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This week's epi update continues to provide a gut check regarding the ability of SARS CoV2 to persist and surge despite our best efforts. **It appears NJ has entered a 3rd wave** before we fully declined off the 2nd wave which you can see in **Illustration 1**. We have passed 900,000 cases. If we recall from the first surge, the peak occurred during the month of April as you can see in **Illustration 1**. Once May 2020 arrived, cases dropped dramatically because of the draconian public health effort of a complete shut down and likely warming weather. Coronaviruses like other respiratory viruses tend to be cool weather foes. **Illustration 2** demonstrates the year-by-year peak of coronavirus infections occur during the cooler months clearly by following the red line which represents all coronavirus cases. Although the public health measures help to flatten the curve significantly, the weather is our greatest ally for respiratory virus illness. We can fully expect that as we approach the warmer weather it will again put pressure on viral circulation and help us achieve control as we continue vaccine rollout. For now, we need to be prepared for more cases in the hospital over the next 2 weeks pending the shape of the epi curve over the next week.

It is important to **recall that the cases we are seeing now reflect the identified cases from 5 to 7 days ago** and the currently identified cases will be reflected in hospital admissions 5-7 days from now. So, if we look at the current NJ Epi curve in **Illustration 1**, you see the last 5 days are higher than the prior 5 days. Therefore, you could expect hospital cases over the next week to be higher than this week. The RWJS test positivity in **Illustration 3** reflects the news and demonstrates **a running average test positivity of 12% which is the highest we have seen since January 19<sup>th</sup>**. The state wide positivity varies by county but is hanging in the 9-10% range.

NJ is part of the regional outbreak that involves NY, NY, CT, PA, RI and MA as seen in **Illustration 4**. I originally pointed out NJ's leading position on this map several weeks ago when NJ and NY were leading the nation in cases. Now the region is leading the nation with **NJ still out in front with the most cases per 100,000 population**. This is striking particularly given the percentage of NJ residents with identified infection - 10%, percentage of people in NJ vaccinated with 1 dose - 31% and the presumed under reported infection of at least 5-10% which means close to 50% of NJ residents now have some degree of immunity. **The data on protection from vaccine keeps getting better with the latest information suggestion first dose protection of**

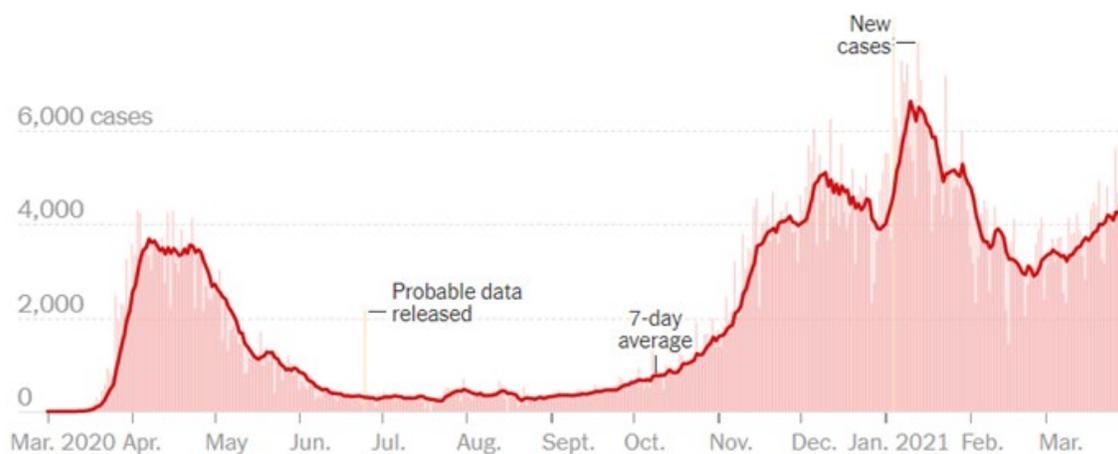
80% or more for all vaccines for serious illness. The number of potential persons who can get seriously ill is dropping quickly and I am optimistic that in the next couple of weeks the NJ 3rd wave will peak and fall abruptly. We should see a particularly steep decline for the hospital census in the next couple of weeks because of the warmer weather and continued increase in vaccine deployment which will dramatically limit the number of people who get ill and require hospitalization.

