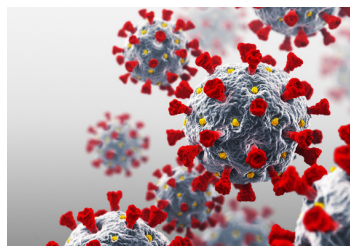


Covid-19 "Vital Signs"

Issue # 358

November 26, 2021



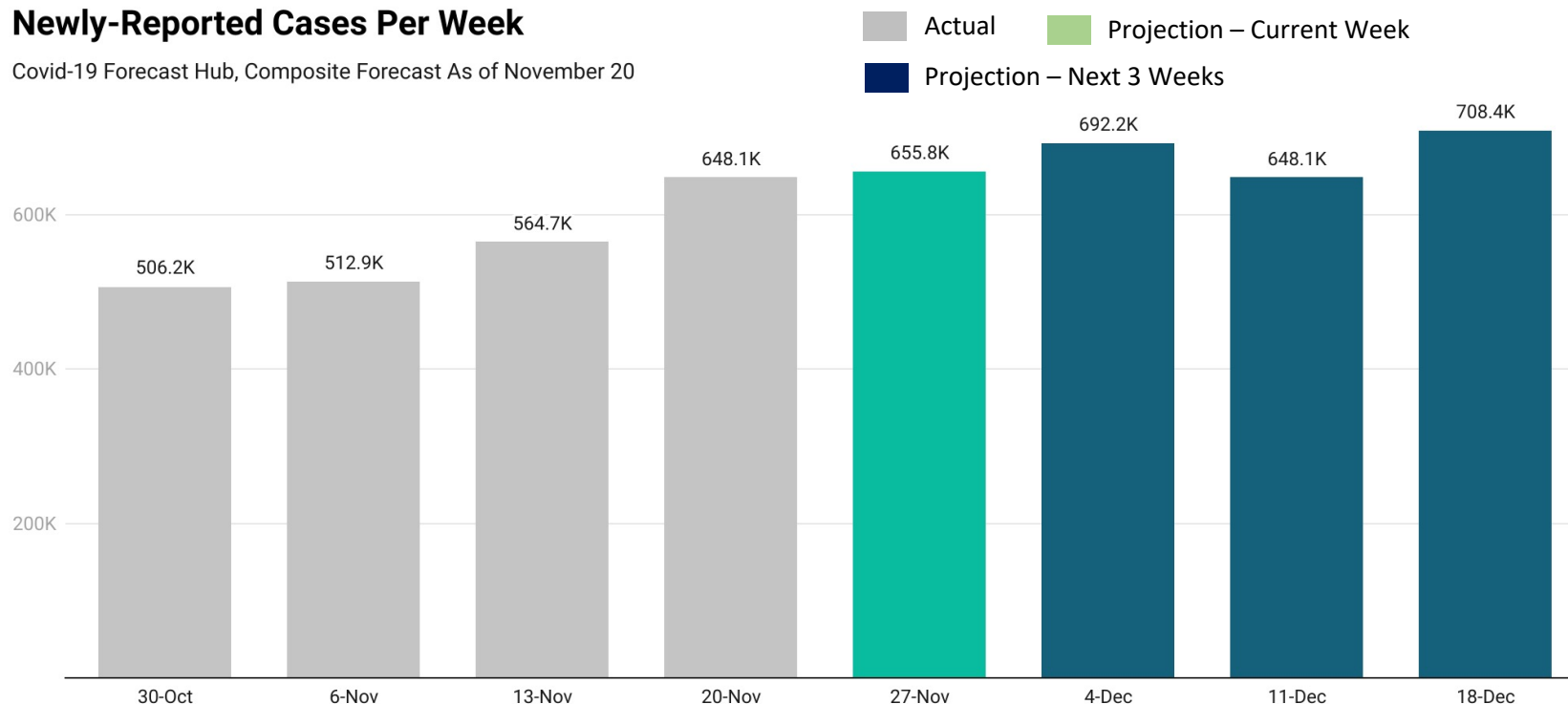
Covid-19 "Vital Signs"

Covid-19 Cases: Ensemble Forecast

The ensemble this week predicts that infections increase modestly each of the next few weeks.

