RESPONDING TO COVID-19

Almanac Highlights

For complete Almanac, please contact COVID19info@oliverwyman.com

May 6, 2021 update
INTRODUCTION: COVID-19 ALMANAC

Context and purpose

The novel coronavirus has infected millions of people globally and is taking a severe toll on individuals, families, and economies as productivity drops and stock markets reflect increased global uncertainty.

This document provides some baseline facts and guidance for business leaders as to critical questions to address in the immediate and near-term to ensure the continuity of their business and the safety, health, and wellbeing of their workforce and customers.

What is it?

COVID-19 is the name for the illness caused by the novel coronavirus that originated in Wuhan, China in December 2019.

It is from the same family of viruses that cause some common colds, as well as Severe Acute Respiratory Syndrome (SARS) and Middle East Respiratory Syndrome (MERS).

It is considered similar to other respiratory infections such as influenzas; symptoms range from fever, cough, shortness of breath to more severe cases of pneumonia and organ failure.
# OLIVER WYMAN’S CORONAVIRUS ALMANAC

This Almanac contains the latest perspectives on key areas related to the COVID-19 pandemic

<table>
<thead>
<tr>
<th>Section</th>
<th>Key Topics</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Epidemiologic perspectives</strong></td>
<td>• Epidemiological background</td>
<td>• The virus displays unique and deadlier characteristics than other known diseases</td>
</tr>
<tr>
<td>Sample pages: 4-6</td>
<td>• Up-to-date statistics by geography</td>
<td>• The pace and maturity of infection is highly variable by region, largely hinging on speed and strength of government response</td>
</tr>
<tr>
<td><strong>An end to the cycle: therapeutics, vaccines and cumulative immunity</strong></td>
<td>• Therapeutics in development</td>
<td>• Effective therapies and vaccination will be critical to bring economies and communities fully “back to normal”</td>
</tr>
<tr>
<td>Sample page: 7</td>
<td>• Vaccine development timeline and current state</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Key considerations and unknowns</td>
<td></td>
</tr>
<tr>
<td><strong>Tracking the Impact of Variants</strong></td>
<td>• Categories of known variants and their mutations</td>
<td>• Variants should be categorized by the mutations they exhibit rather than their geographic origins</td>
</tr>
<tr>
<td>Sample pages: 8-9</td>
<td>• Spread globally and in the U.S.</td>
<td>• Different variants present different risks and require different responses</td>
</tr>
<tr>
<td><strong>Global News</strong></td>
<td>• Global developments</td>
<td>• As countries vaccinate and reopen, we are tracking progress, synthesizing best practices and projecting anticipated trajectory</td>
</tr>
<tr>
<td>Sample pages: 10-13</td>
<td>• On-going risk across the globe</td>
<td></td>
</tr>
<tr>
<td><strong>US News</strong></td>
<td>• US opening approach and initial learnings</td>
<td>• As the US begins to exit out of the pandemic, we are tracking outcomes, vaccination progress, and modeling out progress to the possible herd immunity threshold</td>
</tr>
<tr>
<td>Sample pages: 14-18</td>
<td>• Risk of future disruptions</td>
<td></td>
</tr>
<tr>
<td><strong>Pandemic Navigator</strong></td>
<td>• Overview</td>
<td>• Oliver Wyman has developed a unique time-dependent SIR model to forecast the spread of the virus at the state and county level called the Pandemic Navigator Core Model</td>
</tr>
<tr>
<td>Sample pages: 19-20</td>
<td>• Example capabilities</td>
<td>• Pandemic Navigator provides business leaders and policymakers with the data needed to make informed decisions through the crisis</td>
</tr>
<tr>
<td></td>
<td>• Web-based version to explore</td>
<td>• A sample of the Pandemic Navigator is freely available online</td>
</tr>
<tr>
<td><strong>Testing and Diagnostics</strong></td>
<td>• Current landscape of available tests</td>
<td>• The diagnostic landscape is evolving rapidly to provide more convenient, scalable testing options</td>
</tr>
<tr>
<td>Sample page: 21</td>
<td>• Emerging tech profiles &amp; development news</td>
<td>• The emergence of testing and vaccine passports / tracking methodology is critical in the progress to normalcy</td>
</tr>
<tr>
<td><strong>Returning to Work</strong></td>
<td>• Different employer plans with respect to vaccination</td>
<td>• Employers have a varied degree of involvement with vaccinations, and it depends heavily on industry and the nature of their work</td>
</tr>
<tr>
<td>Sample page: 22</td>
<td>• Industry deep dives</td>
<td>• Deep dives on specific industries and companies within those industries can provide broader insight as to the general employer-vaccination landscape</td>
</tr>
</tbody>
</table>
COVID-19 TRENDS AND SPREAD OF THE DISEASE

Cases are rising rapidly in the APAC region, largely driven by exponential case growth in India, while the rest of the world is largely seeing plateauing or declining new cases.