The **main caveat to this scenario is the distribution of variants** with inherent resistance to immune surveillance by natural infection or vaccine immunity. **Illustration 5** is from the NJDOH site monitoring variants in NJ. You can see that B1117 is the most prevalent variant in NJ. Of note in Somerset County, we are also seeing B117 but have a representation of the B1526, or NY Variant. **The B1117 variant is well controlled by vaccine immunity** as demonstrated in both England where it was discovered and Israel where it became prevalent but was stopped in dramatic fashion by their vaccine effort with the Pfizer vaccine campaign. On the other hand, **there is concern that B1526 will be at least partially resistant to immune surveillance** to vaccine and natural infection which can lead to persistence of the virus in a community. **More importantly, both variants are much more transmissible, even 50% more transmissible.** This means that instead of taking 10 minutes of exposure it could take on 5 minutes of exposure to transmit the virus. You can see how this 50% increase can dramatically increase disease even if we do not change anything about our pandemic public health measures.

## ILLUSTRATION 1

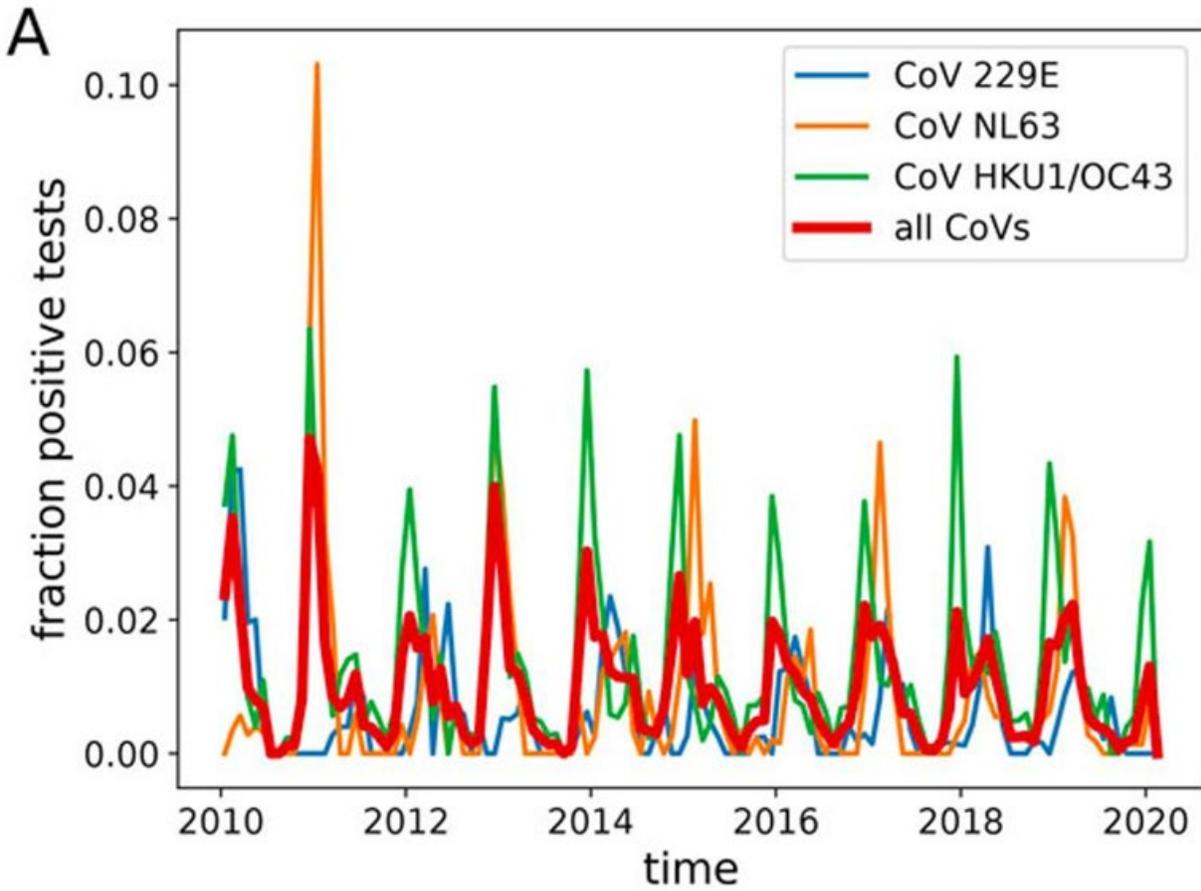
# New Jersey Coronavirus Map and Case Count

Updated March 30, 2021, 7:46 A.M. E.T.



|                     | TOTAL REPORTED | ON MARCH 29 | 14-DAY CHANGE                             |
|---------------------|----------------|-------------|---|
| <b>Cases</b>        | <b>900,271</b> | 3,621       | +20% <span style="color: red;">→</span>   |
| <b>Deaths</b>       | 24,404         | 15          | -33% <span style="color: black;">↔</span> |
| <b>Hospitalized</b> |                | 2,285       | +14% <span style="color: black;">→</span> |