Newly-Reported Cases Per Week

Covid-19 Forecast Hub, Composite Forecast As of November 20



For the week ending on the date shown

Chart: Health Industry Advisor LLC • Source: Covid-19 Forecast Hub • Created with Datawrapper

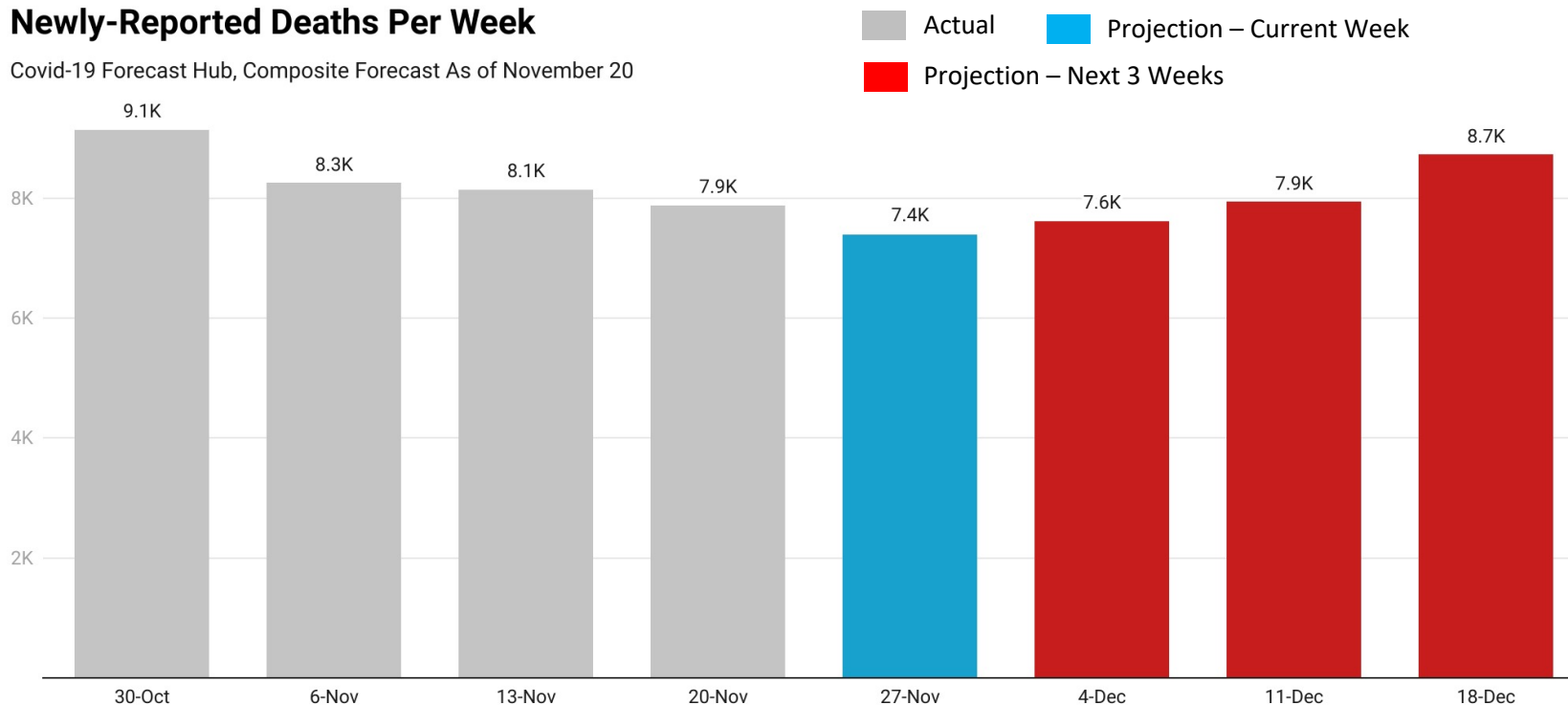
<https://viz.covid19forecasthub.org>

Death Projections – Ensemble Forecast

The ensemble forecast predicts rising Covid deaths over the next few weeks.