Cumulative Confirmed Cases of COVID-19

New Cases Per Day of COVID-19

7-day moving average

1. Data from OW Pandemic Navigator
HOW DOES COVID-19 COMPARE TO OTHER DISEASE OUTBREAKS?

COVID-19 is currently more deadly and contagious than the Flu, but the science on transmission and mortality continues to evolve.

**Case Fatality Rate**

- **Log scale**
- **100%**
- **10%**
- **1%**
- **0.1%**

**Legend and key statistics**

- **SARS**
  - 8,096 infected | 774 deaths
- **MERS**
  - 2,494 infected | 858 deaths
- **1918 Spanish Flu**
  - ~500 MM infected | ~50 MM deaths
- **COVID-19**
  - ~128MM infected | ~2.8 MM deaths
- **H1N1 Swine Flu**
  - 700 MM–1.4 BN infected | 284 K deaths

- **Measles**
- **Chickenpox**
- **Common cold**
- **Seasonal Flu**
- **Smallpox**
- **Ebola**
- **MERS**
- **SARS**
- **Bird Flu**

**Average number of people infected by each sick person (R0)**

- **1**
- **5**
- **10**
- **15**

**Case Fatality Rate & Transmission Range**

- **More Deadly**
- **More contagious**

**Additional details**

- **R-naught (R0)** represents the average number of cases an infected person will cause
  - R0 for the seasonal flu is around 1.3
  - Estimates for initial R0 for SARS-CoV-2 have ranged between 2 and 3 on the lower end and closer to 5.7 on the higher end
  - R0 is time and region dependent, varying significantly based on country and individual measures used to contain the virus (e.g., wearing masks, socially distancing, shutting down businesses)
- **Early evidence suggests COVID-19’s transmission is highly variable, with most infections resulting in no subsequent infections and a few resulting in many**
- **The global case fatality rate for confirmed COVID-19 cases is currently 2.0%; the rate varies significantly by country (e.g., Italy — 3.1%, South Korea — 1.7%)**
- **We expect case fatality rates to fluctuate as vaccination continues, treatment options improve, testing expands, demographics of the ill change, and existing cases are resolved**

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1. New York Times ([link](link)) for fatality and R-naught comparisons, CDC timelines for case numbers (selected link: CDC SARS timeline); 2. Updated CDC estimates ([link](link)); 3. The R0 for the coronavirus was estimated by the WHO to be between 1.4–2.5 (end of January estimate) ([link](link)), other organizations have estimated an R0 ranging between 2–3 or higher ([link](link)); 4. CDC Paper ([link](link)); 5. Calculated as Number of Deaths/Total Confirmed Cases as reported by John Hopkins University. 6. Emerging Infectious Diseases ([link](link)) 7. Science ([link](link))
### AT A GLANCE: SUMMARY FACTS

