

The impact of easily accessible COVID data



Agenda

1. Intro to Covid Act Now
2. What does accessible data mean?
3. Characteristics of accessible COVID data
4. Q & A

We hope that, by the end of this session, you:

- Can spot ways that you can make your COVID data more accessible to different types of users
- Have a toolkit of examples to refer to when communicating your own COVID data
- Better understand the possible downstream impacts of your COVID data



What role has Covid Act Now played?



US COVID data and risk tracker

Risk map

Covid ActNow

Map Learn Data API About Contact Us [DONATE](#)

New vaccine data
The CDC reports that 35,936,000 Americans have received their first shot.

[COMPARE STATES](#) [SEE MY STATE](#)

U.S. COVID Risk & Vaccine Tracker

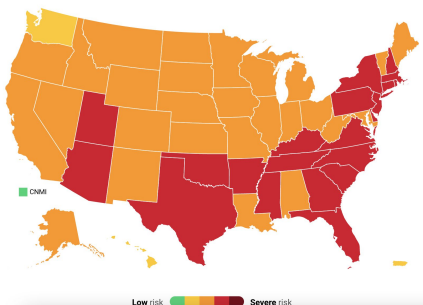
Updated on February 16

Search city, county, or state

North Port metro, FL
At risk of outbreak

Sarasota County FL
At risk of outbreak

States Counties



Location specific pages

Texas

[SHARE](#) [RESERVE ALERTS](#)

COVID RISK LEVEL
Active outbreak
Texas is either actively experiencing an outbreak or is at extreme risk. COVID cases are exponentially growing and/or Texas's COVID preparedness is significantly below international standards.

DAILY NEW CASES **36.5** **100** **100%**
Significant number of new cases

INFECTION RATE **0.77** **100** **100%**
Active cases are decreasing

POSITIVE TEST RATE **11.6%** **100** **100%**
Insufficient testing

ICU CAPACITY USED **81%** **100** **100%**
At risk to a new wave of COVID

VACCINATED **10.2%** **100** **100%**
Not sufficient

Updated: February 15, 2021

Vaccines

Below are government resources to help you get vaccinated. If something is missing or incorrect, [please let us know](#).

When can I get vaccinated if I'm in...

Texas

Where and how do I get vaccinated if I'm in...

Texas

Compare

COUNTIES IN TEXAS

COUNTY POPULATION	DAILY NEW CASES PER 100K	INFECTION RATE	POSITIVE TEST RATE	ICU CAPACITY USED	VACCINATED (EST. SHOTS)
1 Harris Co. 4,100,000	26.8	0.78	11.1%	87%	8.7%
2 Dallas Co. 2,600,000	38.3	0.83	25.3%	95%	9.1%
3 Tarrant Co. 2,100,000	48.4	0.77	16.7%	93%	7.6%
4 Bexar Co. 1,600,000	48.8	0.77	9.3%	91%	10.8%
5 Travis Co. 1,000,000	23.7	0.81	8.6%	83%	8.3%
6 Collin Co. 1,000,000	44.7	0.87	12.8%	96%	10.7%

Displaying 6 of 254 [View all counties in Texas](#)

[More info](#)

Data API

Covid Act Now API

The Covid Act Now API provides access to all of our data tracking all US states, counties, and metros. It includes data and metrics for [cases](#), [vaccinations](#), [tests](#), [hospitalizations](#), and [deaths](#). See [data definitions](#) for all included data.

The API provides the same data that powers [Covid Act Now](#) but in easily digestible CSV or JSON files, intended for consumption by other COVID websites, models, and tools.

