

NAVIGATING THE LONG HAUL TO NORMALCY

Updated from December 2020



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When we wrote Navigating the Long Haul to Normalcy in November, we stated that return to Normalcy was plausible in both July and September of 2021, but more likely in September given the inherently aggressive assumptions needed to achieve potential Herd Immunity Threshold (pHIT) by July. Since then, multiple developments have shifted the landscape.

- **Fall surge with very high new daily case rates:** Case rates in the US have been breaking prior records for well over a month, with new daily case rates exceeding 100,000 every day since November 6 and breaching 200,000 for the first time on December 2. Unabated, this level of natural infection will push us towards pHIT much faster, but will come at a significant toll in terms of additional deaths
- **Moderna and Pfizer filed for EUAs and are preparing to distribute first doses:** On the bright side, two front runner vaccines have gathered sufficient data to file for approval with the FDA in late November and have both announced readiness to begin vaccination as early as late December. If the vaccines are granted approval and distribution begins as planned, the timeline to pHIT shortens
- **Vaccine efficacy exceeds expectations:** Both Moderna and Pfizer announced very high efficacy from their initial data (94.5% and 95% respectively). While it is likely that the final efficacy outside of a carefully controlled clinical trial setting will prove somewhat lower, these efficacy numbers would still exceed expectation and accelerate the timeline to normalcy

These developments have narrowed the possible paths to achieving herd immunity. Our revised analysis suggests we may achieve pHIT in the US as soon as June. At this point, the key parameters that matter are:

- **How “hot” we continue to run:** Below we examine a range of daily new case rates from 70,000 (roughly similar to summer surge) to 150,000 (similar to what we were seeing in mid-late November of this surge). On its own, this range of run rates can influence timing to pHIT by ~5-6 weeks, but will come with a heavy price. A 150,000 daily run rate will result in >100,000 additional deaths in 2021 vs a 70,000 run rate
- **How fast we can produce, distribute and administer the vaccines:** Below we examine a band between an optimistic scenario (vaccination begins at the end of December and continues steadily from there) and a more conservative one (vaccination ramp-up is very slow early on and only begins to meaningfully climb well into Q1 of 2021). This band follows the date of the second dose, and allows for variation in vaccine production (e.g., given the recent announcement from Pfizer, we may see an initial burst of vaccinations in Q1 and then a significant lag until June) and distribution speed as well as variation in vaccine uptake by the population (surveys over the course of the pandemic have suggested 50-70% of the population are willing to be vaccinated, but it is unclear how this number will be influenced by recent efficacy news or how quickly that willingness will translate into completed vaccinations). On its own, this range of vaccination speeds can influence timing to pHIT by ~6 weeks
- The eventual efficacy of the vaccines and the potential presence of pre-existing immunity (examined at ~5-10% of the population) also influence timing to pHIT, but these two parameters have a lower impact (about a few weeks each) on the eventual timing (unless these turn out to be drastically different than anticipated)

While the desperately awaited return of normalcy has drawn nearer due to the recent developments, it is critical to remember that:

There is still a long way to go

While vaccine progress has been heroic, it is not a silver bullet that will solve our problems in a month. Moreover, as it is implemented, the sequential vaccination strategy will bring sequential benefits to sub-populations vaccinated.

The accelerated timeline doesn't come cheap

This timing relies heavily on daily new case rates that are breaching hospital capacity across the nation and driving the heaviest death toll seen since the start of the pandemic. Our actions will likely slow these daily new case rates down in 2021.

Things are likely to get worse before they get better

Faced with overburdened hospital systems and rising death tolls, local governments may rely on a new wave of restrictive measures (e.g., new stay-at-home orders went into effect in parts of CA on December 7) that will test the already strained mental and economic state of the population.

WHEN WILL WE RETURN TO NORMAL?

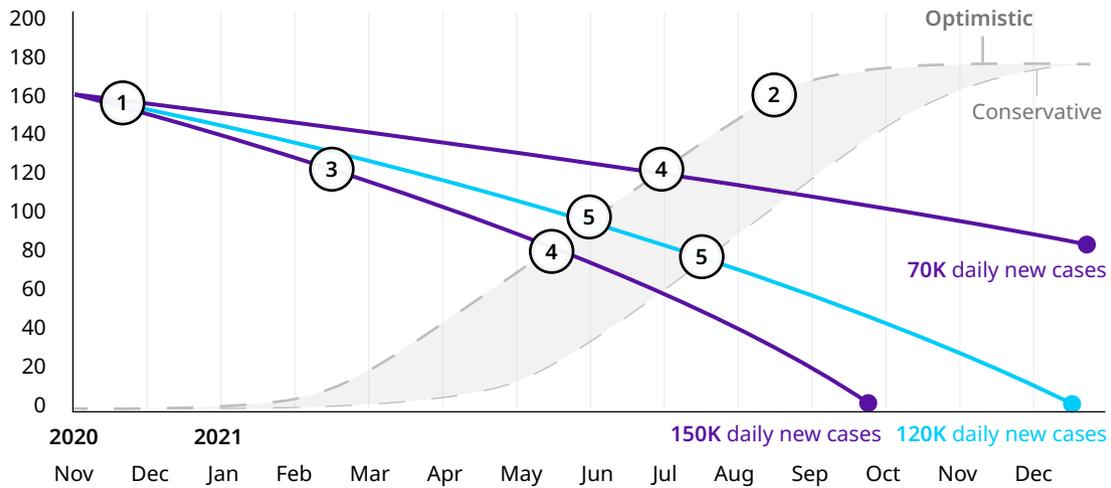
Depends on case counts and vaccinations

To return to some sense of normalcy, we must achieve the potential Herd Immunity Threshold, pHIT, or the point where there is enough cumulative immunity present in the population to slow the natural reproduction rate of the virus. Daily case counts and the pace of vaccination majorly impact when that threshold is met. The below graphic shows how three different case count rates affect pHIT timing. The vaccination scenario band represents a range of different vaccine scenarios.

Exhibit 1: Number of people needing to be vaccinated/number of people vaccinated

Million

- ① Number of people needing to be vaccinated to reach pHIT
- ② Number of people receiving vaccinations in 2021
- “High case counts” scenario: Averaging 120K daily new cases, 85% vaccine efficacy, 0% pre-existing T-cell immunity, > 15 months duration of immunity
- Adjustment: Daily new cases
- The range also accounts for vaccination scenarios where ramp-up delays occur, but pace of uptake thereafter is quicker than envisioned
- - Shown for Optimistic and Conservative scenarios



- ③ Number of people needing vaccinations to reach pHIT decreases as more new COVID-19 infections occur
- ④ With a 150K daily run rate, pHIT is achieved ~6 weeks faster than with a 70K run rate, but results in >100K more deaths
- ⑤ Under these assumptions, pHIT may be reached from early-Jun to late-Jul

Note: Dates recorded are on the 16th of every month.

Source: Oliver Wyman

This article has since been updated at [The Long Haul to Normalcy](#).

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