<table>
<thead>
<tr>
<th>Key facts</th>
<th>Key unknowns</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Contagion</strong></td>
<td>Frequency of transmission by asymptomatic individuals and kids</td>
</tr>
<tr>
<td>- Initial estimates suggested COVID-19 R0 is between 2 and 3 (with edge of range estimates closer to 1.4 and 3.6), which means each person infects 2–3 others¹; R0 for the seasonal flu is around 1.3²</td>
<td></td>
</tr>
<tr>
<td>- The CDC estimate VoC transmission to be between 20-50% more transmissible³</td>
<td></td>
</tr>
<tr>
<td>- Early evidence suggests COVID-19’s transmission is highly variable, with most infections resulting in no subsequent infections and a few resulting in many, which should color response⁴</td>
<td></td>
</tr>
<tr>
<td><strong>Current human immunity</strong></td>
<td>Whether protective immunity is conferred and how long it lasts</td>
</tr>
<tr>
<td>- No herd immunity exists yet as the virus is novel in humans</td>
<td></td>
</tr>
<tr>
<td>- There is emerging evidence that some individuals have cross-reactive antibodies from exposure to other coronaviruses. It remains to be seen if these are protective¹⁷</td>
<td></td>
</tr>
<tr>
<td><strong>Infectious cycle</strong></td>
<td>Exact timing of when an individual is no longer contagious</td>
</tr>
<tr>
<td>- COVID-19 can be spread asymptomatically⁵</td>
<td></td>
</tr>
<tr>
<td>- The incubation period is a median of 5.5 days (up to 14 days)⁶,⁷ (vs 3-day period for common flu⁶)</td>
<td></td>
</tr>
<tr>
<td>- Several epidemiological studies estimate that the infectious period begins 2-3 days prior to onset of symptoms, peaks 0.7 days before symptom onset and then declines within 7 days⁸</td>
<td></td>
</tr>
<tr>
<td>- While viral genetic material can linger in the body for 2-4 weeks, live virus cannot be cultured after day 11 of illness⁸</td>
<td></td>
</tr>
<tr>
<td><strong>Fatality</strong></td>
<td>True fatality rate</td>
</tr>
<tr>
<td>- Case fatality rates (CFR) are trending at 2.0% globally⁹ (vs. 0.1% for flu⁶)</td>
<td></td>
</tr>
<tr>
<td>- Infected fatality rate (IFR) is estimated at 0.68% (0.53-0.82%) though the data shows a significant degree of heterogeneity¹⁰</td>
<td></td>
</tr>
<tr>
<td><strong>Portion of cases asymptomatic but contagious</strong></td>
<td>Why some people are asymptomatic or have mild illness while others show severe symptoms</td>
</tr>
<tr>
<td>- In retrospective studies of those people tested and confirmed positive for COVID-19, experts estimate 18–30% are asymptomatic, with another 10–20% with mild enough symptoms to not suspect COVID-19¹¹</td>
<td></td>
</tr>
<tr>
<td>- Early indicators from point in time comprehensive testing of small populations (e.g. Vo, Italy; Iceland) suggest as many as 50% of cases could be asymptomatic¹²</td>
<td></td>
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<tr>
<td>- In cohorts of younger individuals (e.g., pregnant woman, sailors on USS Theodore) the proportion of asymptomatics exceeded 60%¹³,¹⁴</td>
<td></td>
</tr>
<tr>
<td><strong>Portion of cases reaching “critical”/“severe” infection</strong></td>
<td></td>
</tr>
<tr>
<td>- Data from the US CDC suggested that approximately 14% of confirmed US cases required hospitalization; 1/6th of those needed ICU beds⁵,¹⁶</td>
<td></td>
</tr>
<tr>
<td>- Among states that report hospitalizations, recent data suggests ~9-10% of cases now require hospitalization</td>
<td></td>
</tr>
</tbody>
</table>

1. The R0 for the coronavirus was estimated by the WHO to be between 1.4–2.5 (end of January estimate) (link), other organizations have estimated an R0 ranging between 2–3 or higher (link); 2. CDC Paper (link); 3. CDC 4. Science (link) 5. JAMA. *“Presumed Asymptomatic Carrier Transmission of COVID-19” 6. CDC 7. Annals of Internal Medicine (link) 8. Academy of Medicine Singapore (link) 9. JHU 10. medRxiv (link) 11. Nature (link), Eurosurveillance Paper (link) 12. ZMEScience report (link) 13. Business Insider (link) 14. NEJM (link) 15. 7. China CDC, JAMA (link) 16. Note: However, hospitalization status was only known for ~50% of all cases in CDC study 17. Science Immunology (link)
**RETURN TO NORMALCY: WE WILL BEGIN TO RECOVER WHEN OUR CUMULATIVE IMMUNITY REACHES THE POSSIBLE HERD IMMUNITY THRESHOLD**

Building blocks of herd immunity – illustrative example

**Possible Herd Immunity Level (pHIL)**
The point at which transmission stops

**Possible Herd Immunity Threshold (pHIT)**
The point at which effective reproduction rate without most restrictions is equal to 1 and daily new cases start to decline

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### Natural infection
We assume that natural infection (including when undetected) confers immunity for at least 18 months

### Pre-existing immunity
Some portion of the population may have pre-existing immunity mediated by T-cells, but exact implication and proportion in the population is unknown

### Vaccination
Over time, COVID vaccinations will confer immunity and help push us towards the herd immunity threshold

### Cumulative Immunity

Some people with pre-existing immunity or undetected infection are expected to be vaccinated; this does not have incremental benefit, increasing road to herd immunity
As more variants are being discovered, our focus should turn to the mutations they have, not their geographic origin. Instead of thinking about variants in the context of what country they came from...