Newly-Reported Deaths Per Week

Covid-19 Forecast Hub, Composite Forecast As of November 20



For the week ending on the date shown

Chart: Health Industry Advisor LLC • Source: Covid-19 Forecast Hub • Created with Datawrapper

<https://viz.covid19forecasthub.org>

Vaccine Efficacy – By Age

Vaccines protect against new infections and deaths across all age groups. Interestingly, infection risk among the vaccinated was consistent across all age groups.

Vaccine Efficacy - New Cases

Cases per 100,000, Week Ending October 2

■ Unvax ■ Vax

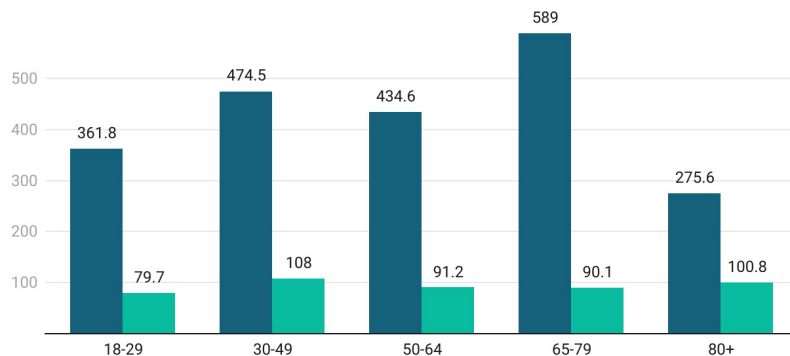


Chart: Health Industry Advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

Vaccine Efficacy - Deaths

Deaths per 100,000, Week Ending October 2

■ Unvax ■ Vax

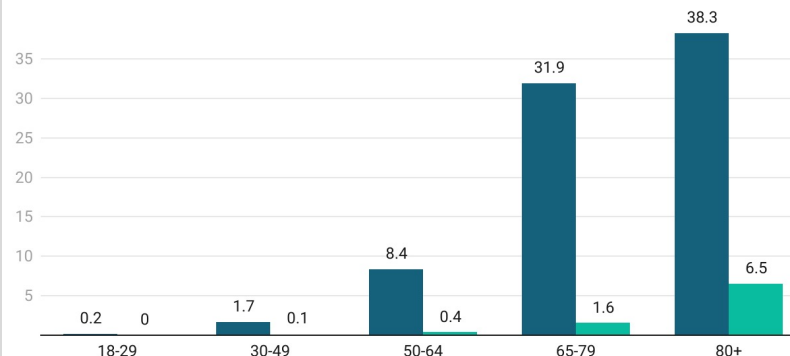


Chart: Health Industry Advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

Vaccine Efficacy – By Vaccine

Each of the approved vaccines protect against new infections and deaths. Moderna seems to provide the highest protection, followed by Pfizer.