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{
  "lat": null,
  "locationId": "iso1:us#iso2:us-ma",
  "long": null,
  "population": 6892503,
  "metrics": {
    "testPositivityRatio": 0.022892025280561695,
    "testPositivityRatioDetails": { ... }, // 1 item
    "caseDensity": 29.11444921698671,
    "contactTracerCapacityRatio": 0.234213711126931,
    "infectionRate": 0.819767661162,
    "infectionRateCI90": 0.10000000000000009,
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    "icuHeadroomDetails": { ... }, // 4 items
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    "vaccinationsInitiatedRatio": 0.12532544418188865,
    "vaccinationsCompletedRatio": 0.04071409181831332
  },
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    "overall": 3,
    "testPositivityRatio": 0,
    "caseDensity": 3,
    "contactTracerCapacityRatio": 1,
    "infectionRate": 0,
    "icuHeadroomRatio": 0
  }
}
```



Present COVID information over multiple channels

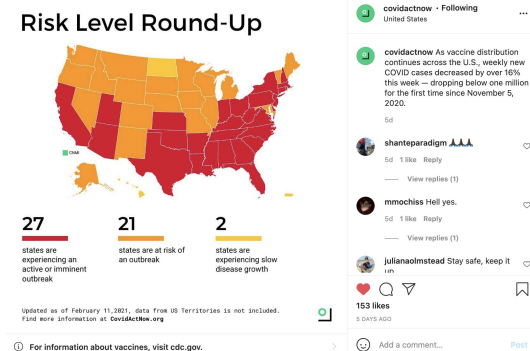
Twitter: Ask an Expert series



Email: Daily Download



Instagram



What is data accessibility?

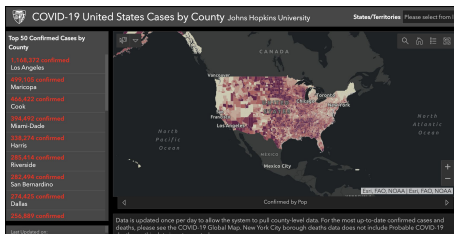


**Data accessibility
is the ability to
access and benefit
from data**



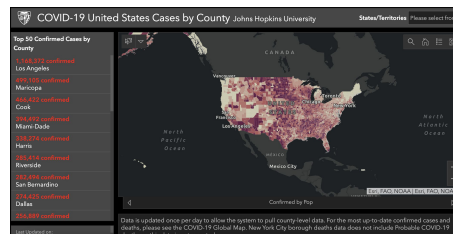
Data accessibility looks different for different users

Software Engineer



```
{
  "fips": "25",
  "country": "USA",
  "state": "MA",
  "county": null,
  "level": "state",
  "lat": null,
  "locationId": "iso:us#iso2:us-ma",
  "long": null,
  "population": 6892503,
  "metrics": {
    "testPositivityRatio": 0.022892025280561695,
    "testPositivityRatioDetails": { ... }, // 1 item
    "caseDensity": 29.11444921698671,
    "contactTracerCapacityRatio": 0.234213711126931,
    "infectionRate": 0.819767661162,
    "infectionRateC190": 0.10000000000000009,
    "icuHeadroomRatio": 0.4336419753086196,
    "icuHeadroomDetails": { ... }, // 1 item
    "icuCapacityRatio": 0.7538564721663313,
    "vaccinationsInitiatedRatio": 0.12532544418188665,
    "vaccinationsCompletedRatio": 0.04071409181831332
  }
},
```

Concerned Citizen



