

Informe de resultados de COVID-19

México

15 de septiembre de 2021

Este documento contiene información resumida sobre las últimas proyecciones del modelo IHME sobre COVID-19 en México. El modelo se ejecutó el 14 de septiembre de 2021, con datos hasta el 2 de septiembre de 2021. Las proyecciones que se presentan en esta ocasión son hasta el 1 de enero de 2022.

Empleando los datos de la última semana de agosto debido al retraso en la notificación del sistema de vigilancia epidemiológico, se estima una disminución de los contagios en una semana de 5,7%. De la misma manera los egresos hospitalarios descienden 15%. En esta semana se registra una caída de 12% de los casos reportados y 16% de las defunciones por COVID-19. Sin embargo, a pesar de haber disminuido, COVID19 sigue siendo la primera causa de muerte esta semana. Actualmente 15 estados presentan una tasa de mortalidad superior a 4 por 1 millón de habitantes y 6 estados mantienen una R efectiva superior a 1. Ellos son: Baja California, Chihuahua, Michoacán, Oaxaca, Chiapas y Aguascalientes.

La variante Delta se mantiene como el principal causante pues circula en los 32 estados y la variante Gama en 21 estados está presente. Siguen aumentando la movilidad en todo el país y la relajación de los mandatos cada vez es más evidente. Incluyendo el regreso a clases en todas las primarias y secundarias del país.

Al 13 de septiembre solo la CDMX ha logrado superar 70% del total de la población (no solo adultos) con una dosis de vacuna y ninguno logra esa cifra con esquema completo. De acuerdo a las encuestas 85,4% de los adultos están dispuestos a recibir vacunas y esta cifra oscila entre 67% en Chiapas y 94% en la CDMX. De acuerdo con nuestras proyecciones esperamos que para el 1 de enero de 2022 81 millones estén vacunados (62% del total de la población). En nuestro escenario de referencia actual, esperamos que para el 1 de enero, 84% de las personas sean inmunes a las variantes sin escape y el 71% de las personas serán inmunes a las variantes de escape.

En nuestro escenario de referencia, que representa lo que creemos que es más probable que suceda, nuestro modelo proyecta 301.000 muertes reportadas acumuladas debido al COVID-19 el 1 de enero. Esto representa 32.000 muertes adicionales del 13 de septiembre al 1 de enero. Las muertes reportadas diariamente disminuirán a 200 el 1 de enero de 2022. Si se alcanzara la cobertura universal de mascarillas (95%) en la próxima semana, nuestro modelo proyecta 5.100 muertes menos en comparación con el escenario de referencia el 1 de enero. Los casos diarios en el escenario de referencia se reducirán a 4.620 el 1 de enero de 2022 y en el peor escenario aumentarán a 24.360 para el 8 de noviembre de 2021. El censo hospitalario diario en el escenario de referencia se reducirá a 3.480 el 1 de enero de 2022, pero en el peor escenario aumentará a 15.740 para el 12 de noviembre de 2021.

Aunque las infecciones, los casos y las muertes están disminuyendo en toda la región, los problemas de la pérdida de inmunidad y la aparición de nuevas variantes, con una mayor transmisibilidad y escape inmunológico, siguen planteando amenazas importantes. De hecho, nuestros modelos aún no tienen en cuenta ninguno de estos factores, por lo que nuestras previsiones actuales pueden resultar optimistas, una vez que sean incluidos. Las mejores estrategias para reducir el daño de COVID-19 siguen estando basadas en políticas y comportamientos de mitigación. Incluyen expandir la vacunación aumentando la oferta y reduciendo la vacilación, implementando las políticas apropiadas y los mandatos de comportamiento (uso de mascarillas, almuerzos, distanciamiento) para guiar las reaperturas de escuelas, promoviendo el uso de mascarillas entre la población en general y participando en una planificación adecuada de los recursos hospitalarios para poder lidiar con las oleadas anticipadas.

Situación actual

- Las infecciones diarias en la última semana disminuyeron a 144.400 por día en promedio en comparación con 153.200 la semana anterior (Figura 1). El censo hospitalario diario en la última semana (hasta el 2 de septiembre) disminuyó a 6.200 por día en promedio en comparación con 7.300 la semana anterior.
- Los casos notificados diariamente en la última semana disminuyeron a 8.900 por día en promedio en comparación con los 10.100 de la semana anterior (Figura 2).
- Las muertes reportadas por COVID-19 en la última semana disminuyeron a 480 por día en promedio en comparación con 570 la semana anterior (Figura 3).
- El exceso de muertes por COVID-19 en la última semana disminuyó a 1.100 por día en promedio en comparación con las 1.300 de la semana anterior (Figura 3). Esto convierte a COVID-19 en la causa número 1 de muerte en México esta semana (Tabla 1). El exceso de muertes diarias estimado por COVID-19 en la última semana fue 2,3 veces mayor que el número de muertes reportadas.
- La tasa diaria de muerte por COVID-19 reportada es mayor a 4 por millón en 15 estados (Figura 4).
- La tasa diaria de exceso de muertes por COVID-19 es superior a 4 por millón en 29 estados (Figura 4).
- Estimamos que el 67% de las personas en México han sido infectadas al 13 de septiembre (Figura 6).
- La R efectiva, calculada usando casos, hospitalizaciones y muertes, es mayor que 1 en 6 estados (Figura 7).
- La tasa de detección de infecciones en México fue cercana al 6% el 13 de septiembre (Figura 8).
- Basándonos en el GISAID y varias bases de datos nacionales, combinado con nuestro modelo de dispersión de variantes, estimamos la prevalencia actual de variantes de interés

(Figura 9). Estimamos que la variante Beta no circula en ningún estado, que la variante Delta circula en 32 estados y que la variante Gamma circula en 21 estados.

Tendencias en los impulsores de la transmisión

- La movilidad la semana pasada fue 2% más alta que la línea de base anterior a COVID-19 (Figura 11). La movilidad estuvo cerca de la línea de base (dentro del 10%) en 30 estados pero en ninguno fue inferior a 30%.
- Al 13 de septiembre, en la Encuesta de Tendencias e Impacto de COVID-19, el 82% de las personas informan que siempre usaban una máscara al salir de casa (Figura 13).
- Se realizaron 31 pruebas de diagnóstico por cada 100.000 personas el 13 de septiembre (Figura 15).
- Al 13 de septiembre, 1 estado ha logrado que 70% o más de la población que haya recibido al menos una dosis de vacuna y ningún estado ha llegado a 70% o más de la población que está completamente vacunada (Figura 17).
- En México, el 85,4% de los adultos dicen que aceptarían o probablemente aceptarían una vacuna para COVID-19. Esto es 0,2 puntos porcentuales menos que la semana pasada. La proporción de la población que está dispuesta a recibir la vacuna COVID-19 oscila entre 67% en Chiapas y 94% en la Ciudad de México (Figura 19).
- En nuestro escenario de referencia actual, esperamos que 81 millones de personas estén vacunadas con al menos una dosis para el 1 de enero (Figura 20).
- En nuestro escenario de referencia actual, esperamos que para el 1 de enero, 84% de las personas sean inmunes a las variantes sin escape y 71% de las personas serán inmunes a las variantes de escape (Figura 21).

Proyecciones

- En nuestro escenario de referencia, que representa lo que creemos que es más probable que suceda, nuestro modelo proyecta 301.000 muertes reportadas acumuladas debido al COVID-19 el 1 de enero. Esto representa 32.000 muertes adicionales del 13 de septiembre al 1 de enero. Las muertes reportadas diariamente disminuirán a 200 el 1 de enero de 2022 (Figura 22).
- Bajo nuestro escenario de referencia, nuestro modelo proyecta 702.000 muertes en exceso acumuladas debido a COVID-19 el 1 de enero. Esto representa 78.000 muertes adicionales del 13 de septiembre al 1 de enero (Figura 22).
- Si se alcanzara la cobertura universal de mascarillas (95%) en la próxima semana, nuestro modelo proyecta 5.100 muertes reportadas acumulativas menos en comparación con el escenario de referencia el 1 de enero.
- En nuestro peor escenario, nuestro modelo proyecta 334.000 muertes acumuladas reportadas el 1 de enero, 33.000 muertes adicionales en comparación con nuestro escenario

de referencia. Las muertes reportadas diariamente en el peor escenario aumentarán a 870 para el 18 de noviembre de 2021 (Figura 22).

- Las infecciones diarias en el escenario de referencia se elevarán a 142.940 al 14 de octubre de 2021 (Figura 23). Las infecciones diarias en el peor escenario aumentarán a 386.230 para el 22 de octubre de 2021 (Figura 23).
- Los casos diarios en el escenario de referencia se reducirán a 4.620 el 1 de enero de 2022 (Figura 24). Los casos diarios en el peor escenario aumentarán a 24.360 para el 8 de noviembre de 2021 (Figura 24).
- El censo hospitalario diario en el escenario de referencia se reducirá a 3.480 el 1 de enero de 2022 (Figura 25). El censo hospitalario diario en el peor escenario aumentará a 15.740 para el 12 de noviembre de 2021 (Figura 25).
- La Figura 26 compara nuestros pronósticos de escenarios de referencia con otros modelos archivados públicamente. Los pronósticos son muy divergentes.
- En algún momento, desde septiembre hasta el 1 de enero, 9 estados tendrán un estrés alto o extremo en las camas de hospital (Figura 27). En algún momento, desde septiembre hasta el 1 de enero, 12 estados tendrán un estrés alto o extremo en la capacidad de la unidad de cuidados intensivos (UCI) (Figura 28).

Actualizaciones de modelos

Sin actualizaciones de modelo

COVID-19 Results Briefing

Mexico

September 15, 2021

This document contains summary information on the latest projections of the IHME model on COVID-19 in Mexico. The model was run on September 14, 2021, with data up to September 2, 2021. The projections presented this time are up to January 1, 2022.

Using the data from the last week of August due to the delay in notifications from the epidemiological surveillance system, a decrease in infections in one week of 5.7% is estimated. In the same way, hospital discharges decrease 15%. This week there is a 12% drop in reported cases and 16% decrease in deaths from COVID-19. However, despite these declines, COVID-19 remains the leading cause of death this week. Currently 15 states have a mortality rate greater than 4 per 1 million inhabitants, and six states maintain an effective R greater than 1: Baja California, Chihuahua, Michoacán, Oaxaca, Chiapas, and Aguascalientes.

The Delta variant remains the main cause as it circulates in all 32 states, and the Gamma variant is present in 21 states. Mobility throughout the country continues to increase, and the relaxation of mandates is increasingly evident, including the return to classes in all elementary and secondary schools in the country.

As of September 13, only the CDMX (Mexico City) has managed to exceed 70% of the total population (not only adults) with one dose of vaccine, and no state has achieved 70% fully vaccinated. According to surveys, 85.4% of adults are willing to receive vaccines, and this figure ranges from 67% in Chiapas to 94% in CDMX. According to our projections, we expect that by January 1, 2022, 81 million will be vaccinated (62% of the total population). In our current baseline scenario, we expect that by January 1, 84% of people will be immune to non-escape variants and 71% of people will be immune to escape variants.

In our baseline scenario, which represents what we think is most likely to happen, our model projects 301,000 cumulative reported deaths due to COVID-19 on January 1. This represents an additional 32,000 deaths from September 13 to January 1. Daily reported deaths will decrease to 200 on January 1, 2022. If universal mask coverage (95%) is reached in the next week, our model projects 5,100 fewer deaths compared to the baseline scenario on January 1. Daily cases in the baseline scenario will decrease to 4,620 on January 1, 2022, and in the worse scenario they will increase to 24,360 by November 8, 2021. The daily hospital census in the baseline scenario will drop to 3,480 on January 1, 2022, but in the worse scenario will increase to 15,740 by November 12, 2021.