Vaccine Efficacy By Type - Cases

Cases per 100,000, Week Ending October 2

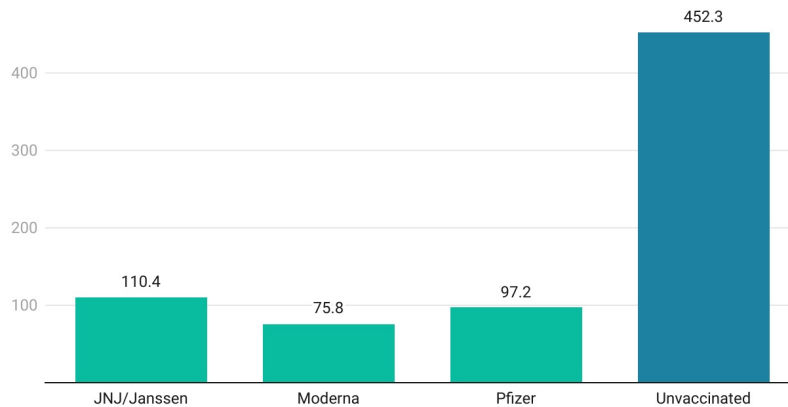


Chart: Health Industry Advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

Vaccine Efficacy By Type - Deaths

Deaths per 100,000, Week Ending October 2

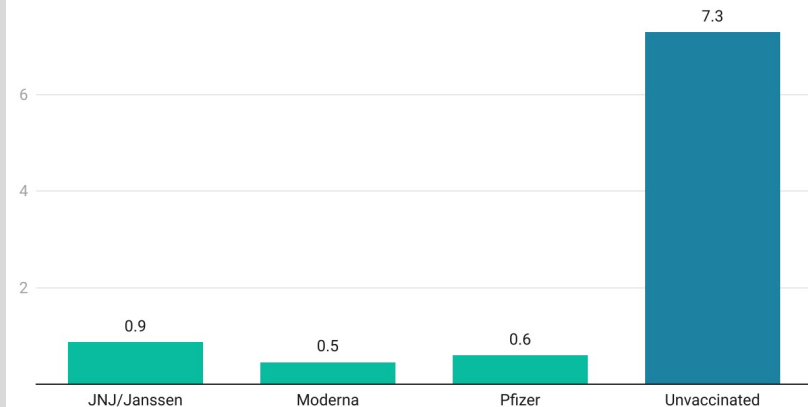


Chart: Health Industry Advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

Vaccine Efficacy Trends

Despite waning over time, vaccines provide significant protection against infections and even greater protection against death.