```
{
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  "country": "USA",
  "state": "MA",
  "county": null,
  "level": "state",
  "lat": null,
  "locationId": "iso:us#iso2:us-ma",
  "long": null,
  "population": 6892503,
  "metrics": {
    "testPositivityRatio": 0.022892025280561695,
    "testPositivityRatioDetails": { ... }, // 1 item
    "caseDensity": 29.11444921698671,
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    "vaccinationsInitiatedRatio": 0.12532544418188665,
    "vaccinationsCompletedRatio": 0.04071409181831332
  }
},
```



Characteristics of accessible COVID data



Accessible COVID data is

Specific



When data is specific it reduces confusion

Connecticut Test Positivity

POSITIVE TEST RATE

● **3.8%**

Indicates adequate
testing

State Summary

Connecticut COVID-19 Summary

Summary for the most recent day of reporting. Includes confirmed persons with positive antigen results

Measure	Total
Daily Test Positivity*	2.98%



Share methodology to make data more specific

POSITIVE TEST RATE

● **3.8%**

Indicates adequate
testing

“We calculate the rate as a 7-day
trailing average.”

Covid Act Now CT test positivity

State Summary

Connecticut COVID-19 Summary

Summary for the most recent day of reporting. Includes confi
persons with positive antigen results

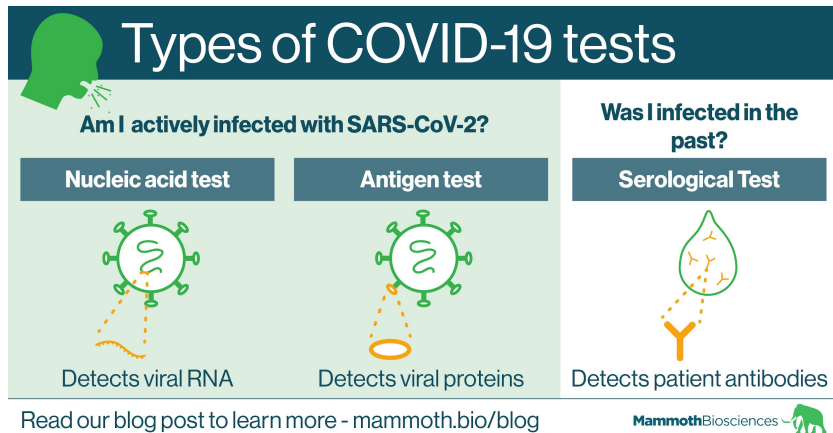
Measure	Total
Daily Test Positivity*	2.98%

“Daily test positivity is the number of new positive
molecular and antigen cases divided by the number of
new molecular and antigen tests reported in the past 24