Although infections, cases, and deaths are declining throughout the region, problems of loss of immunity and the emergence of new variants, with increased transmissibility and immune escape, continue to pose significant threats. In fact, our models do not yet take into account any of these factors, so our current forecasts may be optimistic. The best strategies to reduce the harm of COVID-19 remain based on mitigation policies and behaviors. They include expanding vaccination by increasing supply and reducing hesitancy, implementing appropriate policies and behavioral mandates (use of masks, distancing) to guide school re-openings, promoting the use of masks among the general population, and participating in adequate planning of hospital resources to be able to deal with anticipated surges.

Current situation

- Daily infections in the last week decreased to 144,400 per day on average compared to 153,200 the week before (Figure 1). Daily hospital census in the last week (through September 2) decreased to 6,200 per day on average compared to 7,300 the week before.
- Daily reported cases in the last week decreased to 8,900 per day on average compared to 10,100 the week before (Figure 2).
- Reported deaths due to COVID-19 in the last week decreased to 480 per day on average compared to 570 the week before (Figure 3).
- Excess deaths due to COVID-19 in the last week decreased to 1,100 per day on average compared to 1,300 the week before (Figure 3). This makes COVID-19 the number 1 cause of death in Mexico this week (Table 1). Estimated excess daily deaths due to COVID-19 in the past week were 2.3 times larger than the reported number of deaths.
- The daily reported COVID-19 death rate is greater than 4 per million in 15 states (Figure 4).
- The daily rate of excess deaths due to COVID-19 is greater than 4 per million in 29 states (Figure 4).
- We estimate that 67% of people in Mexico have been infected as of September 13 (Figure 6).
- Effective R, computed using cases, hospitalizations, and deaths, is greater than 1 in six states (Figure 7).
- The infection-detection rate in Mexico was close to 6% on September 13 (Figure 8).
- Based on the GISAID and various national databases, combined with our variant spread model, we estimate the current prevalence of variants of concern (Figure 9). We estimate that the Beta variant is circulating in no states, that the Delta variant is circulating in 32 states, and that the Gamma variant is circulating in 21 states.

Trends in drivers of transmission

- Mobility last week was 2% higher than the pre-COVID-19 baseline (Figure 11). Mobility was near baseline (within 10%) in 30 states. Mobility was lower than 30% of baseline in no locations.

- As of September 13, in the COVID-19 Trends and Impact Survey, 82% of people self-report that they always wore a mask when leaving their home, the same as last week (Figure 13).
- There were 31 diagnostic tests per 100,000 people on September 13 (Figure 15).
- As of September 13, one state has reached 70% or more of the population who have received at least one vaccine dose and no states have reached 70% or more of the population who are fully vaccinated (Figure 17).
- In Mexico, 85.4% of adults say they would accept or would probably accept a vaccine for COVID-19. This is down by 0.2 percentage points from last week. The proportion of the population who are open to receiving a COVID-19 vaccine ranges from 67% in Chiapas to 94% in Mexico City (Figure 19).
- In our current reference scenario, we expect that 81.0 million people will be vaccinated with at least one dose by January 1 (Figure 20).
- In our current reference scenario, we expect that by January 1, 84% of people will be immune to non-escape variants and 71% of people will be immune to escape variants (Figure 21).

Projections

- In our **reference scenario**, which represents what we think is most likely to happen, our model projects 301,000 cumulative reported deaths due to COVID-19 on January 1. This represents 32,000 additional deaths from September 13 to January 1. Daily reported deaths will decline to 200 on January 1, 2022 (Figure 22).
- Under our **reference scenario**, our model projects 702,000 cumulative excess deaths due to COVID-19 on January 1. This represents 78,000 additional deaths from September 13 to January 1 (Figure 22).
- If **universal mask coverage (95%)** were attained in the next week, our model projects 5,100 fewer cumulative reported deaths compared to the reference scenario on January 1.
- Under our **worse scenario**, our model projects 334,000 cumulative reported deaths on January 1, an additional 33,000 deaths compared to our reference scenario. Daily reported deaths in the **worse scenario** will rise to 870 by November 18, 2021 (Figure 22).
- Daily infections in the **reference scenario** will rise to 142,940 by October 14, 2021 (Figure 23). Daily infections in the **worse scenario** will rise to 386,230 by October 22, 2021 (Figure 23).
- Daily cases in the **reference scenario** will decline to 4,620 on January 1, 2022 (Figure 24). Daily cases in the **worse scenario** will rise to 24,360 by November 8, 2021 (Figure 24).

- Daily hospital census in the **reference scenario** will decline to 3,480 on January 1, 2022 (Figure 25). Daily hospital census in the **worse scenario** will rise to 15,740 by November 12, 2021 (Figure 25).
- Figure 26 compares our reference scenario forecasts to other publicly archived models. Forecasts are widely divergent.
- At some point from September through January 1, nine states will have high or extreme stress on hospital beds (Figure 27). At some point from September through January 1, 12 states will have high or extreme stress on intensive care unit (ICU) capacity (Figure 28).

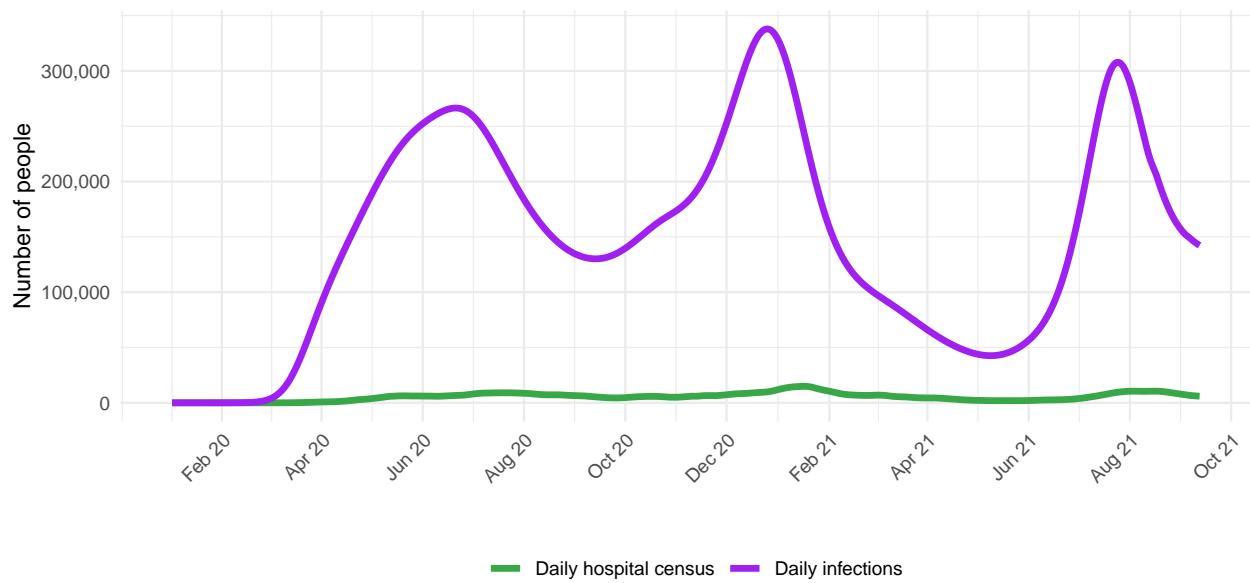
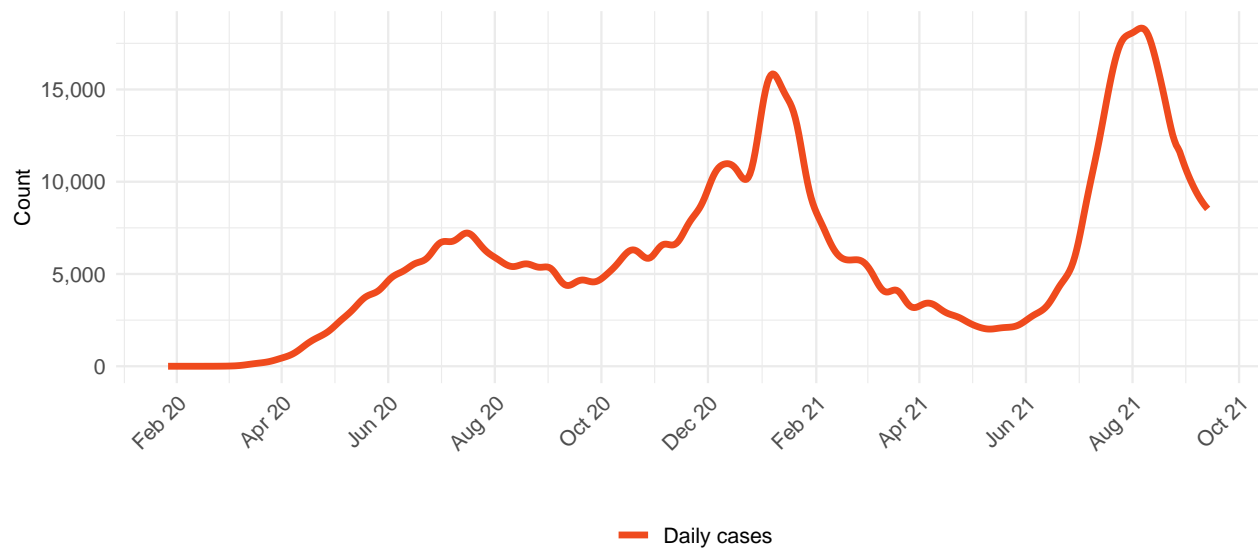
Figure 1. Daily COVID-19 hospital census and infections**Figure 2.** Reported daily COVID-19 cases, moving average

Table 1. Ranking of excess deaths due to COVID-19 among the leading causes of mortality this week, assuming uniform deaths of non-COVID causes throughout the year

Cause name	Weekly deaths	Ranking
COVID-19	7,884	1
Ischemic heart disease	2,044	2
Diabetes mellitus	1,420	3
Chronic kidney disease	1,395	4
Cirrhosis and other chronic liver diseases	891	5
Stroke	729	6
Chronic obstructive pulmonary disease	630	7
Interpersonal violence	590	8
Alzheimer’s disease and other dementias	455	9
Lower respiratory infections	434	10

Figure 3. Smoothed trend estimate of reported daily COVID-19 deaths (blue) and excess daily deaths due to COVID-19 (orange)