Vaccine Efficacy Trends - Cases & Deaths

Age-Adjusted Rate: Unvaccinated v. Vaccinated

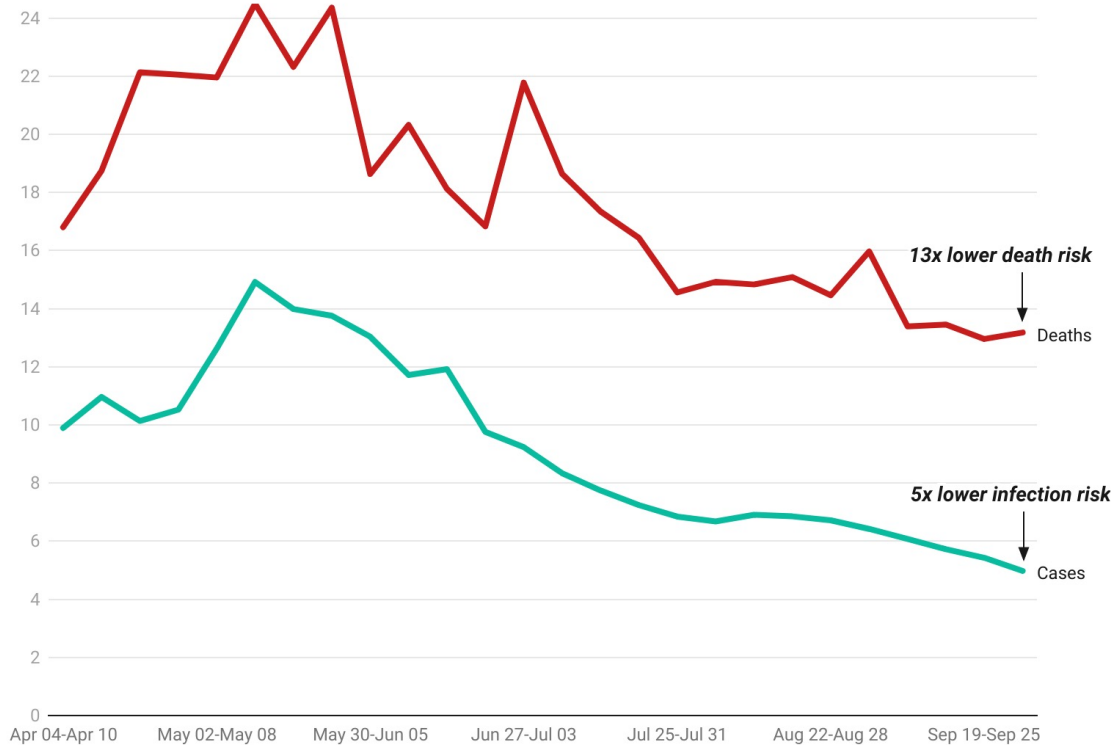


Chart: Health Industry Advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

Analysis:

- Vaccine effectiveness has waned over time (may be stabilizing now for deaths)
- Still, effectiveness remains high
- Effectiveness in preventing deaths is particularly high

Vaccine Efficacy – By Vaccine

While still strong, vaccine efficacy has waned over time for the Moderna and Pfizer vaccines. The JNJ/Janssen vaccine has maintained its efficacy over time.