...we need to consider the effect of specific mutations and which require greater concern.

Some mutations make the variant more infectious than others.

Some mutations make the variant cause more severe disease.

Some mutations enable the variant to evade existing treatments, immunity and vaccines.

In the US, the CDC classifies variants based on the nature of their mutations and the severity of the impact they might have on existing ideas of transmission, severity and immunity.

- **Variant of Interest (2 in the US)**: Low risk of impact
- **Variant of Concern (5 in the US)**: Medium risk of impact
- **Variant of High Consequence (0 in the US)**: High risk of impact

Source: CDC

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## MUTATION PREVALENCE ACROSS VARIANTS

Of variants currently discovered, many share mutations with others, leading them to behave in similar ways

### Table: Key Mutations and Variants

<table>
<thead>
<tr>
<th>Key Mutation</th>
<th>Description of Mutation</th>
<th>Variants of Concern</th>
<th>Variants of Interest</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>E484K</strong></td>
<td>Common mutation that has been shown to evade existing immunity and treatments</td>
<td><img src="green" alt="" /></td>
<td><img src="green" alt="" /></td>
</tr>
<tr>
<td><strong>N501Y</strong></td>
<td>Mutation that helps the virus more effectively bind to human cells, increasing transmission</td>
<td><img src="green" alt="" /></td>
<td><img src="red" alt="" /></td>
</tr>
<tr>
<td><strong>K417N</strong></td>
<td>Another common mutation that helps the virus bind to cells</td>
<td><img src="red" alt="" /></td>
<td><img src="red" alt="" /></td>
</tr>
<tr>
<td><strong>L452R</strong></td>
<td>Preliminary studies suggest increased infectivity and replication</td>
<td><img src="green" alt="" /></td>
<td><img src="red" alt="" /></td>
</tr>
</tbody>
</table>

Since many mutations are common across variants, our **response should be tailored to mutations and their impact**, rather than specific variants and where they come from

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1. These are the key mutations primarily found in variants in the US – there are many multiples more that have been discovered and researched globally

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OW’S GLOBAL MONITORING CAPABILITIES PROVIDE DEEP AND ACTIONABLE INSIGHT TO GOVERNMENTS, EXECUTIVES AND PUBLIC HEALTH AUTHORITIES

Daily updated database covering 50+ metrics and 200+ countries; access to relevant COVID information in one convenient location

Risk tracker and dashboard identifying likely hotspots and areas of resurgence with key global archetypes

In-depth profiles highlighting global themes and detailed developments from any given country

- Complete history of pandemic by region (cases, deaths, infection rates, testing)
- Daily updated case projections for select countries of interest
- Mobility indices and leading indicators
- Population risk factors, include health risks, urban density, age and demographics
- Flexible chart builder and data export tool; explore metrics from any region over any period of time

- Convenient dashboard highlighting key risk factors and current pandemic status by day
- Deep dive worksheets exploring mobility, case, and infection rate growth over variable periods of time
- Analysis of mobility correlations with Oliver Wyman derived infection rates
- Flexible segmentation and archetyping tool, with editable risk thresholds

- Timeline of key developments and government responses over the lifetime of COVID in a given country
- Key lessons learned from each region—detailed notes on what caused a country’s response to be successful (or not)
- Themes that governed a country’s COVID response policy and philosophy
- Other cultural or endogenous factors that directly affected the impact of the disease
THERE ARE A WIDE RANGE OF METRICS THAT CAN HELP INFORM THE “HEALTH RISK” OF A PARTICULAR GEOGRAPHY

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>How severe are outbreaks today?</td>
<td>What is the near-term outlook?</td>
<td>How widespread is testing and contact tracing?</td>
<td>How is human behavior changing?</td>
</tr>
<tr>
<td>• Active cases</td>
<td>• Active case forecasts</td>
<td>• % positive tests</td>
<td>• Impact of mobility on transmission</td>
</tr>
<tr>
<td>• Reproduction rate</td>
<td>• Projected reproduction rate</td>
<td>• # of people tested</td>
<td>• Changes in government stringency</td>
</tr>
<tr>
<td>• Deaths</td>
<td>• Projected deaths</td>
<td>• Level of contact tracing</td>
<td></td>
</tr>
</tbody>
</table>

These factors combined into a “health risk score”, alongside judgement on the ground, can help quickly assess the potential health risk posed by geography in a structured way.
WHAT DOES GLOBAL RISK LOOK LIKE AROUND THE GLOBE?