hours.”

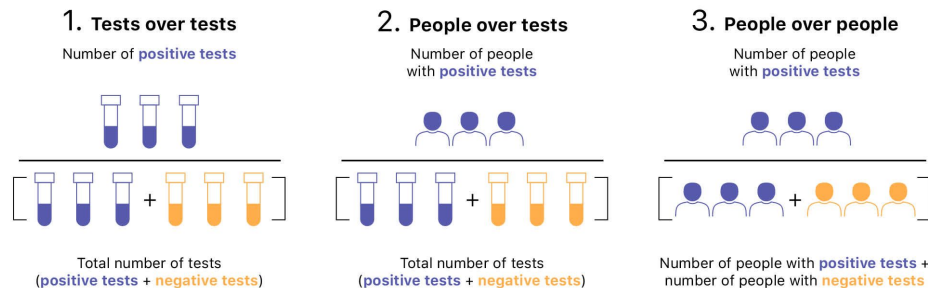
[CT Department of Health test positivity](#)



Presenting specific data is difficult because metrics are complicated



THE THREE METHODS TO CALCULATE TEST POSITIVITY



Source: CDC

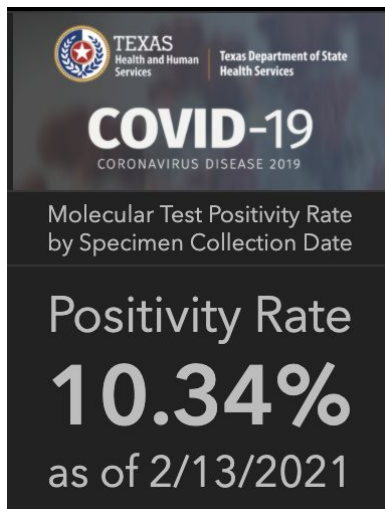
By The COVID Tracking Project

Figure 1

Published Oct 8



Lean on good documentation and great examples



Testing Positivity Rate

Measures the percentage of people tested that are positive. The DSHS formula divides the number of new cases reported in the past seven days by the new molecular test results received in the past seven days.

[Texas data dashboard](#)



Specific data lets users apply data in other contexts

STATE POPULATION ^ v	DAILY NEW CASES PER 100K ^ v	INFECTION RATE ^ v	POSITIVE TEST RATE ^ v	ICU CAPACITY USED ^ v	VACCINATED (1ST SHOT) ^ v
1 California 39,500,000	24.5	0.75	6.5%	84%	11.4%
2 Texas 29,000,000	36.5	0.77	11.6%	81%	10.2%
3 Florida 21,500,000	32.9	0.88	8.9%	81%	11.0%
4 New York 19,500,000	43.8	0.90	6.4%	70%	10.3%
5 Pennsylvania 12,800,000	26.7	0.86	7.3%	74%	10.6%
6 Illinois 12,700,000	17.8	0.83	3.5%	61%	11.2%
7 Ohio 11,700,000	23.4	0.82	5.8%	67%	10.6%
8 Georgia 10,600,000	31.5	0.80	10.3%	87%	9.7%



Accessible COVID data

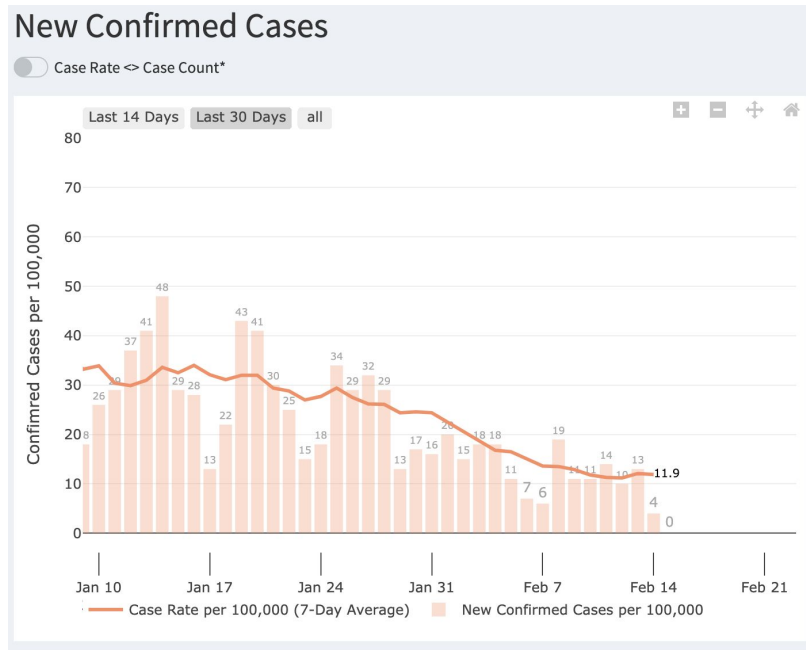
Includes context



Without enough context, users may turn to their assumptions

City of Cambridge, MA

New confirmed cases
by event date



[City of Cambridge Dashboard](#)

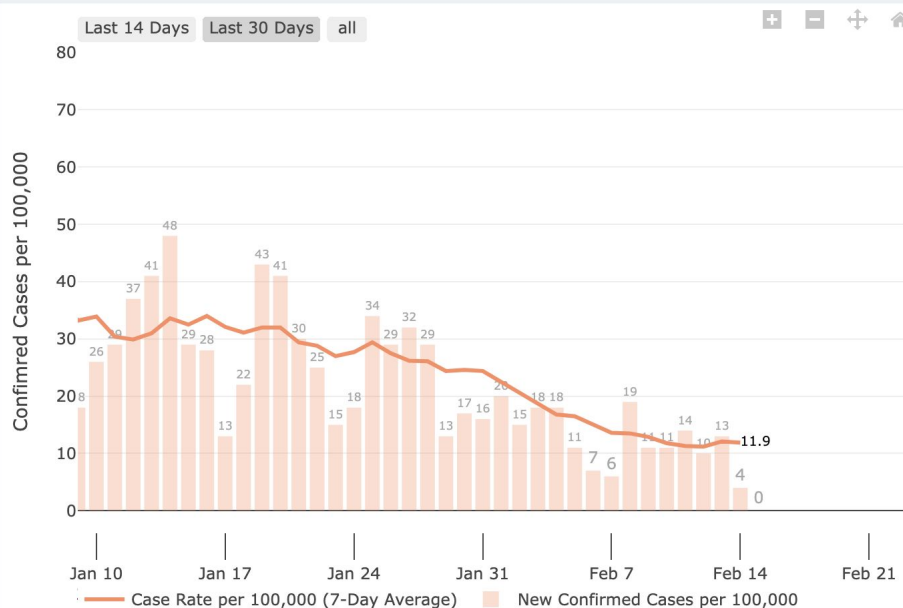