Vaccine Efficacy Trends By Type - Cases

Age-Adjusted Rate: Unvaccinated v. Vaccinated

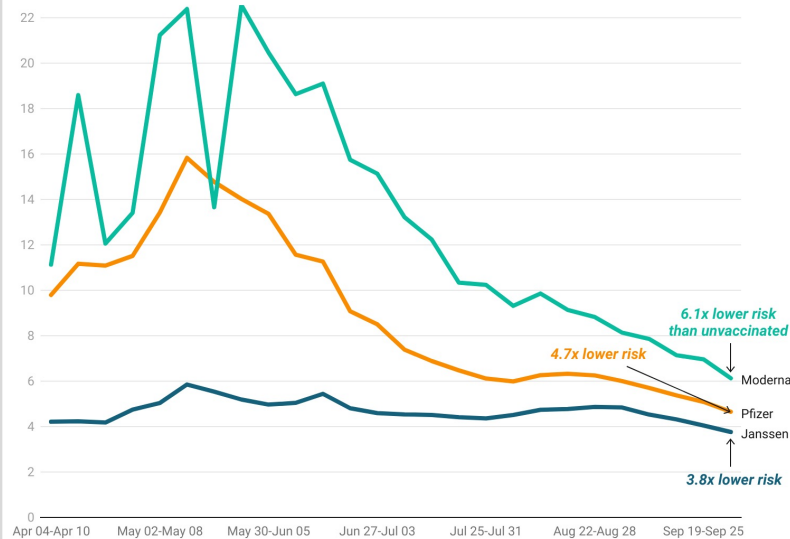


Chart: Health Industry Advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

Vaccine Efficacy Trends By Type - Deaths

Age-Adjusted Rate: Unvaccinated v. Vaccinated

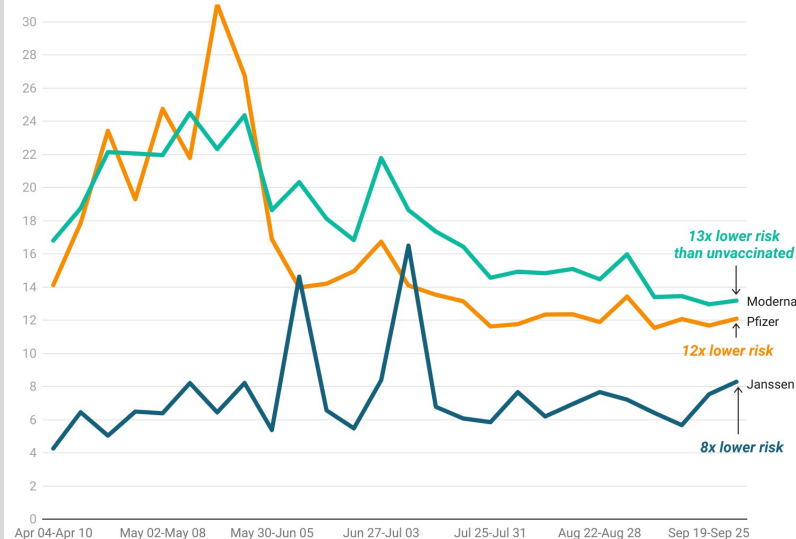


Chart: Health Industry Advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

Vaccination Status By Age – United States

More than one third of senior citizens received their booster shots at this point. Among 5-to-11-year-olds, more than one-in-eight received an initial vaccine already.

Vaccination Status By Age

As of November 23

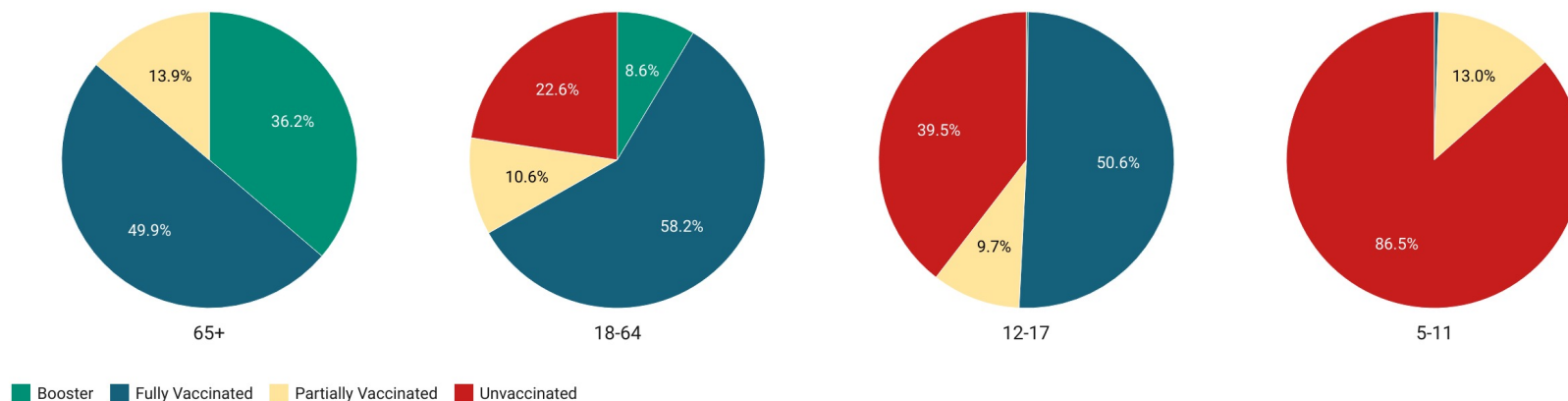


Chart: Health Industry Advisor LLC • Source: CDC • Created with Datawrapper

Covid-19 "Vital Signs"

Estimated Daily Infections & New Case Rates – U.S.

Reported case rates began rising early this month, increasing

Estimated Daily Infections v. Detected Cases

— Estimated Infections — Detected Cases/Day (7 Day Avg)