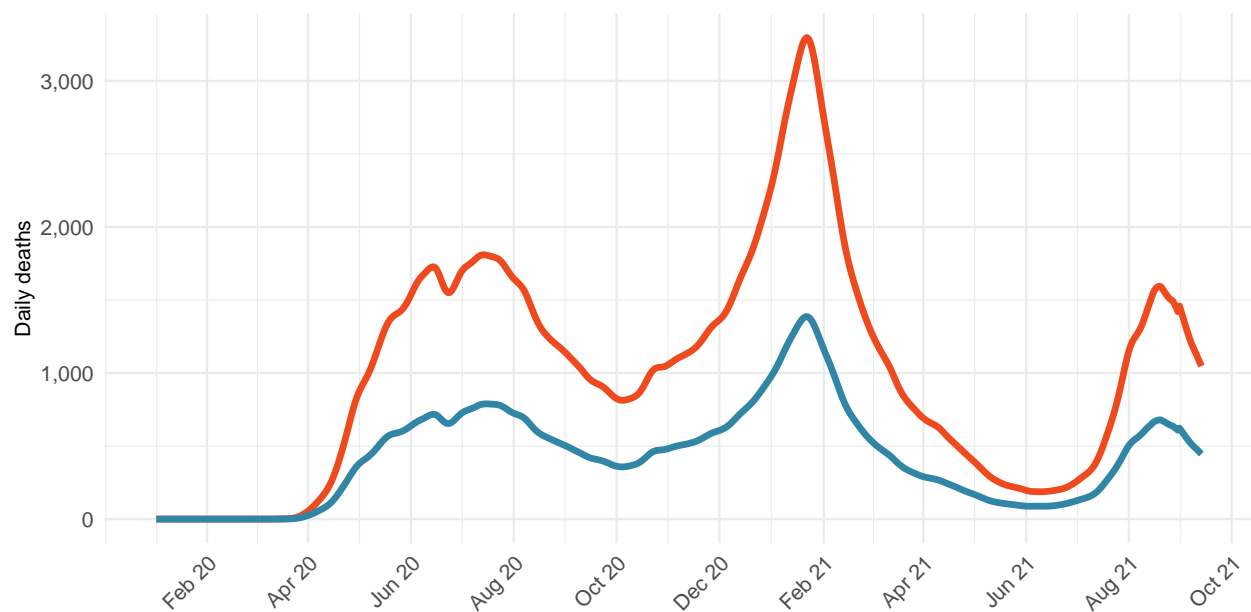
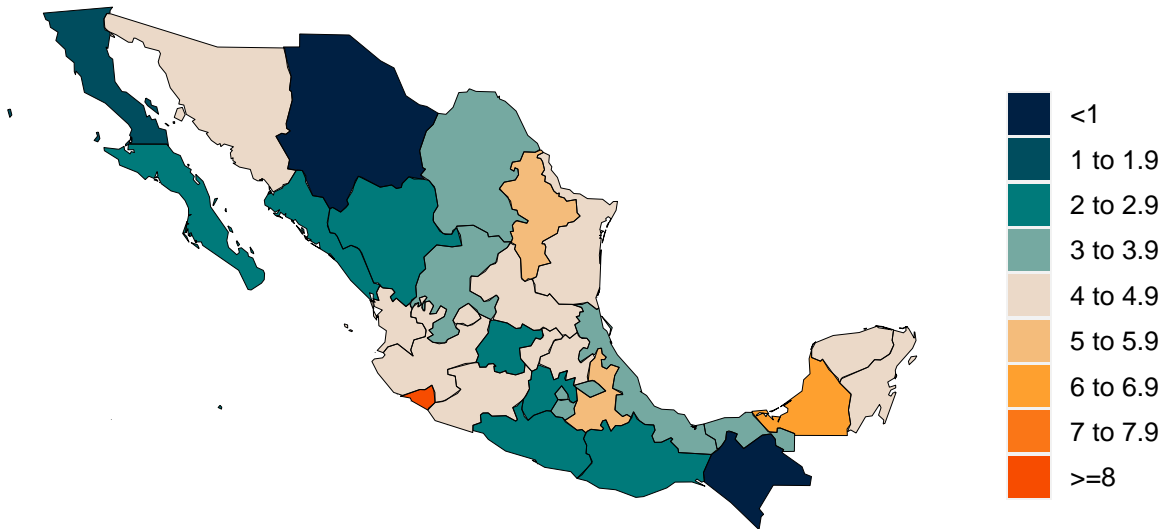


Figure 4. Daily COVID-19 death rate per 1 million on September 13, 2021

A. Daily reported COVID-19 death rate per 1 million



B. Daily excess COVID-19 death rate per 1 million

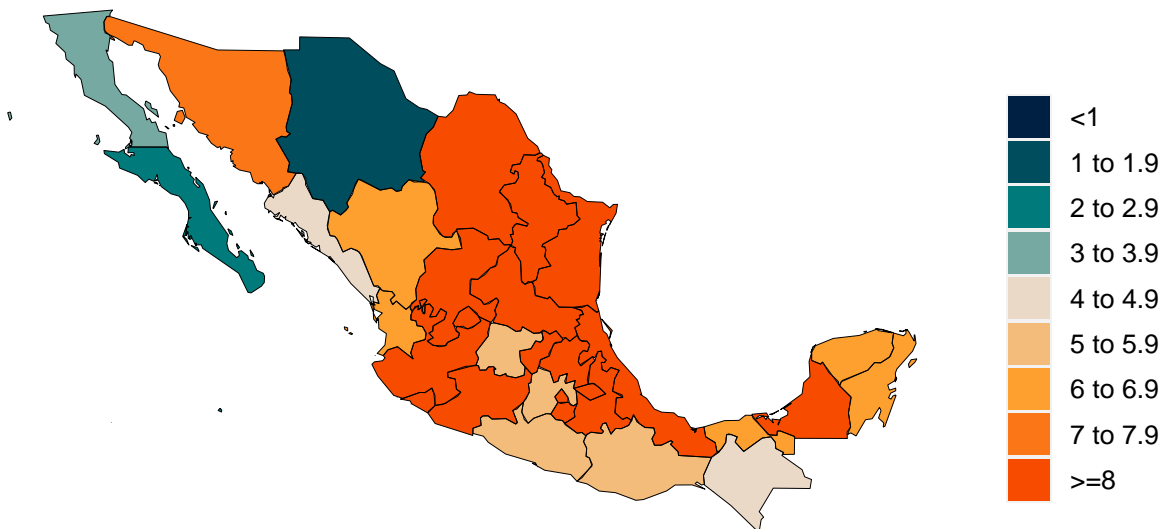


Figure 5. Cumulative COVID-19 deaths per 100,000 on September 13, 2021

A. Reported cumulative COVID-19 deaths per 100,000



B. Excess cumulative COVID-19 deaths per 100,000

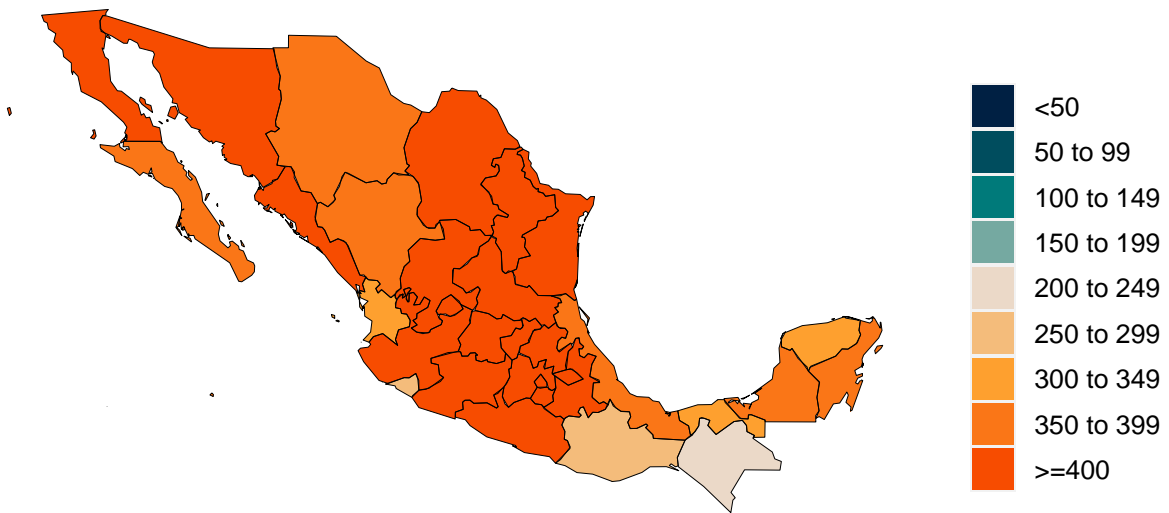


Figure 6. Estimated percent of the population infected with COVID-19 on September 13, 2021

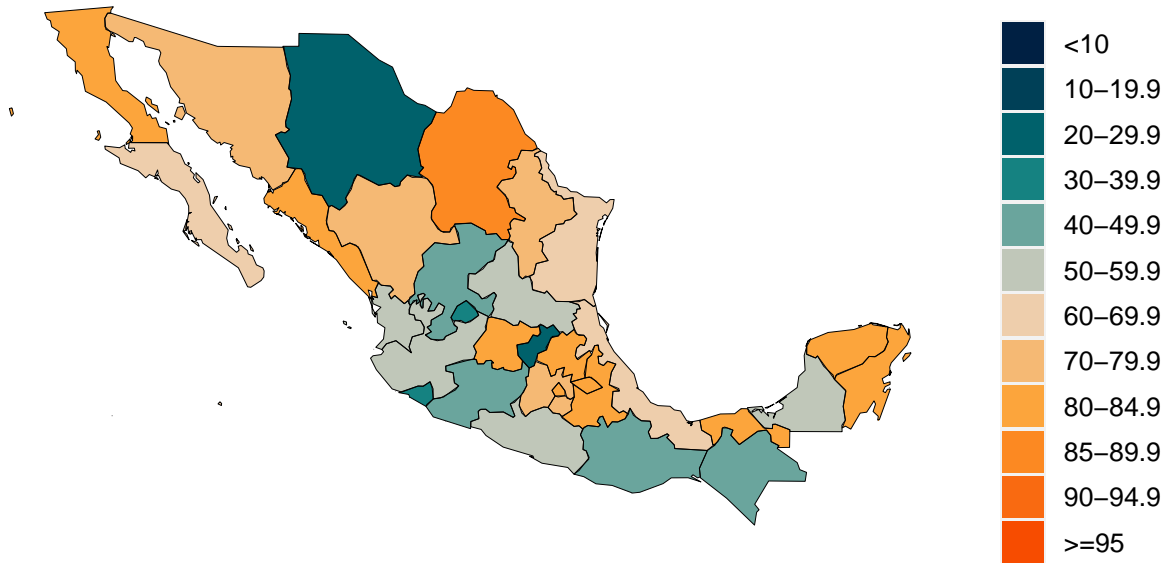


Figure 7. Mean effective R on September 2, 2021. Effective R less than 1 means that transmission should decline, all other things being held the same. The estimate of effective R is based on the combined analysis of deaths, case reporting, and hospitalizations where available. Current reported cases reflect infections 11-13 days prior, so estimates of effective R can only be made for the recent past.

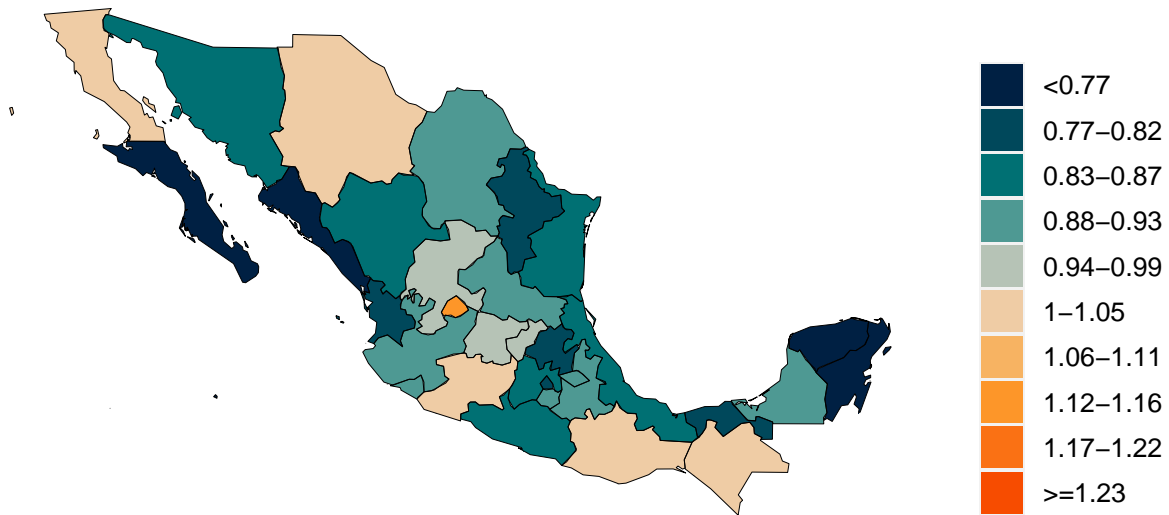


Figure 8. Percent of COVID-19 infections detected. This is estimated as the ratio of reported daily COVID-19 cases to estimated daily COVID-19 infections based on the SEIR disease transmission model. Due to measurement errors in cases and testing rates, the infection-detection rate can exceed 100% at particular points in time.