Context helps users correctly interpret data

New Confirmed Cases



Case Rate ↔ Case Count*



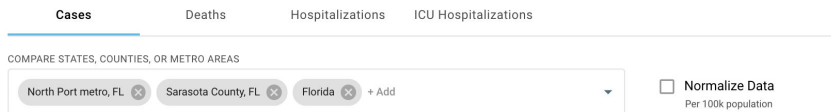
About these Charts

The chart **reflects the event date for each new case**. An event date can be the date of symptom onset, date of test, or date of report. Symptom onset date, when available, is the best marker of when a person is experiencing illness and infectious to others. For people who are asymptomatic, or for whom symptom onset date is unknown, date of test is used. When the test date is unknown, the date of report is used. **As more information becomes available, case counts for individual dates going back in time may change** as the Cambridge Public Health Department receives new data. **For this reason, the number of new cases initially reported on a given day might shift to other dates.** The dates in the most recently reported data are the most accurate.



Adding context can reveal new information

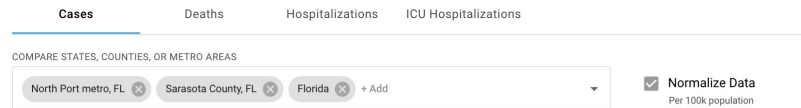
Daily new cases



CASES IN NORTH PORT METRO AREA, SARASOTA CO. FL AND FLORIDA



Daily new cases normalized by population



CASES PER 100K POPULATION IN NORTH PORT METRO AREA, SARASOTA CO. FL AND FLORIDA



Historical data lets users test their own hypotheses

Massachusetts



COVID RISK LEVEL

Active outbreak

Massachusetts is either actively experiencing an outbreak or is at extreme risk. COVID cases are exponentially growing and/or Massachusetts's COVID preparedness is significantly below international standards.