High rates of active cases in both the Americas and Western EU cause scores to climb back up to critical for many countries in each region; rising cases in India have led its score to jump up from medium to critical.

Legend:
- Low risk
- Medium risk
- High risk
- Critical risk

1. Highlighted countries indicate risk monitoring coverage
2. Due to the heterogenous nature of outbreaks in large countries, certain countries dealing with substantial outbreaks in certain localities (India, Australia) may appear to be low risk at an aggregate level
3. Countries with fewer than 7 data sources and no OSI index or no active case information are “pastel” colored to indicate the incomplete nature of the available data
4. Israel and UAE have a critical designation due to high baseline active cases, but new cases are rapidly dropping as a by-product of an effective vaccination campaign and we expect this score to shift lower in the future
5. The accuracy of these risk scores relies on the accuracy and validity of publicly available data
GLOBAL PATH TO HERD IMMUNITY

Israel continues to stand out with its rapid vaccination roll-out, with a few other countries like the US, UK, and UAE also performing strongly.

The herd immunity threshold, given other COVID variants, is likely between 67%-75% of a country's population.

% with immunity by natural infection or effective vaccination by country\(^1,2\)

Data as of May 2\(^{nd}\), 2021

We estimate a **handful of countries** (US, UK, Mexico, Brazil) to reach herd immunity in the next few months, but countries relying on natural infection must be wary of variants with high reinfection rates.

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1. As we learn more about the risk of reinfection, we may see some countries relying on high levels of natural infection lose significant progress towards herd immunity.
2. Effective vaccination counts use a weighted average of efficacy rates for first and second injections across manufacturers. We also assume individuals who were naturally infected and received a vaccine dose will be counted towards immunity from vaccination and not natural infection (assumes those with previous natural infection are just as likely as the noninfected population to receive a vaccination). Undetected cases vary by region and are estimated based on IFR data and deaths. Vaccination data from OWID; JHU.
US OUTLOOK: CASES AROUND THE COUNTRY ARE TRENDING LOWER, CONTINUING THEIR DECLINE OR BEGINNING TO LEVEL OFF

Active cases per Million for select states
Data as of May 4th, 2021
THE US VACCINATION CAMPAIGN HAS ACCELERATED RAPIDLY AND IS AIMING TO REACH 70% OF AMERICANS WITH AT LEAST ONE SHOT BY THE 4TH OF JULY

Share of population receiving at least one dose
As of May 4th, 2021

- **144.2 million** (~44% of U.S. population) people have received their first dose as of May 4th
- More than **104 million** (~32% of U.S. population) people have been fully vaccinated as of May 4th
- Biden reached announced goals of vaccinating 200M people within his first 100 days in office, and expects to celebrating July 4th as normal
- The U.S. is currently administering **2.29M shots per day**

% of vaccine supply used
As of May 4th, 2021

- Vaccine utilization has remained steady for the past month, averaging 79%, compared to last month’s 81%
- Many states are seeing evidence of waning demand:
  - Appointments that were previously hard-to-get are now going unfilled
  - States like Mississippi are asking the government to stop shipping the vaccine as they can’t find people to take the shot

1. NYT; *Data may be lagged as states report vaccination totals at different rates 2. Washington Post
© Oliver Wyman
The pace of vaccination looks dramatically different across the U.S. Some states have seen their vaccination pace flatten off while others continue a rapid rollout.

% of population with at least one dose for select states

Vermont

New York

Mississippi

Louisiana

Sources: OWID; JHU; NYT

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US: REVISED ASSUMPTIONS IMPROVE AVERAGE PHIT TIMING FOR THE US

Driven primarily by an earlier than expected approval of an adolescent vaccine, optimistic potential herd immunity threshold (pHIT) timing in the US has moved up from mid to late summer to early-summer.