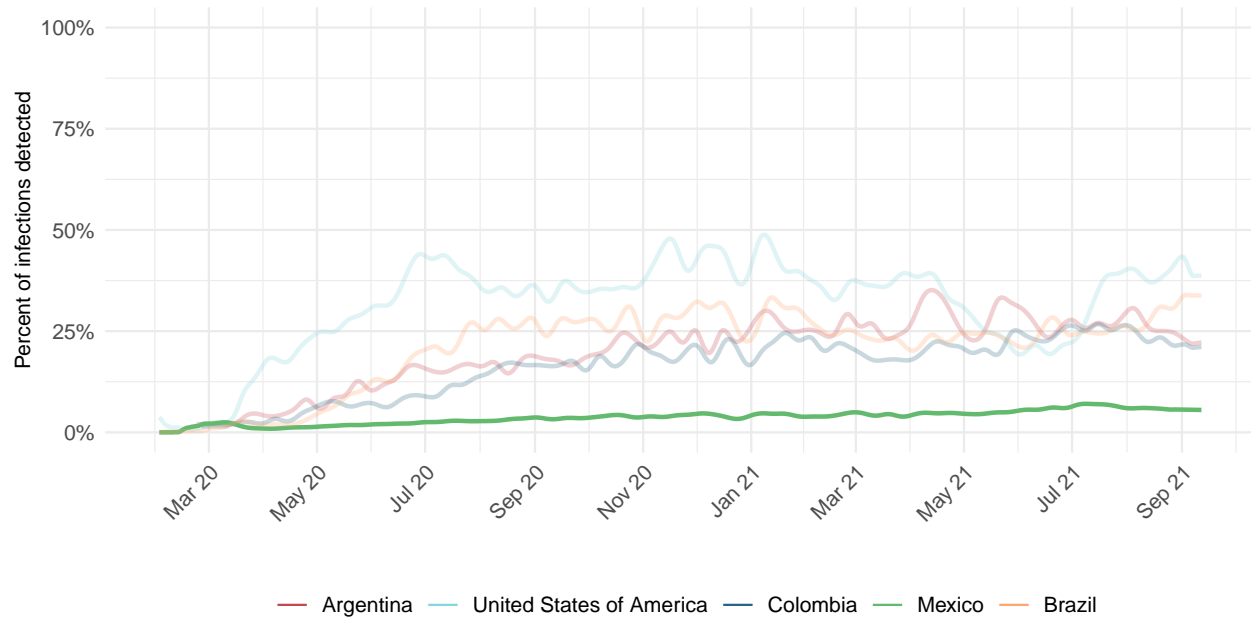


Figure 9. Estimated percent of circulating SARS-CoV-2 for primary variant families on September 13, 2021

A. Estimated percent Alpha variant



B. Estimated percent Beta variant



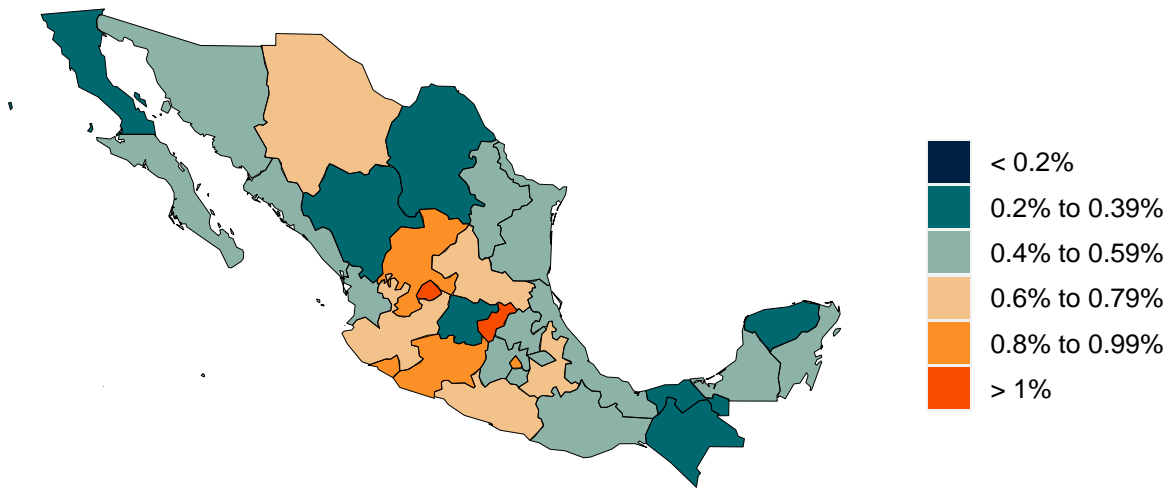
C. Estimated percent Delta variant



D. Estimated percent Gamma variant



Figure 10. Infection-fatality rate on September 13, 2021. This is estimated as the ratio of COVID-19 deaths to estimated daily COVID-19 infections.



Critical drivers

Table 2. Current mandate implementation

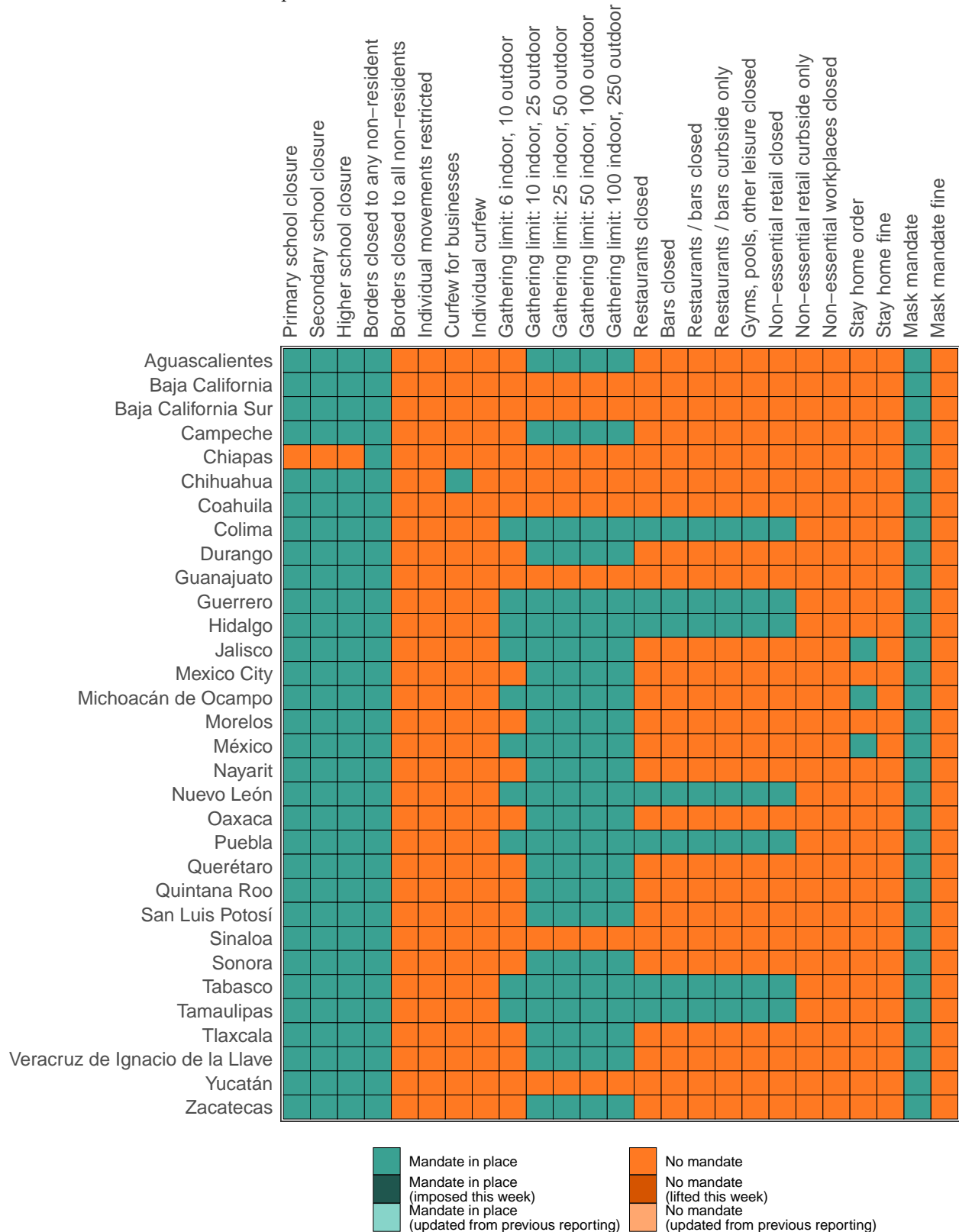


Figure 11. Trend in mobility as measured through smartphone app use, compared to January 2020 baseline

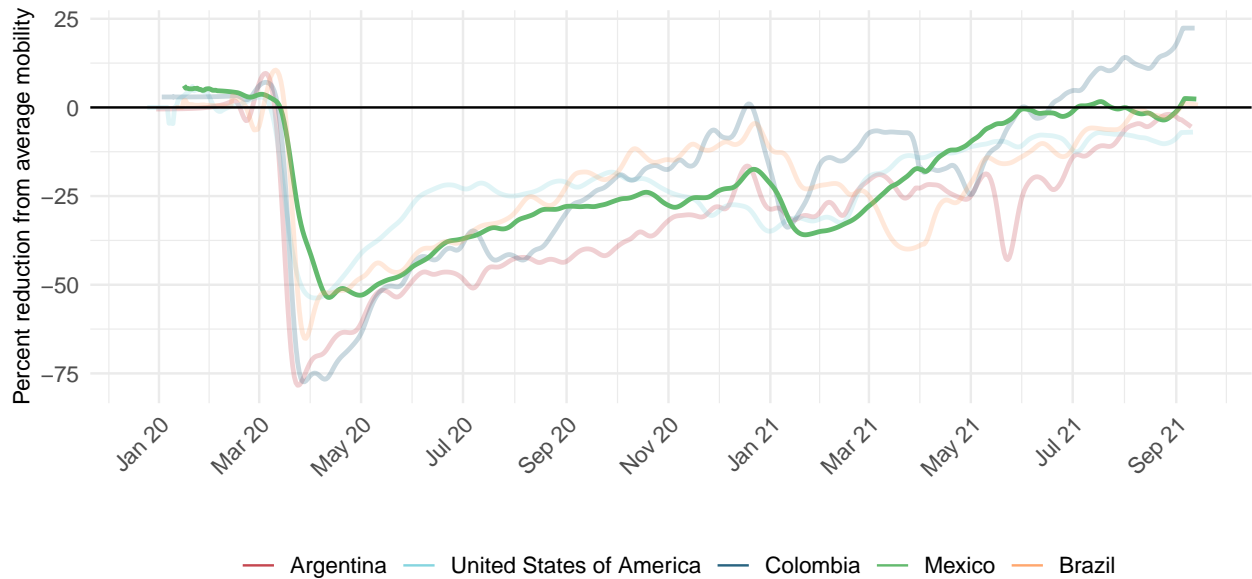


Figure 12. Mobility level as measured through smartphone app use, compared to January 2020 baseline (percent) on September 13, 2021