## ILLUSTRATION 2

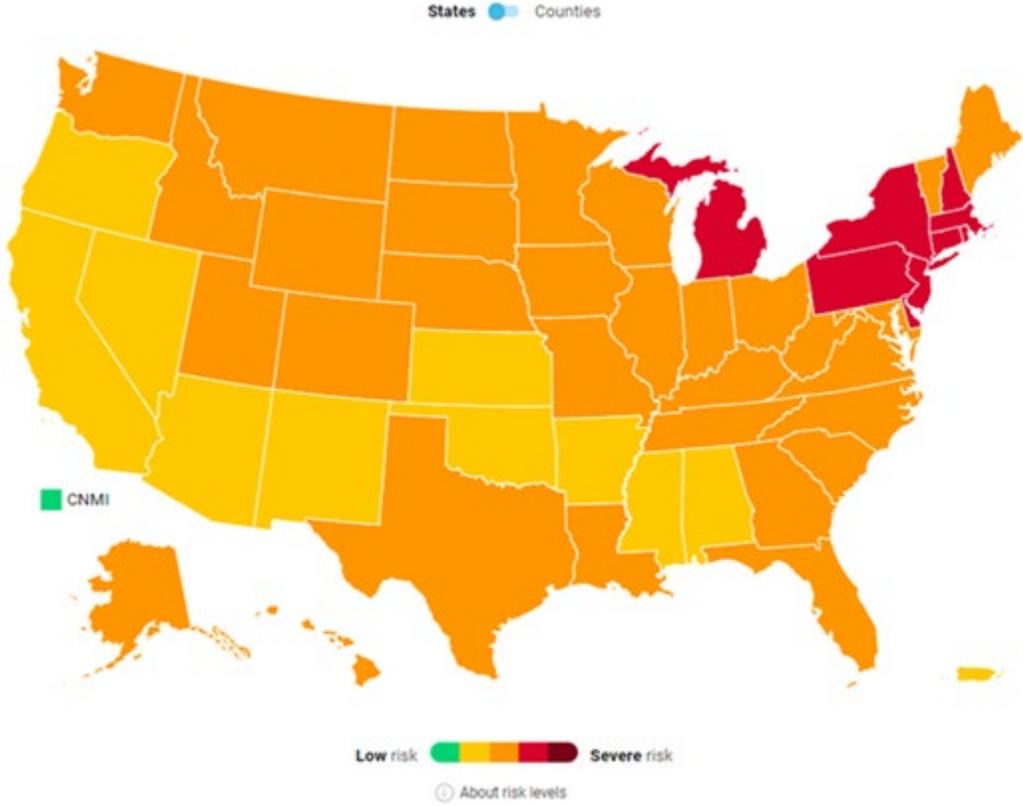


## ILLUSTRATION 3

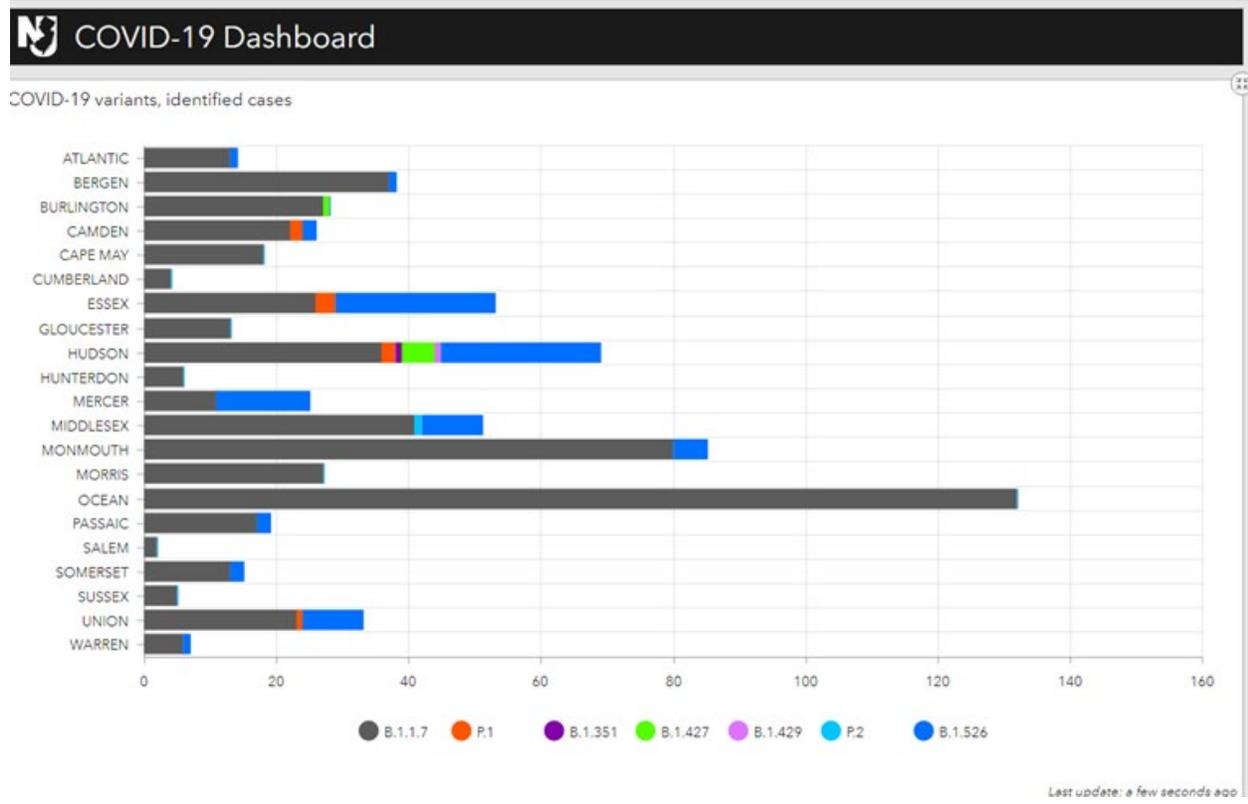
| Date<br>Lab Receipt or<br>Admit | Rolling 7 Day Positive |                |       |
|---------------------------------|------------------------|----------------|-------|
|                                 | Positive               | Total<br>Tests | Ratio |
| 02/15/21                        | 48                     | 489            | 9.8%  |
| 02/16/21                        | 48                     | 505            | 9.5%  |
| 02/17/21                        | 47                     | 544            | 8.6%  |
| 02/18/21                        | 45                     | 550            | 8.2%  |
| 02/19/21                        | 43                     | 559            | 7.7%  |
| 02/20/21                        | 47                     | 544            | 8.6%  |
| 02/21/21                        | 43                     | 573            | 7.5%  |
| 02/22/21                        | 36                     | 542            | 6.6%  |
| 02/23/21                        | 32                     | 519            | 6.2%  |
| 02/24/21                        | 34                     | 534            | 6.4%  |

|          |    |     |       |
|----------|----|-----|-------|