% with immunity by effective vaccination or natural immunity\(^1,2\)

Data as of May 2\(^{nd}\), 2021

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1. Immune individuals (either from natural infection, or vaccination) are assumed not to transmit the virus. Given that most vaccine trials assessed efficacy against symptomatic illness, this assumption may prove to be overly optimistic, i.e. efficacy with respect to asymptomatic but contagious illness may be lower than is assumed here. In addition, vaccine efficacy for J&J clinical trial (66%) was assessed with respect to moderate to severe disease so this efficacy may be overstated when applied to case transmission. 2. In our optimistic scenario, it is assumed that a vaccine approved for 12-15 year olds will become available in July 2021 or earlier, while a pediatric vaccine for ages 11 and under does not become available until 2022. 3. Administration rate is the average number of doses administered until all willing individuals are vaccinated. 4. 71% is used for pHIT, SIR logic applied after threshold to project case growth. Sources: [OWID](https://ourworldindata.org); [JHU](https://www.jhu.edu)
**US: PATH TO HERD IMMUNITY THRESHOLD**

A handful of states are approaching the herd immunity threshold, largely owing to a rapid vaccination campaign.

% with immunity by effective vaccination or natural infection by state\(^1,2\)

Data as of May 2\(^{nd}\), 2021

The herd immunity threshold in the United States, with a higher transmissible dominant strain, is likely between 67%-75%.

---

1. As we learn more about the risk of reinfection, we may see some states relying on high levels of natural infection lose progress towards herd immunity threshold. 2. Effective vaccination counts use a weighted average of efficacy rates for first and second injections across manufacturers. We also assume individuals who were naturally infected and received a vaccine dose will be counted towards immunity from vaccination and not natural infection (assumes those with previous natural infection are just as likely as the noninfected population to receive a vaccination). Undetected cases vary by region and are estimated based on IFR data and deaths. Vaccination data from 1. **NYT**

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OLIVER WYMAN’S PANDEMIC NAVIGATOR IS A SUITE OF MODELS THAT HAS BEEN HELPING BUSINESS & POLICY LEADERS MAKE DECISIONS DURING THE CRISIS

Elements of the Pandemic Navigator toolkit

| Near-term risk monitoring | • Updated daily for 3,000+ U.S. counties and 90+ countries  
|                          | • Measures detected and undetected cases (i.e., asymptomatic, untested cases)  
|                          | • Featured by the CDC and consistently recognized as top-performing in independent studies |
| Long-term risk modeling  | • Epidemiology scenarios to test impacts of policy measures, behaviors, vaccinations, and latest medical developments  
|                          | • Measures timing and threshold to achieve herd immunity  
|                          | • Available for all 50 U.S. states and 90+ countries |
| Event-specific risk analysis | • Calculates the probability of someone attending a gathering in a specified location (county-level in the U.S.) on a specific date with an active COVID-19 infection  
|                          | • Calculates the probability of contracting COVID-19, based on conditions at the gathering and attendee profile |
| Risk scores by geography | • 16-dimensional score that combines current and future cases, public health infrastructure, mobility patterns, and government policy measures in risk score  
|                          | • Available for 3,000+ U.S. counties and 90+ countries |

Visit our [website](#) to see a selection of our analytics.
PANDEMIC NAVIGATOR PERFORMANCE
Over the past six months, our model is emerging as one of the top COVID-19 models according to multiple independent model comparisons

What others are saying about the Pandemic Navigator:
“A” rating according to National Forecasting Evaluation Report comparing CDC-listed models for deaths forecasts
Only leading model to beat baseline forecasts 100% of weeks, compared to other CDC listed deaths forecasts
Consistently top-performing according to Steve McConnell’s weekly evaluations of forecast errors
Regularly recognized as leading model in independent modeler’s COVID-19 “Power Rankings”

Oliver Wyman “instantly became one of the top-performing models since its release...one of the few other models to have estimates of true infections”

- COVID-19 projections creator
### ADVANCES IN TESTING TECHNOLOGY HAVE GIVEN RISE TO AT-HOME ALTERNATIVES TO IN-PERSON TESTING

