]['new_cases_per_million_habitants'])
            if(float(dictionary[location]['dates'][date]['mask_use_percentage']) < 50 and float(dictionary[location]['dates'][date]['mask_use_percentag
                new_deaths_50 += float(dictionary[location]['dates'][date]['new_deaths_per_million_habitants'])
                new_cases_50 += float(dictionary[location]['dates'][date]['new_cases_per_million_habitants'])
            if(float(dictionary[location]['dates'][date]['mask_use_percentage']) < 75 and float(dictionary[location]['dates'][date]['mask_use_percentag
                new_deaths_75 += float(dictionary[location]['dates'][date]['new_deaths_per_million_habitants'])
                new_cases_75 += float(dictionary[location]['dates'][date]['new_cases_per_million_habitants'])
            if(float(dictionary[location]['dates'][date]['mask_use_percentage']) >= 75):
                new_deaths_100 += float(dictionary[location]['dates'][date]['new_deaths_per_million_habitants'])
                new_cases_100 += float(dictionary[location]['dates'][date]['new_cases_per_million_habitants'])

new_deaths_25 = new_deaths_25/new_cases_25
new_deaths_50 = new_deaths_50/new_cases_50
new_deaths_75 = new_deaths_75/new_cases_75
new_deaths_100 = new_deaths_100/new_cases_100

print("Uso de máscara < 25%: {:.2f}%, Uso de máscara entre 25% e 50%: {:.2f}%,  Uso de máscara entre 50% e 75%: {:.2f}%,  Uso de máscara entre < 75%: {
```

```
Uso de máscara < 25%: 2.91%, Uso de máscara entre 25% e 50%: 3.06%,  Uso de máscara entre 50% e 75%: 2.15%,  Uso de máscara entre < 75%: 2.05%
```

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

```sql
SELECT location,
       new_cases_per_million_habitants
FROM casos,
WHERE mask_use_percentage < 10;

SELECT location,
       new_cases_per_million_habitants
FROM casos,
WHERE mask_use_percentage >= 10 AND mask_user_percentage < 20;

SELECT location,
       new_cases_per_million_habitants
FROM casos,
WHERE mask_use_percentage >= 20 AND mask_user_percentage < 30;

SELECT location,
       new_cases_per_million_habitants
FROM casos,
WHERE mask_use_percentage >= 30 AND mask_user_percentage < 40;

SELECT location,
       new_cases_per_million_habitants
FROM casos,
WHERE mask_use_percentage >= 40 AND mask_user_percentage < 50;

SELECT location,
       new_cases_per_million_habitants
FROM casos,
WHERE mask_use_percentage >= 50 AND mask_user_percentage < 60;

SELECT location,
       new_cases_per_million_habitants
FROM casos,
WHERE mask_use_percentage >= 60 AND mask_user_percentage < 70;
SELECT location,
       new_cases_per_million_habitants
FROM casos,
WHERE mask_use_percentage >= 70 AND mask_user_percentage < 80;

SELECT location,
       new_cases_per_million_habitants
FROM casos,
WHERE mask_use_percentage >= 80 AND mask_user_percentage < 90;

SELECT location,
       new_cases_per_million_habitants
FROM casos,
WHERE mask_use_percentage >= 90;
```

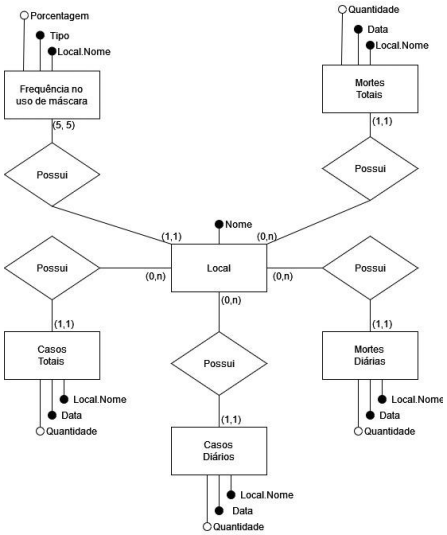
	location character varying (35)	new_cases_per_million_habitants double precision
1	Denmark	5181.027570468143
2	Finland	1114.432677586594
3	Italy	28.041177109615894
4	Norway	1082.5684223202873
5	United Kingdom	384.54642795618605
6	Alabama	7616.4162061860025
7	Alaska	951.7433401827947
8	Alaska	3614.7157518976915
9	Alaska	3114.3005572743596
10	Arkansas	4567.122825519571
11	Arkansas	7297.3019640554085
12	Connecticut	3875.822808119039
13	Georgia	3158.354235305232
14	Georgia	8891.506536463905
15	Georgia	7627.959463430791
16	Indiana	1684.7620406252836
17	Indiana	4158.114151175855
18	Iowa	3080.8348501380246
19	Kansas	1715.1823764074775

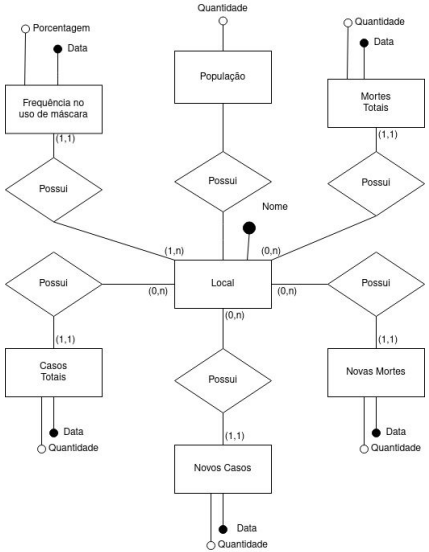
05

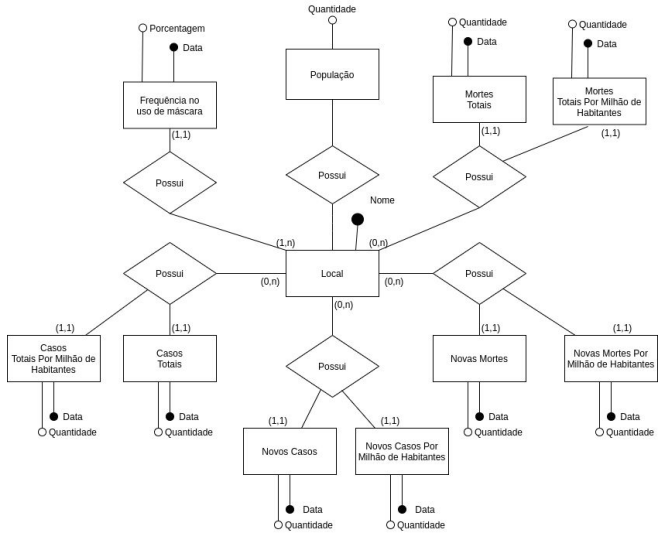
Evolução do projeto

Evoluções na modelagem do projeto e melhorias

Evolução do Projeto







Evolução do Projeto

CASO(_id_, locations, date, new_cases, total_cases, new_deaths, total_deaths, mask_use_percentage)

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

Location chave estrangeira -> POPULACAO(location)

POPULACAO(_location_, população);