DAILY NEW CASES

● **29.1** PER 100K

Dangerous number of new cases

INFECTION RATE

● **0.82**

Active cases are decreasing

POSITIVE TEST RATE

● **2.5%**

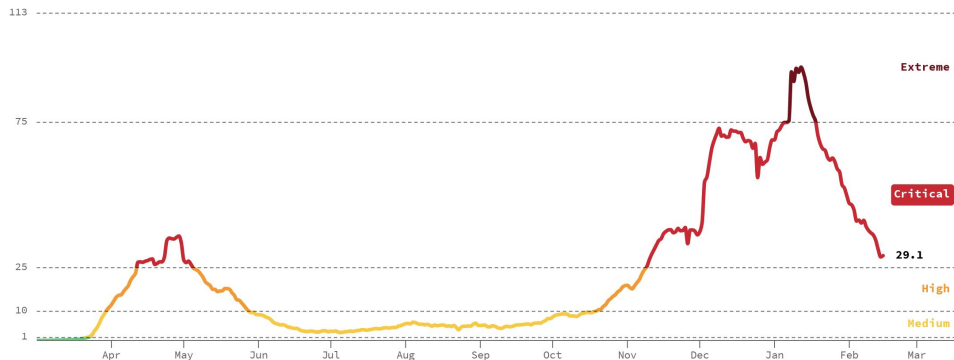
Indicates widespread testing

MASSACHUSETTS

Daily New Cases Per 100k Population

Last updated February 16, 2021

Generated by
CovidActNow.org



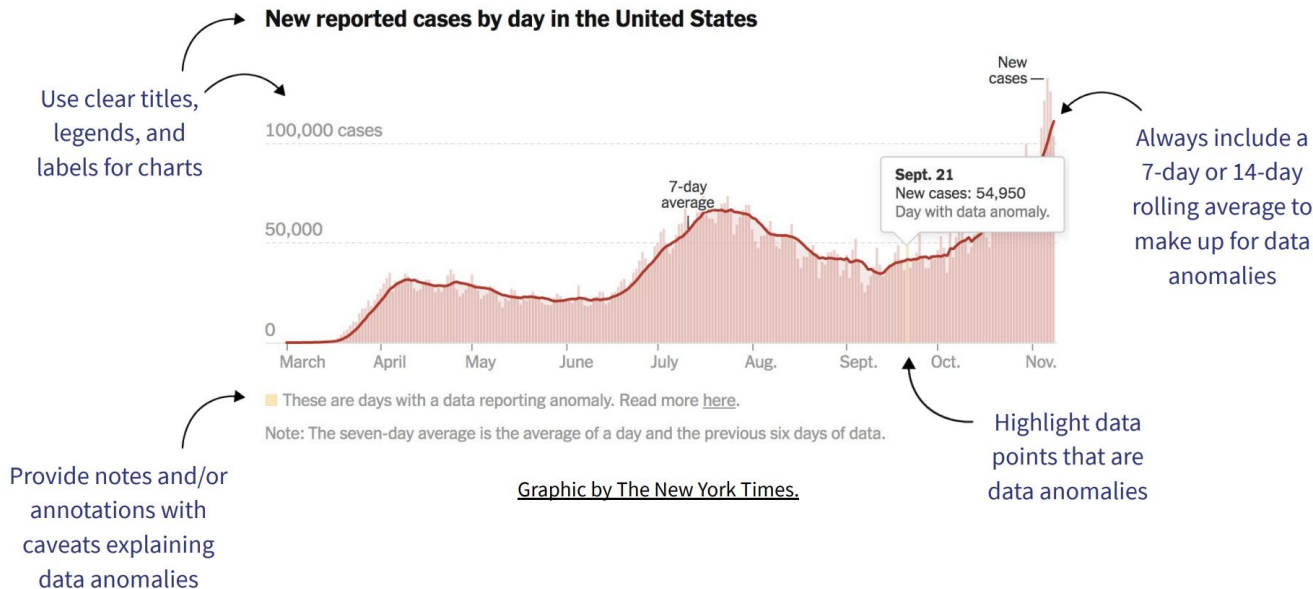
<https://covidactnow.org/us/massachusetts-ma/>



Context helps remove potential stumbling blocks

Graphics that build understanding and trust

ANNOTATE AND DISCLAIM.



Accessible COVID data is

**Available in multiple
formats**



Providing the same data in different formats expands reach

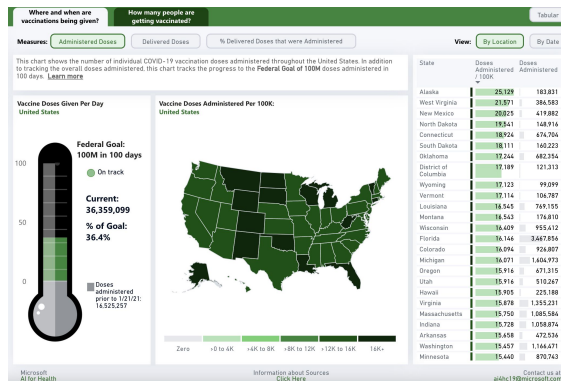
Business Intelligence dashboards

Pros:

- Powerful tooling simplifies creation
- Powerful filtering and annotations

Cons:

- Typically not responsive
- Hard to access underlying data
- Generally very slow



COVID-19 Vaccinations
[Download Data](#)

Downloadable data

Pros:

- Data can easily be imported to other tools
- Gives users with excel skills a lot of flexibility to analyze data

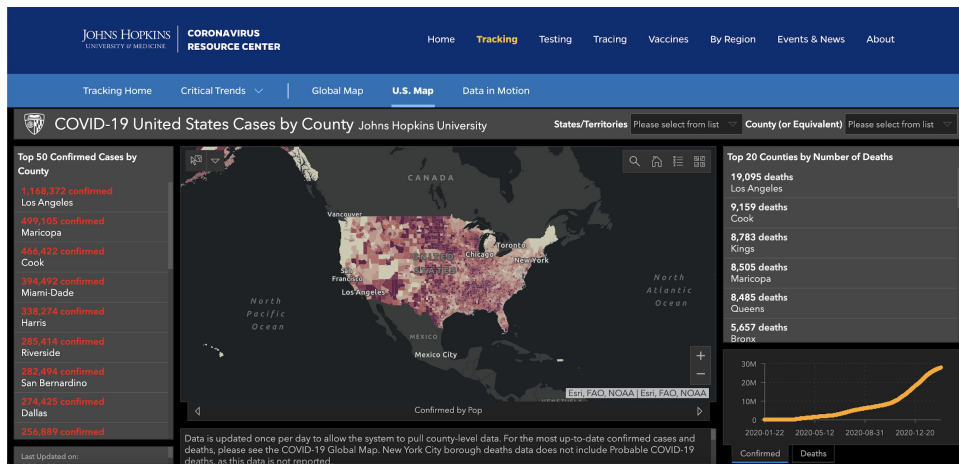
Cons:

- Requires separate software
- Takes more work to add context and describe anomalies in data

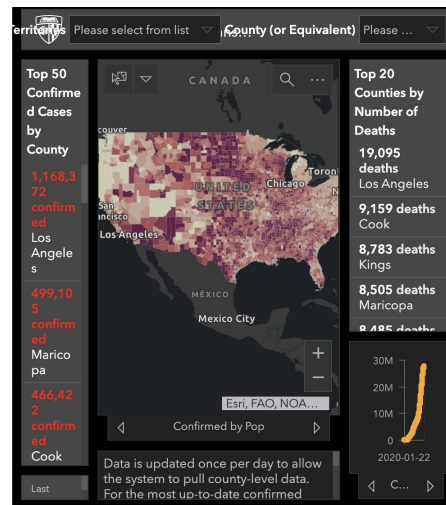


Dashboards don't always translate well to different devices

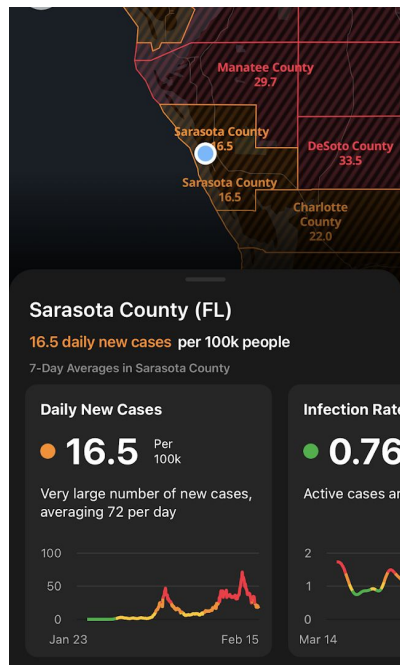
Looks great on desktop



Needs work on mobile



Let users download your data to build their own dashboards

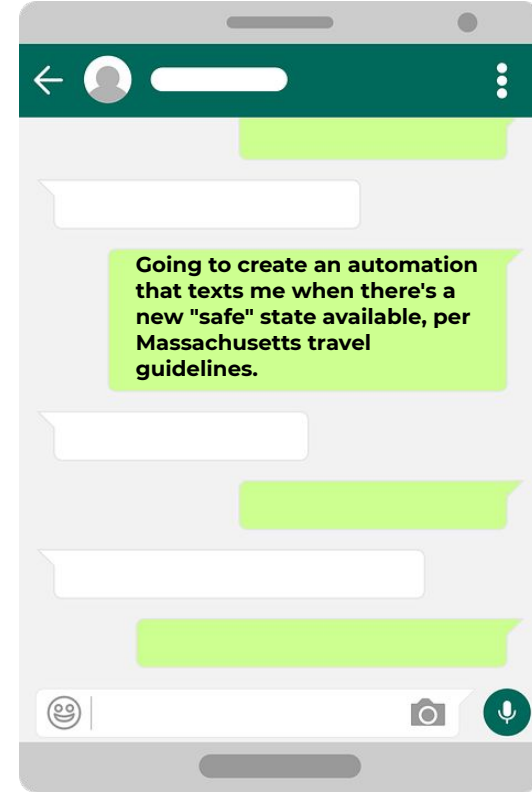