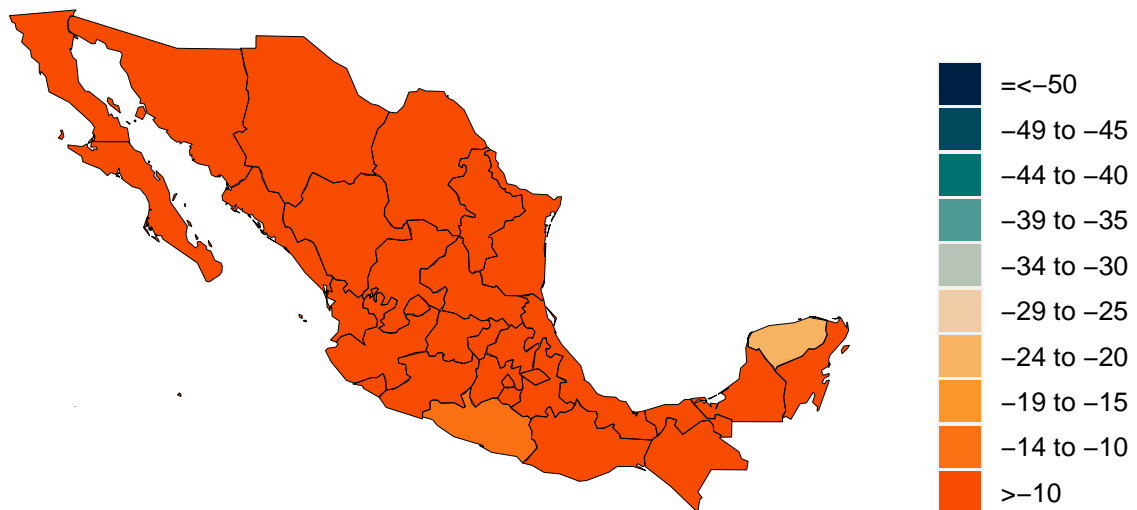


Figure 13. Trend in the proportion of the population reporting always wearing a mask when leaving home

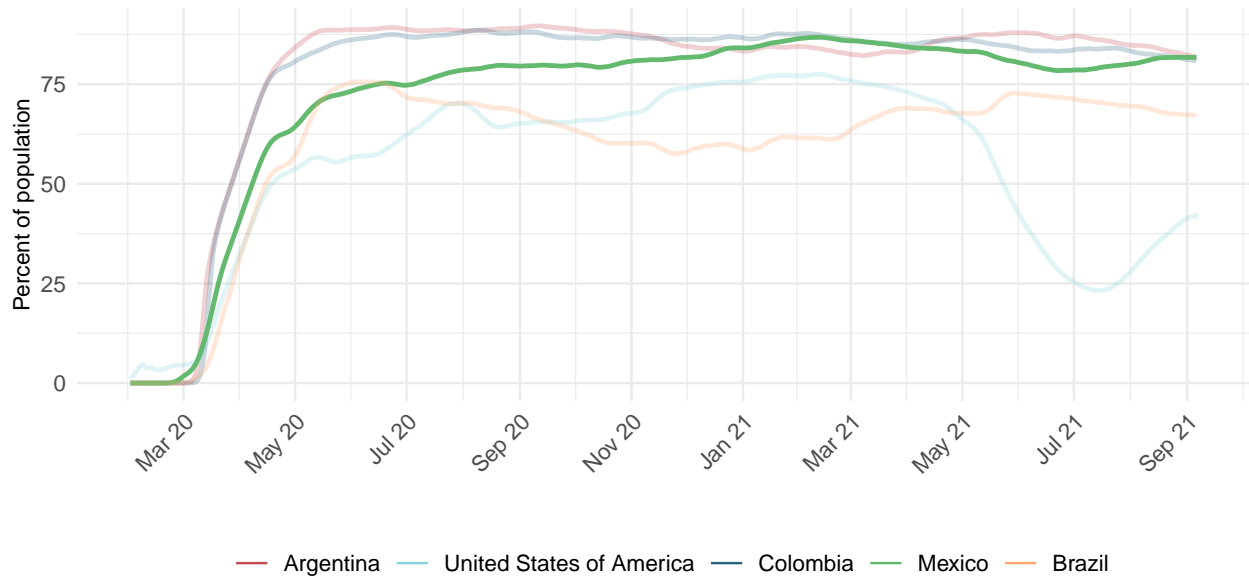


Figure 14. Proportion of the population reporting always wearing a mask when leaving home on September 13, 2021

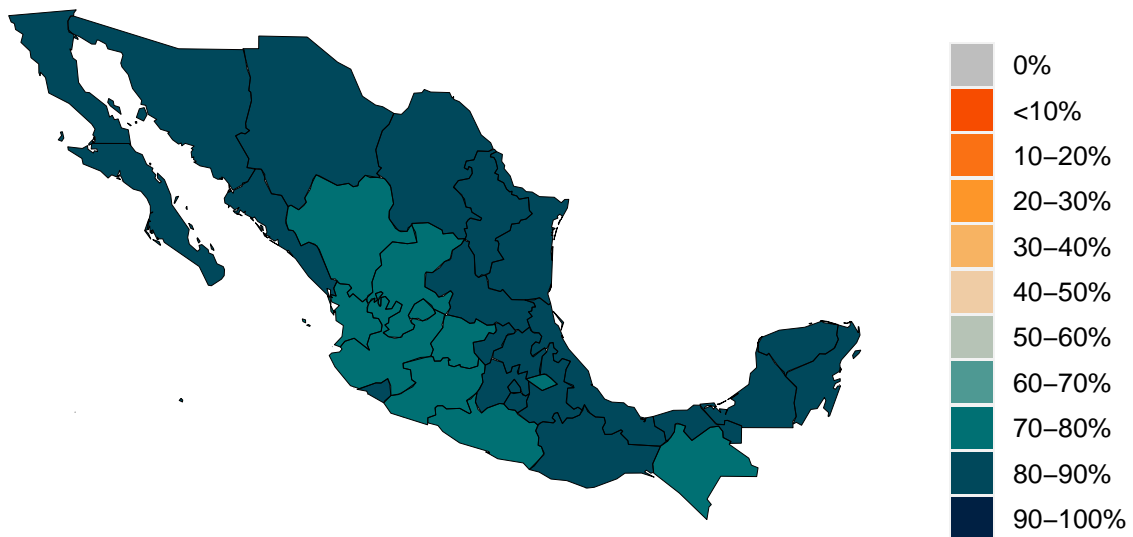


Figure 15. Trend in COVID-19 diagnostic tests per 100,000 people

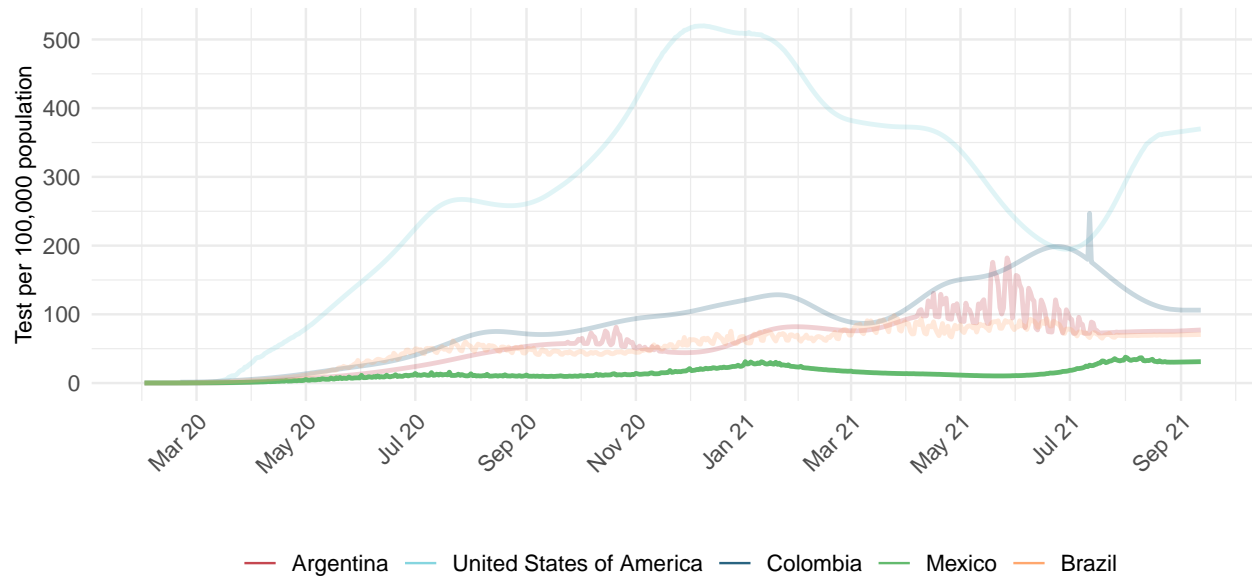


Figure 16. COVID-19 diagnostic tests per 100,000 people on September 13, 2021

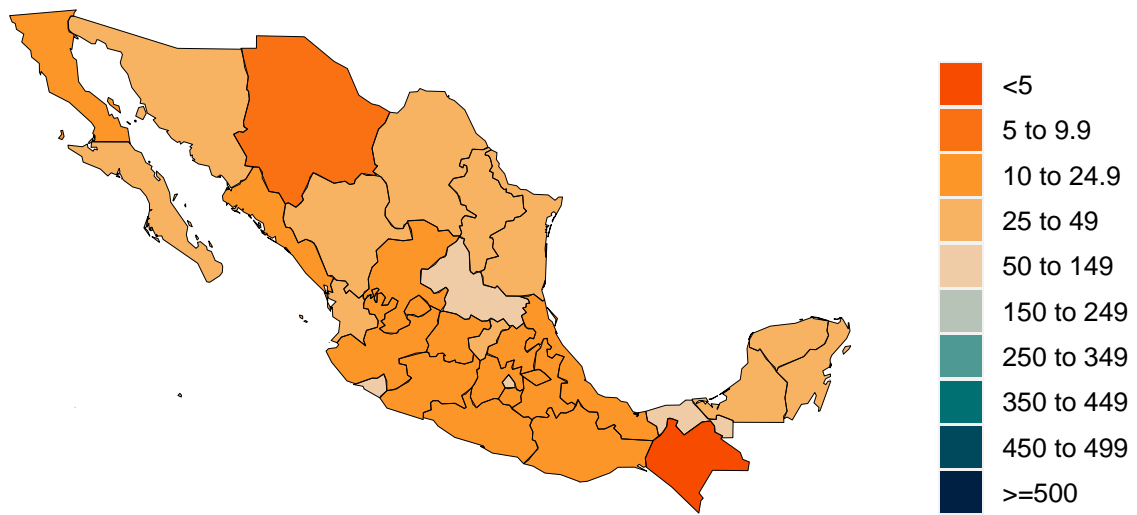


Table 3. Estimates of vaccine efficacy for specific vaccines used in the model at preventing disease and infection. The SEIR model uses variant-specific estimates of vaccine efficacy at preventing symptomatic disease and at preventing infection. We use data from clinical trials directly, where available, and make estimates otherwise. More information can be found on our [website](#).