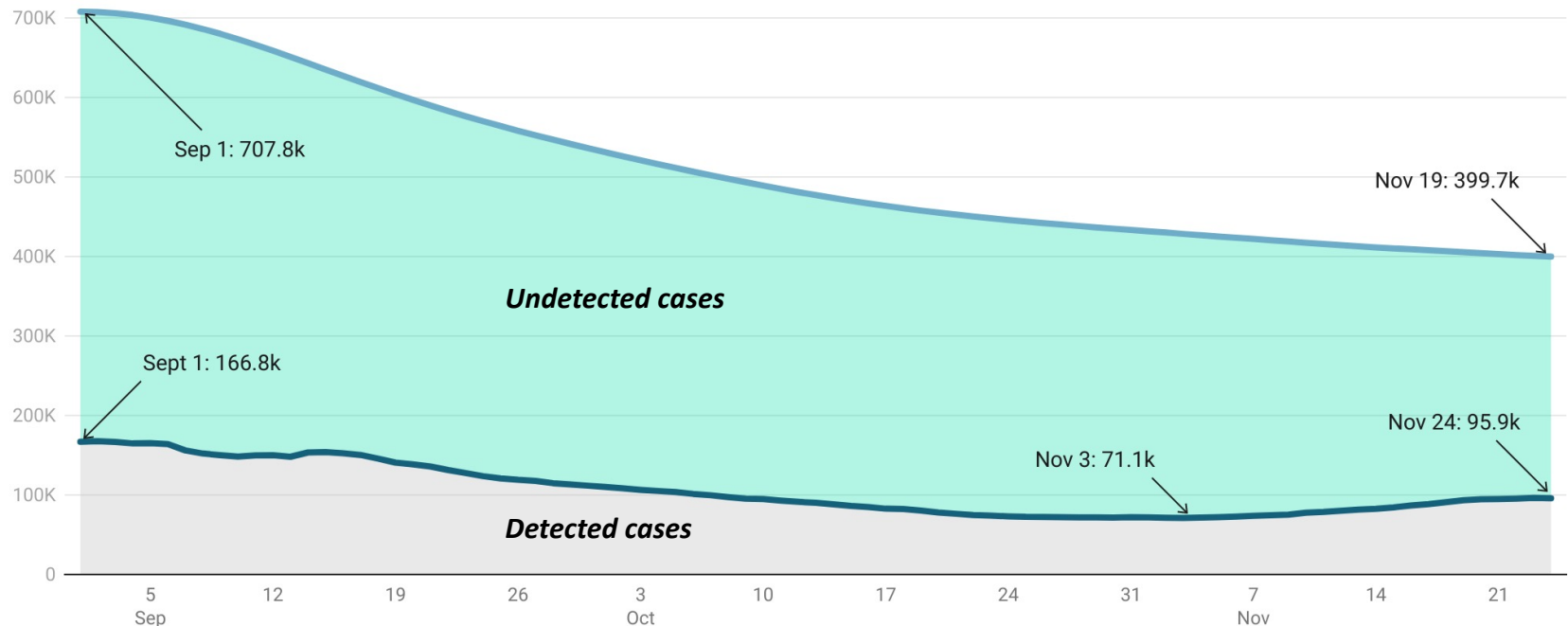


Chart: Health Industry Advisor LLC • Source: Yale School of Public Health • Created with Datawrapper

Covid-19 "Vital Signs"

Week-Over-Week Changes in New Cases – U.S.

New cases increased week-over-week all month. However, the rate of increase declined each of the past five days.