| 02/25/21 | 37 | 533 | 6.9%  |
| 02/26/21 | 36 | 538 | 6.7%  |
| 02/27/21 | 35 | 559 | 6.3%  |
| 02/28/21 | 32 | 562 | 5.7%  |
| 03/01/21 | 34 | 577 | 5.9%  |
| 03/02/21 | 31 | 595 | 5.2%  |
| 03/03/21 | 31 | 549 | 5.6%  |
| 03/04/21 | 29 | 539 | 5.4%  |
| 03/05/21 | 29 | 551 | 5.3%  |
| 03/06/21 | 26 | 523 | 5.0%  |
| 03/07/21 | 24 | 496 | 4.8%  |
| 03/08/21 | 23 | 481 | 4.8%  |
| 03/09/21 | 26 | 467 | 5.6%  |
| 03/10/21 | 25 | 477 | 5.2%  |
| 03/11/21 | 25 | 483 | 5.2%  |
| 03/12/21 | 30 | 468 | 6.4%  |
| 03/13/21 | 35 | 488 | 7.2%  |
| 03/14/21 | 38 | 479 | 7.9%  |
| 03/15/21 | 44 | 487 | 9.0%  |
| 03/16/21 | 44 | 510 | 8.6%  |
| 03/17/21 | 48 | 532 | 9.0%  |
| 03/18/21 | 44 | 532 | 8.3%  |
| 03/19/21 | 44 | 547 | 8.0%  |
| 03/20/21 | 44 | 540 | 8.1%  |
| 03/21/21 | 44 | 547 | 8.0%  |
| 03/22/21 | 38 | 553 | 6.9%  |
| 03/23/21 | 37 | 544 | 6.8%  |
| 03/24/21 | 35 | 546 | 6.4%  |
| 03/25/21 | 44 | 557 | 7.9%  |
| 03/26/21 | 47 | 539 | 8.7%  |
| 03/27/21 | 52 | 518 | 10.0% |
| 03/28/21 | 57 | 492 | 11.6% |
| 03/29/21 | 57 | 451 | 12.6% |

# ILLUSTRATION 4



# ILLUSTRATION 5



As submitted by:

**Ronald G Nahass, MD, MHCM - President**

**ID Care – The Right Specialist – The Right Care**

**The largest organization in NJ dedicated to the diagnosis, treatment, and prevention of infectious diseases.**