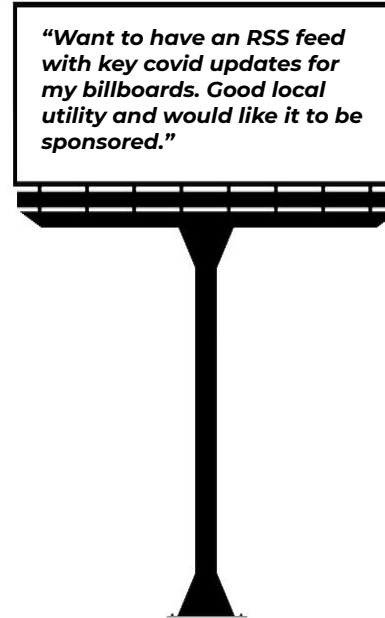
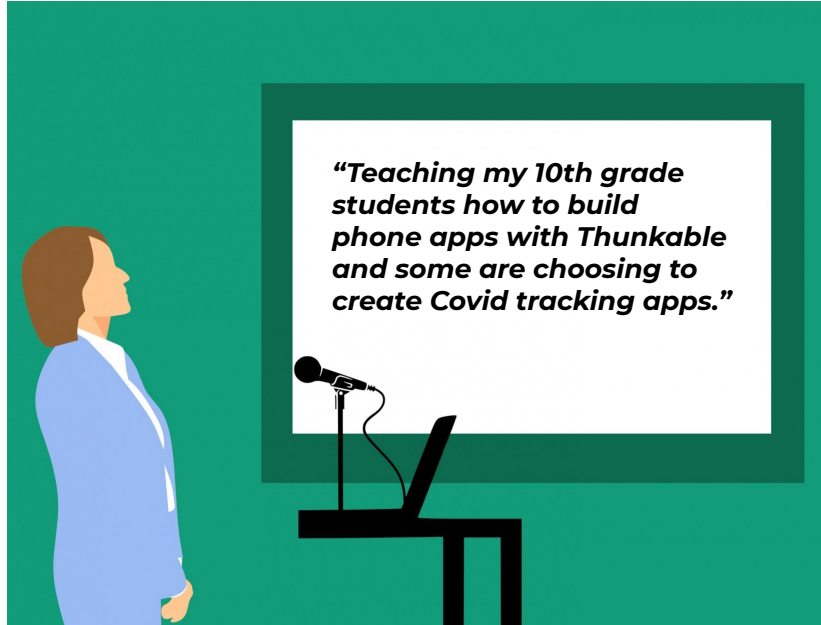


County Name	Critical Change	CAN URL	This Monday Overall Risk	Last Monday Overall Risk	County Population	Average Daily Cases Last Week	This Monday Infection Rate	This Monday Incident Rate
Juneau City and Borough		Link	At Risk	At Risk	31,374	4.3	0.34	13.4
Kenai Peninsula Borough		Link	At Risk	At Risk	58,708	7.7	0.75	13.14
Kenai Peninsula Borough		Link	At Risk	At Risk	58,708	7.7	0.75	13.14
Kenai Peninsula Borough		Link	At Risk	At Risk	58,708	7.7	0.75	13.14
Kenai Peninsula Borough		Link	At Risk	At Risk	58,708	7.7	0.75	13.14
Kenai Peninsula Borough		Link	At Risk	At Risk	58,708	7.7	0.75	13.14
Kenai Peninsula Borough		Link	At Risk	At Risk	58,708	7.7	0.75	13.14
Kenai Peninsula Borough		Link	At Risk	At Risk	58,708	7.7	0.75	13.14
Ketchikan Gateway Borough	Better	Link	Slow Growth	At Risk	13,901	0.7	0.95	5.14
Matanuska-Susitna Borough		Link	Active Outbreak	Active Outbreak	108,317	28.9	0.85	26.64
Matanuska-Susitna Borough		Link	Active Outbreak	Active Outbreak	108,317	28.9	0.85	26.64
Matanuska-Susitna Borough		Link	Active Outbreak	Active Outbreak	108,317	28.9	0.85	26.64
Nome Census Area		Link	At Risk	At Risk	10,004	1.3		12.85
Sitka City and Borough	Better	Link	Slow Growth	Active Outbreak	8,493	0.4		5.05
Clackamas County		Link	At Risk	At Risk	418,187	56.7	0.8	13.56
Clackamas County		Link	At Risk	At Risk	418,187	56.7	0.8	13.56
Clackamas County		Link	At Risk	At Risk	418,187	56.7	0.8	13.56
Clackamas County		Link	At Risk	At Risk	418,187	56.7	0.8	13.56