Vaccine	Efficacy at preventing disease: ancestral and Alpha	Efficacy at preventing infection: ancestral and Alpha	Efficacy at preventing disease: Beta, Delta, & Gamma	Efficacy at preventing infection: Beta, Delta, & Gamma
AstraZeneca	90%	52%	85%	49%
CoronaVac	50%	44%	43%	38%
Covaxin	78%	69%	68%	60%
Johnson & Johnson	86%	72%	60%	56%
Moderna	94%	89%	94%	80%
Novavax	89%	79%	79%	69%
Pfizer/BioNTech	94%	86%	85%	78%
Sinopharm	73%	65%	63%	56%
Sputnik-V	92%	81%	80%	70%
Tianjin	66%	58%	57%	50%
CanSino				
Other vaccines	75%	66%	65%	57%
Other vaccines (mRNA)	91%	86%	85%	78%

Figure 17. Percent of the population (A) having received at least one dose and (B) fully vaccinated against SARS-CoV-2 by September 13, 2021

A. Percent of the population having received one dose of a COVID-19 vaccine



B. Percent of the population fully vaccinated against SARS-CoV-2

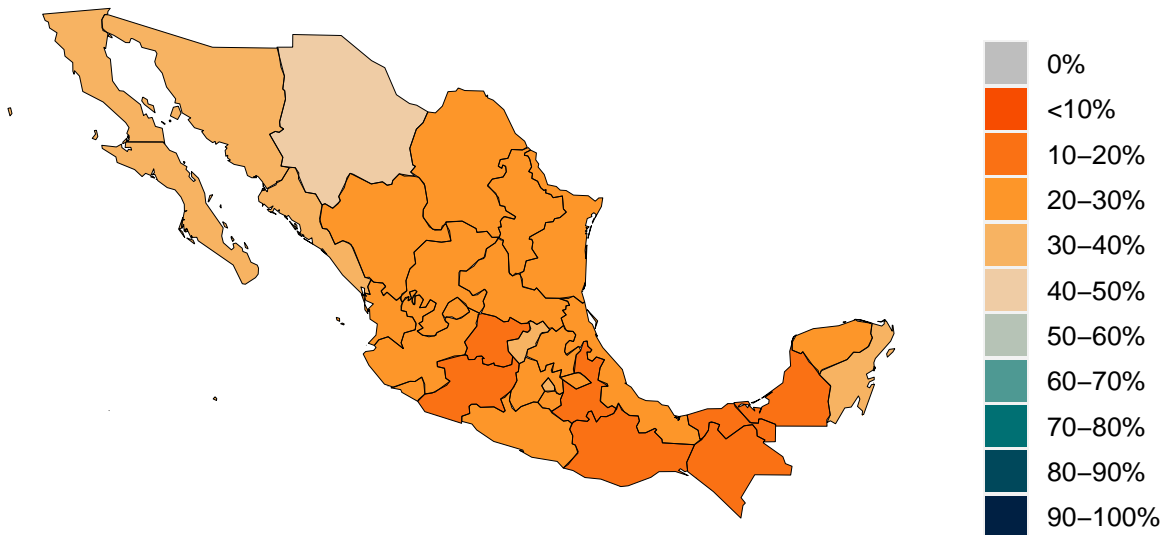


Figure 18. Trend in the estimated proportion of the adult (18+) population that have been vaccinated or would probably or definitely receive the COVID-19 vaccine if available

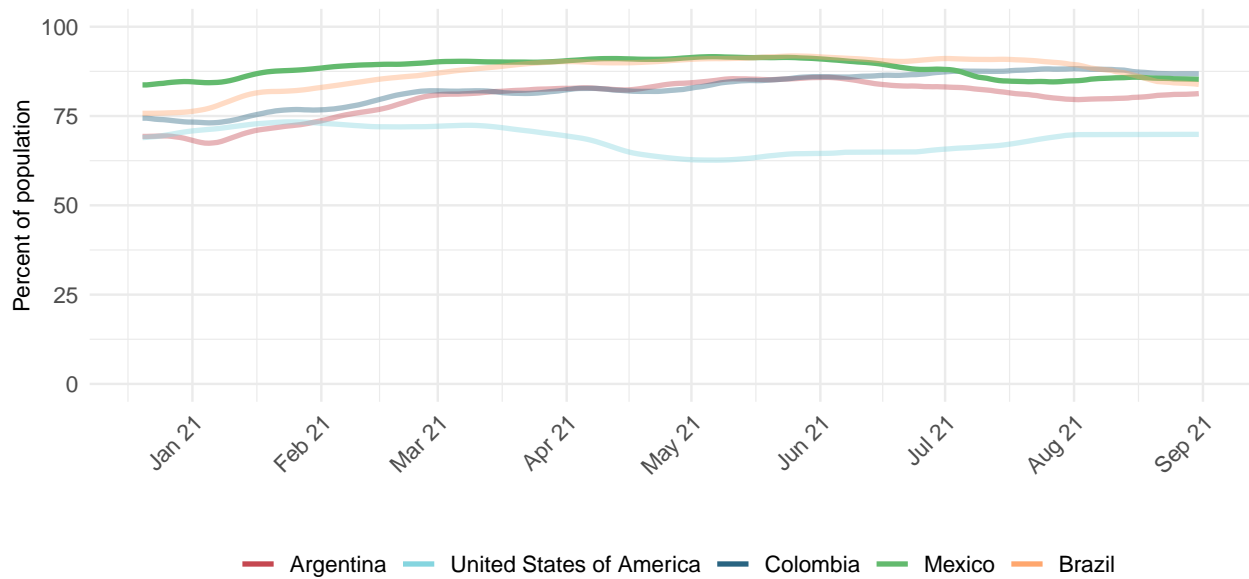


Figure 19. This figure shows the estimated proportion of the adult (18+) population that has been vaccinated or would probably or definitely receive the COVID-19 vaccine if available

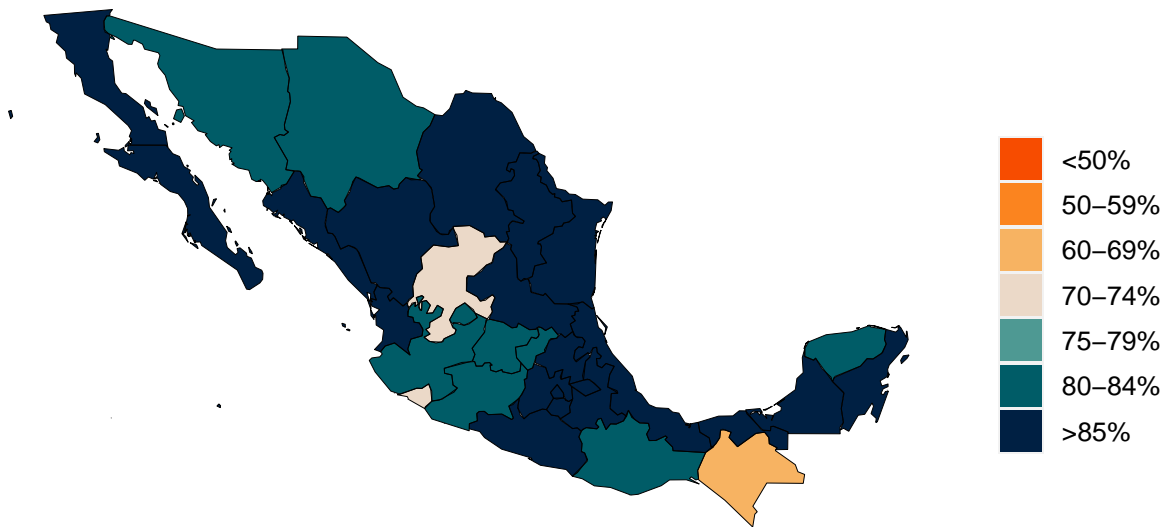


Figure 20. Percent of people who receive at least one dose of a COVID-19 vaccine and those who are fully vaccinated

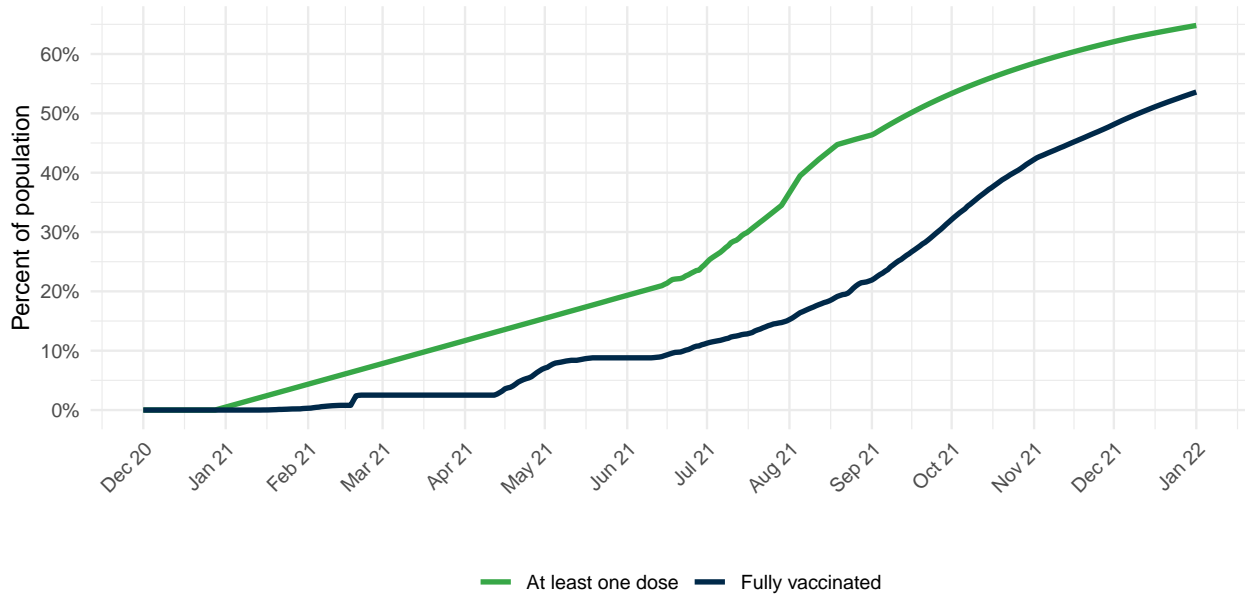
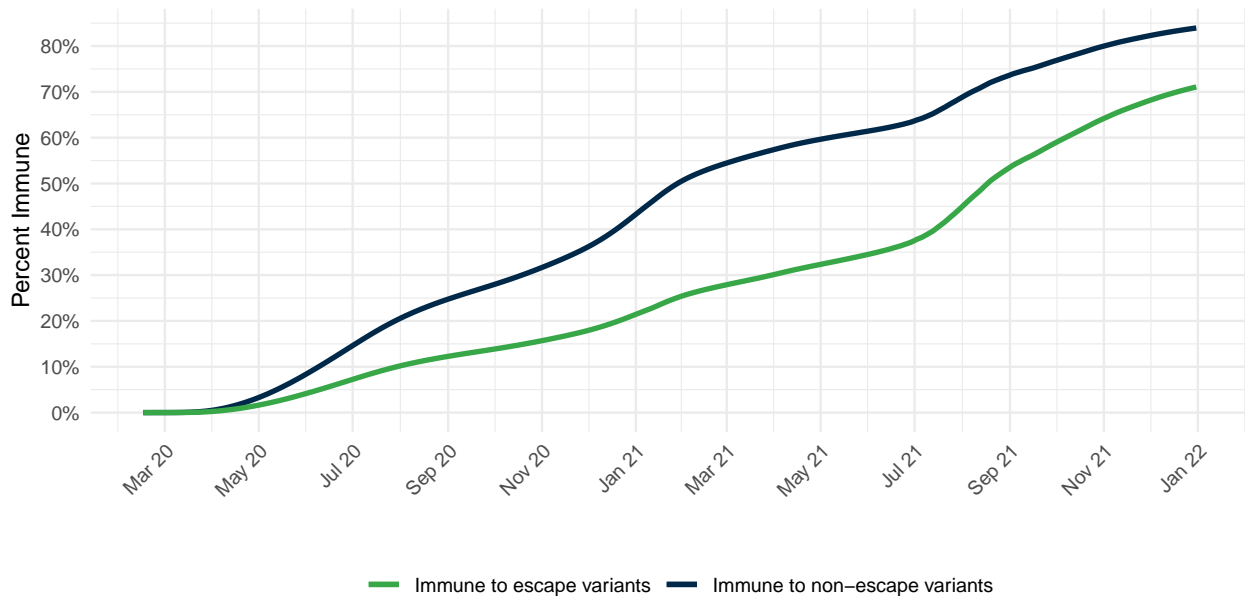


Figure 21. Percentage of people who are immune to non-escape variants and the percentage of people who are immune to escape variants



Projections and scenarios

We produce three scenarios when projecting COVID-19. The **reference scenario** is our forecast of what we think is most likely to happen:

- Vaccines are distributed at the expected pace. Brand- and variant-specific vaccine efficacy is updated using the latest available information from peer-reviewed publications and other reports.
- Future mask use is the mean of mask use over the last 7 days.
- Mobility increases as vaccine coverage increases.
- Governments adapt their response by re-imposing social distancing mandates for 6 weeks whenever daily deaths reach 8 per million, unless a location has already spent at least 7 of the last 14 days with daily deaths above this rate, and not yet re-imposed social distancing mandates. In this case, the reference scenario assumes that mandates are re-imposed when daily deaths reach 15 per million.
- Variants Alpha, Beta, Gamma, and Delta continue to spread regionally and globally from locations with sufficient transmission.