<table>
<thead>
<tr>
<th>Administration</th>
<th>Time to results</th>
<th>Cost</th>
<th>Accuracy</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completely at-home rapid antigen test using a nasal swab</td>
<td>About 15-20 minutes</td>
<td>$30</td>
<td>• 95% sensitivity</td>
<td>Purchase at drugstores or online with a prescription</td>
</tr>
<tr>
<td>At-home rapid antigen test under the guidance of a telehealth professional using a nasal swab</td>
<td>About 20 minutes on a portal with scannable test results</td>
<td>$25</td>
<td>• 64.2% sensitivity for symptomatic cases(^3) • 35% of sensitivity for asymptomatic cases(^3)</td>
<td>Order online after meeting eligibility criteria</td>
</tr>
<tr>
<td>Completely at-home rapid LAMP test using a nasal swab</td>
<td>Less than 30 minutes</td>
<td>$50</td>
<td>• Unavailable</td>
<td>Currently released to healthcare providers in bulk</td>
</tr>
<tr>
<td>Completely at-home rapid test using a nasal swab</td>
<td>Around 20 minutes</td>
<td>Unavailable</td>
<td>• 99% sensitivity • 98% specificity</td>
<td>Scaling up to a production capacity of 100K+ tests per day</td>
</tr>
</tbody>
</table>

\(^3\) Available for purchase

Ellume; AARP; Abbott; 3. Fierce; Lucira; Insider; Pixel; Cue

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## Vaccination Policy Varies Across Industry and Classification of Employees

Employers largely will avoid mandating vaccines apart from a select few

<table>
<thead>
<tr>
<th>Employer</th>
<th>Approach</th>
<th>Mandate</th>
<th>Pay</th>
<th>Facilitate</th>
<th>Encourage</th>
<th>Lobby</th>
</tr>
</thead>
<tbody>
<tr>
<td>United</td>
<td>• Plans to make the vaccine mandatory, while accommodating for federally mandated religious beliefs and medical conditions</td>
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<tr>
<td>Dollar General</td>
<td>• Equivalent of 4-hours pay to employees who get vaccinated</td>
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<tr>
<td>Trader Joe’s®</td>
<td>• Equivalent of 2-hours pay to employees who get vaccinated</td>
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<td></td>
<td>• Commitment to adjust schedules so employees have time to get vaccinated</td>
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<tr>
<td>Instacart</td>
<td>• $25 stipend to employees who get vaccinated</td>
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<td></td>
<td>• Lobbied state and local authorities for delivery workers to be prioritized in vaccine roll-out</td>
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<tr>
<td>DoorDash</td>
<td>• No plans to incentivize workers for becoming vaccinated</td>
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<tr>
<td></td>
<td>• Lobbied state and local authorities to prioritize delivery workers in vaccine roll-out</td>
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<tr>
<td>Target</td>
<td>• Vaccine will be free to employees under employer’s health insurance</td>
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<td></td>
<td>• Planning for vaccine to be readily accessible in 1,700 stores with in-store CVS pharmacies</td>
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<td>Marriott</td>
<td>• Urging employees to get vaccinated and highlighting benefits of doing so</td>
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<td></td>
<td>• Discussions underway to bring in vaccine providers into larger hotels to administer shots</td>
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<tr>
<td>Facebook</td>
<td>• No plans to require employees to get vaccinated</td>
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<td>• Allowing staff to work remotely at least until the summer 2021</td>
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<td>Discover</td>
<td>• Encouraging, but not requiring employees to get vaccinated</td>
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<td></td>
<td>• Allowing staff to work remotely at least until the summer 2021</td>
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<td>Verizon</td>
<td>• Vaccine will be free to employees under employer’s health insurance</td>
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<td></td>
<td>• No comments on whether workers will be required to get vaccinated</td>
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<td>Emerson</td>
<td>• No mandate for employees to become vaccinated</td>
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<td></td>
<td>• Considering 401(k) contributions or providing gift cards to local businesses as incentives</td>
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</tbody>
</table>

Sources: 1. Wall Street Journal 2. CBS News
READ OUR LATEST INSIGHTS ABOUT COVID-19 AND ITS GLOBAL IMPACT ONLINE

Oliver Wyman and our parent company Marsh and McLennan (MMC) have been monitoring the latest events and are putting forth our perspectives to support our clients and the industries they serve around the world. Our dedicated COVID-19 digital destination will be updated daily as the situation evolves.

Visit our dedicated COVID-19 website
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