Week-Over-Week Change in New Daily Cases

7-Day Average

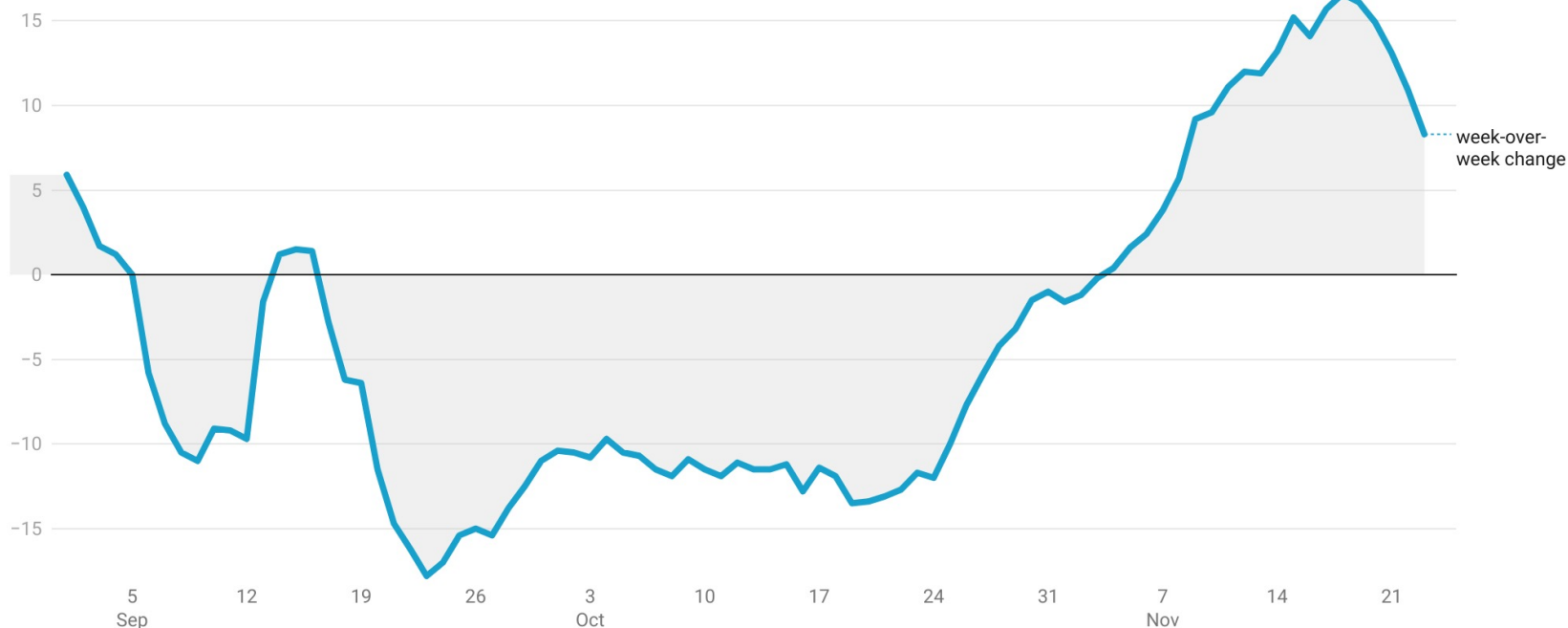


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Sources

The following data sources are accessed on a daily or weekly basis

- U.S. Department of Health & Human Services: <https://healthdata.gov/dataset/covid-19-estimated-patient-impact-and-hospital-capacity-state>
- U.S. Department of Health & Human Services <https://beta.healthdata.gov/dataset/COVID-19-Diagnostic-Laboratory-Testing-PCR-Testing/j8mb-icvb>
- Worldometers.info: <https://www.worldometers.info/coronavirus/>
- Centers for Disease Control and Prevention, National, Regional, and State Level Outpatient Illness and Viral Surveillance <https://gis.cdc.gov/grasp/fluview/fluportaldashboard.html>
- Centers for Disease Control and Prevention, COVID-19 Laboratory-Confirmed Hospitalizations https://gis.cdc.gov/grasp/COVIDNet/COVID19_5.html
- Centers for Disease Control and Prevention, COVID Data Tracker <https://www.cdc.gov/covid-data-tracker/index.html#mobility>
- Centers for Disease Control and Prevention, Vaccines, <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/index.html>
- Institute for Health Metrics and Evaluation, COVID-19 estimate downloads <http://www.healthdata.org/covid/data-downloads>
- New York Times, Covid-19 data <https://github.com/nytimes/covid-19-data>
- COVID-19 Data Repository by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University <https://github.com/CSSEGISandData/COVID-19>
- COVID-19 Projections Using Machine Learning, <https://covid19-projections.com>
- Our World In Data, <https://ourworldindata.org/covid-vaccinations>
- Covid-19 Forecast Hub, <https://viz.covid19forecasthub.org>
- Yale School of Public Health & Harvard TH Chan School of Public Health, <https://covidestim.org>
- Bloomberg Vaccine Trackers, <https://www.bloomberg.com/graphics/covid-vaccine-tracker-global-distribution/?sref=Z0b6TmH>