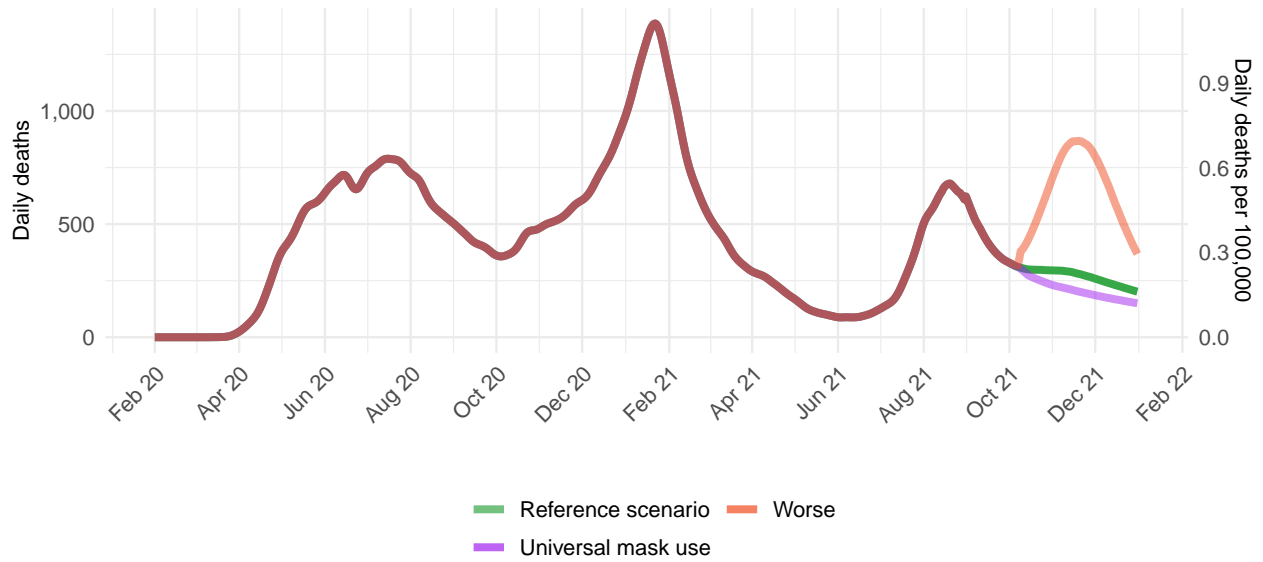
The **worse scenario** modifies the reference scenario assumption in four ways:

- 100% of vaccinated individuals stop using masks.
- Mobility increases in all locations to 25% above the pre-pandemic winter baseline, irrespective of vaccine coverage.
- Governments are more reluctant to re-impose social distancing mandates, waiting until the daily death rate reaches 15 per million, unless a location has already spent at least 7 of the last 14 days with daily deaths above this rate, and not yet re-imposed social distancing mandates. In this case, the reference scenario assumes that mandates are re-imposed when daily deaths reach 38 per million. In either case, we assume social distancing mandates remain in effect for 6 weeks.
- Variants Alpha, Beta, Gamma, and Delta spread between locations twice as fast when compared with our reference scenario.

The **universal masks scenario** makes all the same assumptions as the reference scenario but assumes all locations reach 95% mask use within 7 days.

Figure 22. Daily COVID-19 deaths until January 01, 2022 for three scenarios

A. Reported daily COVID-19 deaths per 100,000



B. Excess daily COVID-19 deaths per 100,000

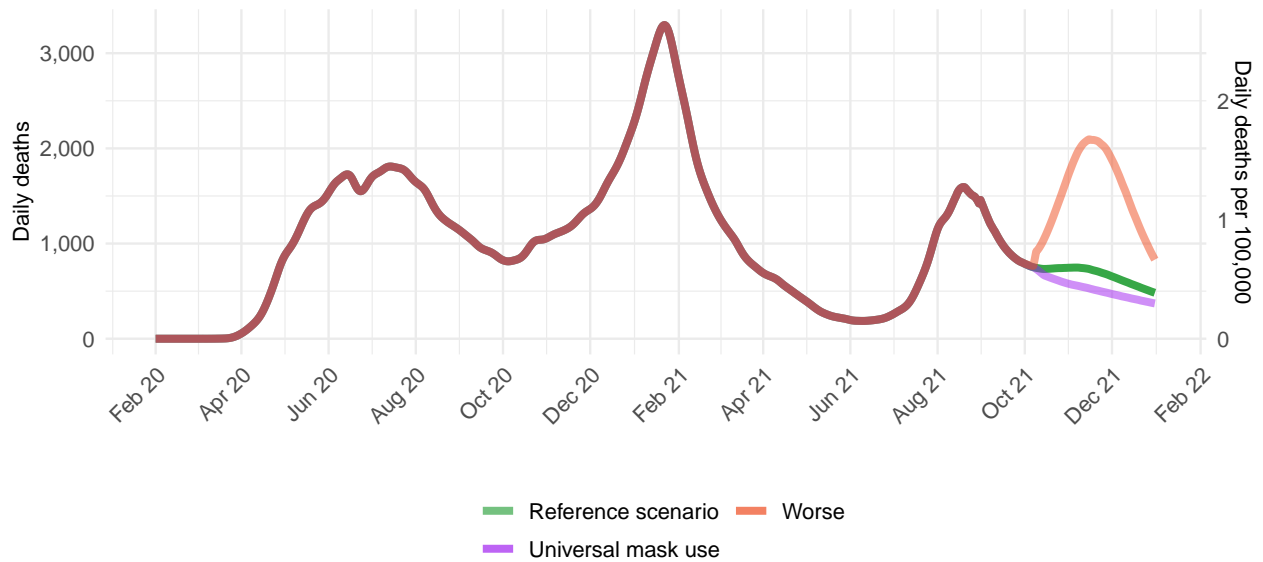


Figure 23. Daily COVID-19 infections until January 01, 2022 for three scenarios

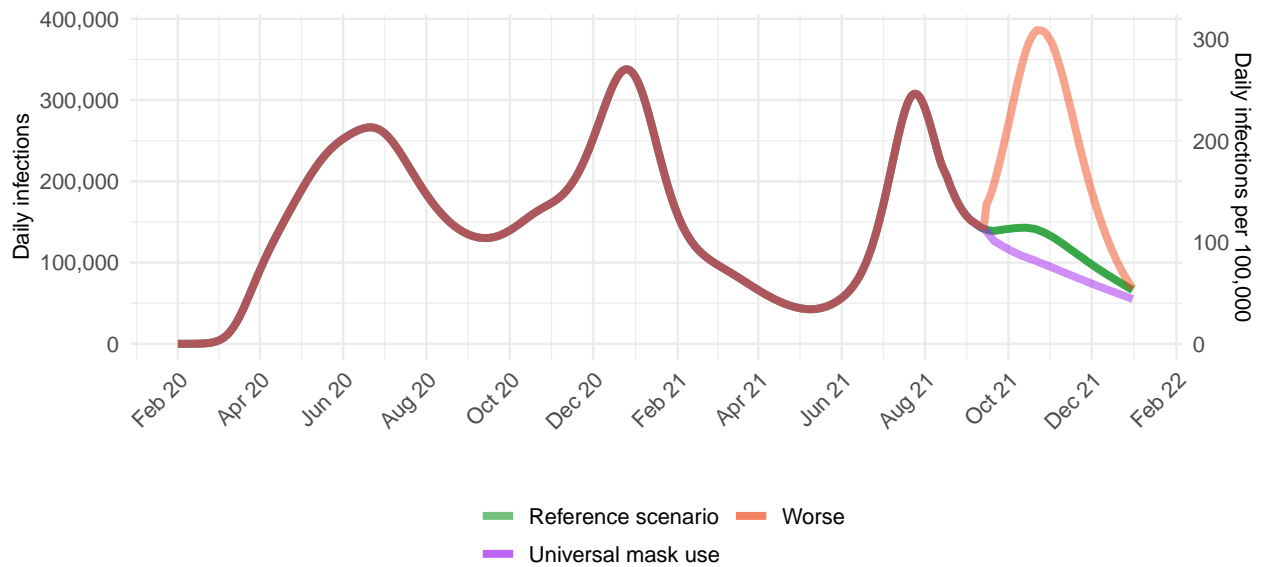


Figure 24. Daily COVID-19 reported cases until January 01, 2022 for three scenarios

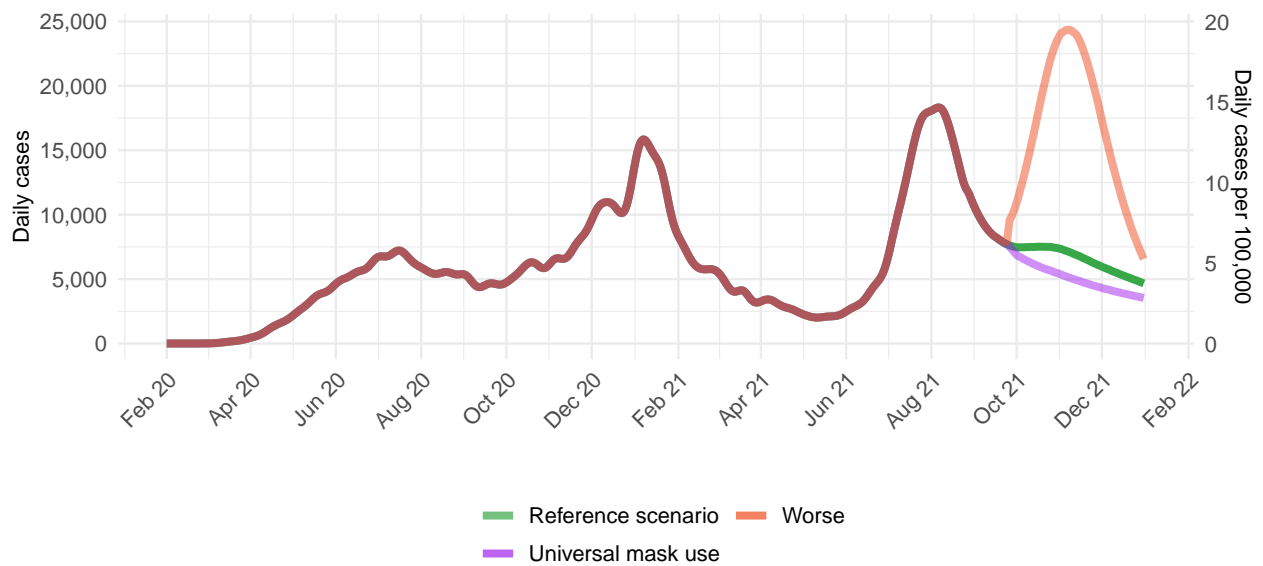


Figure 25. Daily COVID-19 hospital census until January 01, 2022 for three scenarios

