

## Immunity is Closer Than You Think

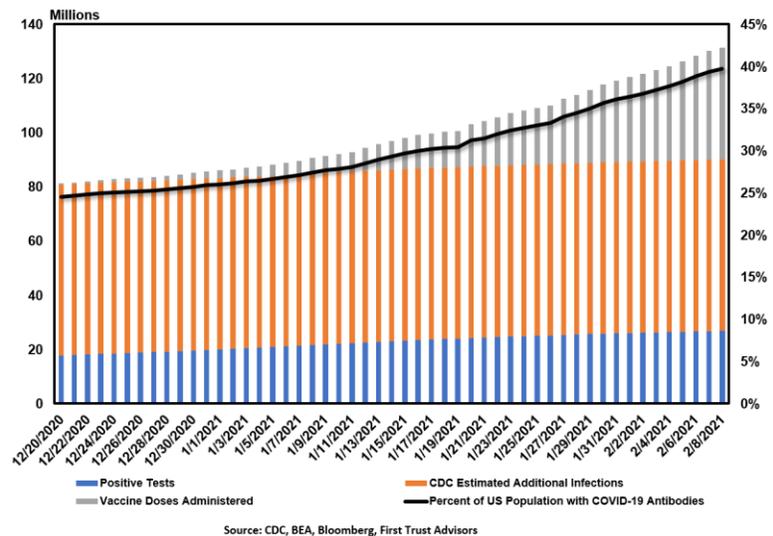
While the US has been a focus for criticism throughout the COVID-19 pandemic, its vaccine rollout has so far been the envy of the world. Since Operation Warp Speed eliminated many of the bureaucratic hurdles to FDA approval and helped deliver a vaccine in record time, the US has been steadily growing its distribution system. Currently, about 1.5 million Americans are being vaccinated a day, putting us on pace to easily beat the Biden Administration’s original goal of 100 million doses in 100 days. Cumulatively, 44 million vaccine doses have been administered, with 10 million people having gotten the recommended two doses that offer 90%+ effectiveness. That means roughly 34 million Americans, or 10% of the population, have some level of immunity to the virus.

While controversial early in the pandemic, many are now more familiar with the term herd immunity, which represents a hypothetical threshold of the population that needs pre-existing immunity to a virus through antibodies in order for transmission to break down. The scientific consensus for that threshold seems to be about 70%, so from a vaccine-based measure we are about 1/7th of the way there.

However, we think that looking at vaccine doses alone is leaving out a huge part of the picture. We know that prior infection from COVID-19 generates an immune response, and that immunity seems to be long lasting. Recent studies have proven that immunity lasts 3-6 months, but even that is probably understated. There are currently 100 million confirmed cases of COVID-19 worldwide, but only 47 confirmed cases of reinfection. Given that the pandemic has been raging for over 6 months and reinfections are still exceedingly rare, a reasonable conclusion is that antibodies from prior infection will be an important component to reaching herd immunity.

So, how many people have had COVID-19 in the US? The official count of positive tests is currently 26.9 million according to the COVID Tracking Project. But this leaves out a huge chunk of Americans who have had the virus and never got an official test that shows up in the national statistics. The CDC currently estimates that we only find about one out of every four infections, meaning north of 100 million Americans have likely been infected at some point in the past year and now have antibodies from the virus.

By our calculations which you can see in the nearby chart, including official positive tests, estimated additional infections, and vaccine doses, shows that roughly 40% of the US population currently has antibodies. That means we are currently over halfway to the 70% goal, and projecting vaccinations forward shows we are likely to get the rest of the way there in mid-late April as vaccines continue to do the heavy lifting.



While this is bound to include some double-counting, with people who have been previously infected getting a vaccine for example, it’s a much better measure than just looking at vaccine doses alone when estimating where we are in the fight against this terrible virus. In fact, with recent COVID data showing daily cases and hospitalizations are down by 57% and 36% respectively since the peak, we may already be hitting a point where preexisting immunity is playing a role in driving down transmission.

This in turn is positive news for the US economy in 2021 because it means we will be able to roll back the pandemic restrictions that remain the biggest impediment to a further recovery faster than many expect. Stay positive and stay invested, immunity to COVID-19 is closer than you think.