Clackamas County		Link	At Risk	At Risk	418,187	56.7	0.8	13.56
Clackamas County		Link	At Risk	At Risk	418,187	56.7	0.8	13.56
Clackamas County		Link	At Risk	At Risk	418,187	56.7	0.8	13.56

<https://citizen.com/>



API use cases



Accessible COVID data

**Follows best practices for
web accessibility**



Charts may be difficult to comprehend with screen readers

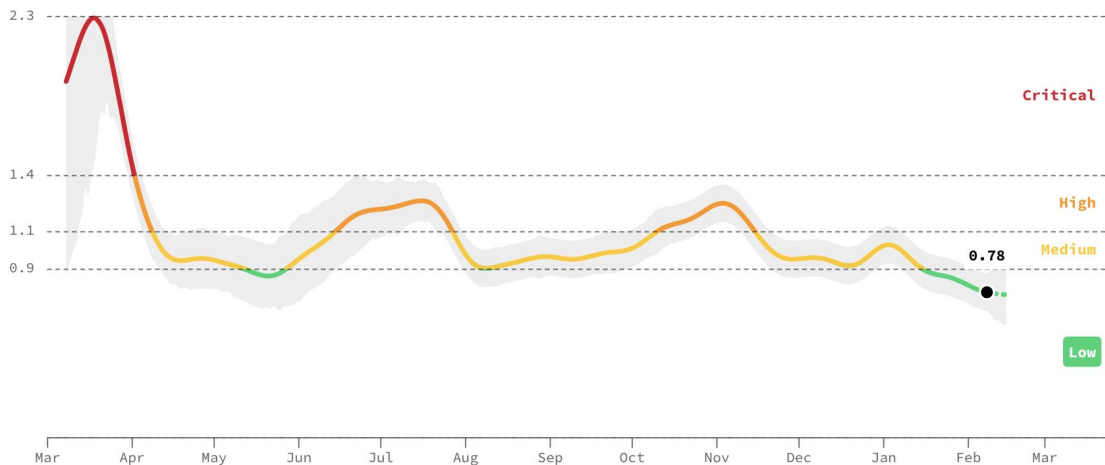
“I am a blind researcher and most dashboards do not include any text, making the vital information inaccessible to people who use screen reading software. I was able to read important data points on your resource and I really appreciate it.”

Infection rate

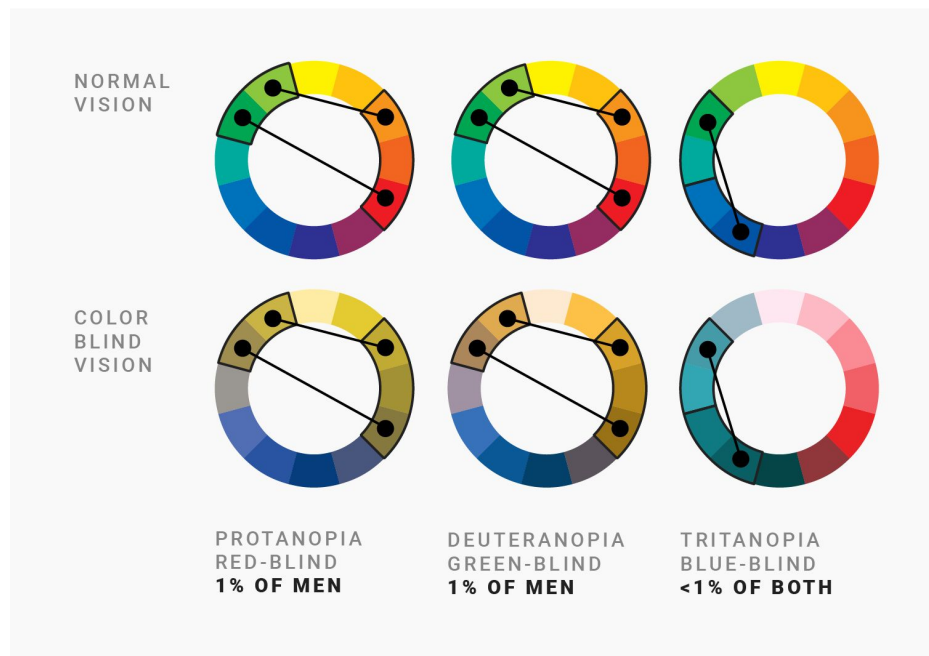
ST. LOUIS COUNTY, MISSOURI

[Save](#)[Share](#)

On average, each person in St. Louis County, Missouri with COVID is infecting 0.78 other people. Because each person is infecting less than one other person, the total number of current cases in St. Louis County, Missouri is shrinking.



Use colorblind aware colors



NOT IDEAL: COMBINING GREEN WITH ORANGE/RED OR BLUE

[Datawrapper colorblindness post](#)



Characteristics of accessible data

1. Specific
2. Provides context
3. Available in multiple formats
4. Follows best practices for web accessibility



Questions? Stay in touch!

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[LinkedIn](#)

Covid Act Now

[Website](#)

[API Documentation](#)

**Twitter: [@covidactnow](https://twitter.com/covidactnow)
api@covidactnow.org**