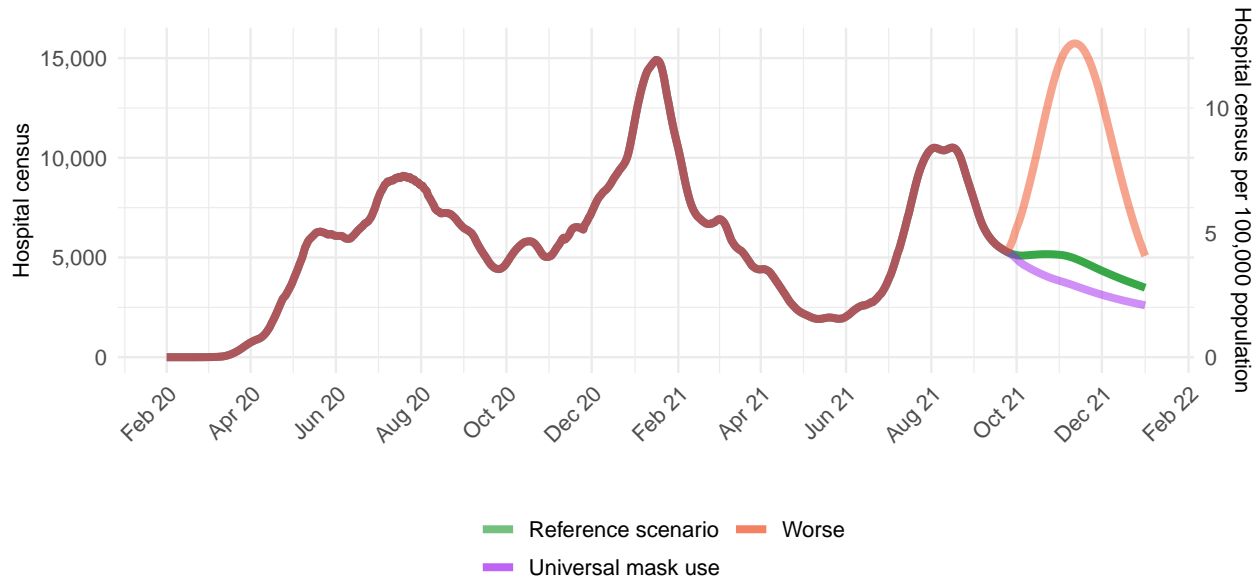


Figure 26. Comparison of reference model projections with other COVID modeling groups. For this comparison, we are including projections of daily COVID-19 deaths from other modeling groups when available: Delphi from the Massachusetts Institute of Technology ([Delphi](#)), Imperial College London ([Imperial](#)), The Los Alamos National Laboratory ([LANL](#)), and the SI-KJalpha model from the University of Southern California ([SIKJalpha](#)). Daily deaths from other modeling groups are smoothed to remove inconsistencies with rounding. Regional values are aggregates from available locations in that region.

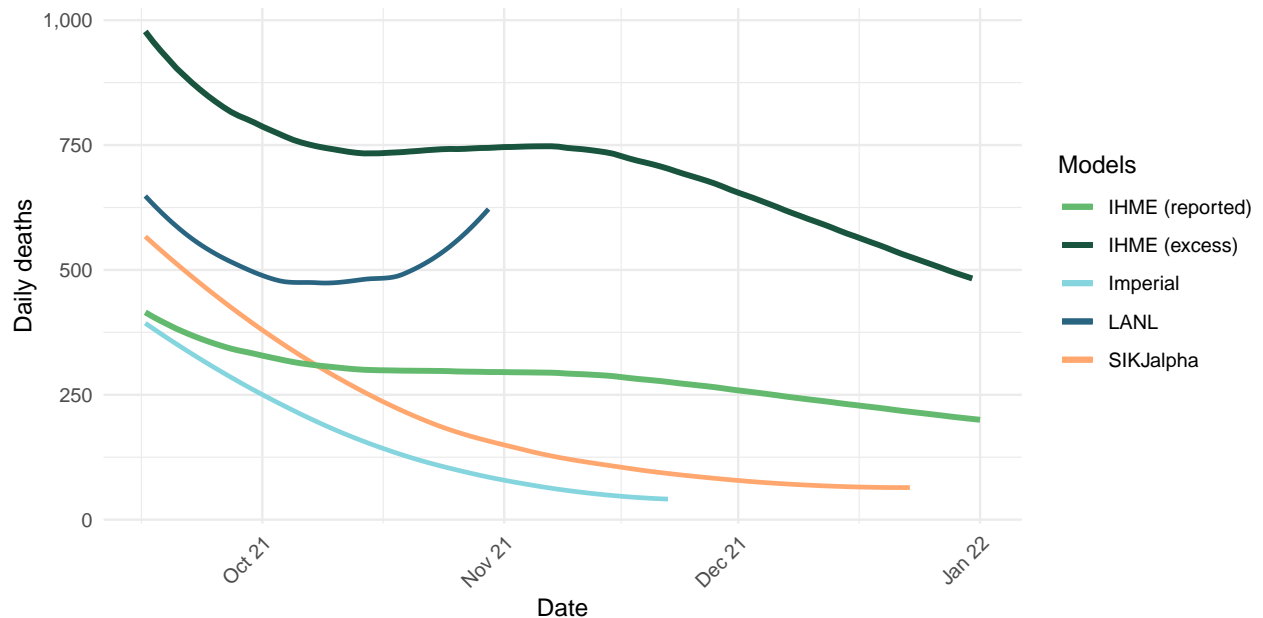


Figure 27. The estimated inpatient hospital usage is shown over time. The percent of hospital beds occupied by COVID-19 patients is color-coded based on observed quantiles of the maximum proportion of beds occupied by COVID-19 patients. Less than 5% is considered *low stress*, 5-9% is considered *moderate stress*, 10-19% is considered *high stress*, and 20% or greater is considered *extreme stress*.

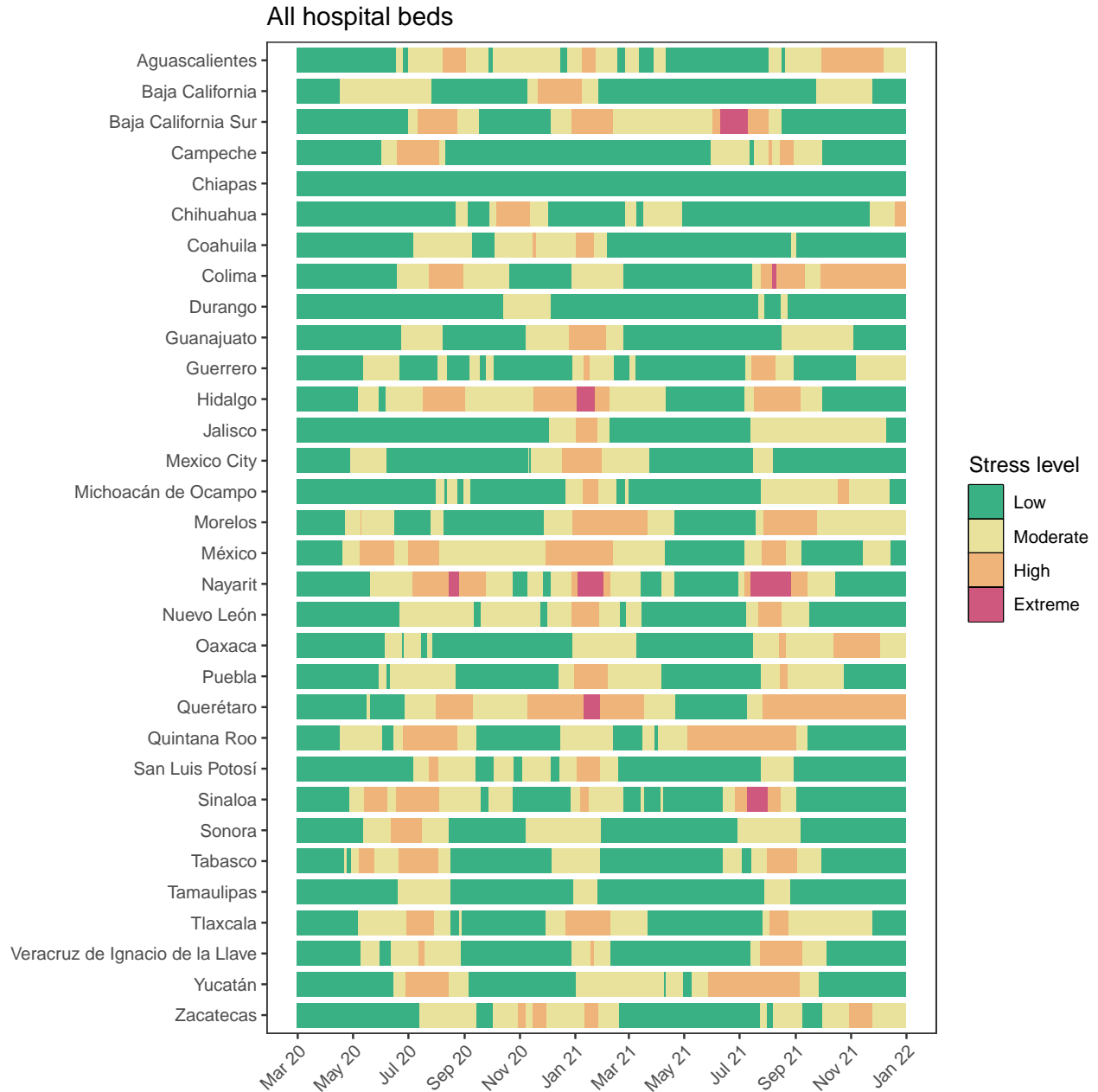


Figure 28. The estimated intensive care unit (ICU) usage is shown over time. The percent of ICU beds occupied by COVID-19 patients is color-coded based on observed quantiles of the maximum proportion of ICU beds occupied by COVID-19 patients. Less than 10% is considered *low stress*, 10-29% is considered *moderate stress*, 30-59% is considered *high stress*, and 60% or greater is considered *extreme stress*.



More information

Data sources:

Mask use and vaccine confidence data are from the [The Delphi Group at Carnegie Mellon University and University of Maryland COVID-19 Trends and Impact Surveys](#), in partnership with Facebook. Mask use data are also from [Premise](#), the Kaiser Family Foundation, and the [YouGov COVID-19 Behaviour Tracker](#) survey.

Genetic sequence and metadata are primarily from the GISAID Initiative. Further details available on the COVID-19 model [FAQ page](#).

A note of thanks:

We wish to warmly acknowledge the support of [these](#) and others who have made our COVID-19 estimation efforts possible.

More information:

For all COVID-19 resources at IHME, visit <http://www.healthdata.org/covid>.

To download our most recent results, visit our [Data downloads page](#).

Questions? Requests? Feedback? Please contact us at <https://www.healthdata.org/covid/contact-us>.