



Town of New Castle, NH
Settled 1623
Incorporated 1693

Public Health Update June 4, 2021

As things are going well in New Hampshire and our town with respect to COVID, I will be phasing out the weekly updates and simply sending out an update if important new information comes out. Additionally, at the end of the update I have attached the updated PFAS information sheets from Dartmouth.

If you are eligible for the vaccine and you have not had it, please have the vaccine or talk to me with any concerns. Everyone age 12 and older is eligible to be vaccinated.

COVID-19 vaccines could offer lasting protection without booster doses needed: Early clues indicate that existing COVID-19 could offer lasting protection without the need for booster doses. But studies to confirm these theories are underway. Pfizer and Moderna have both estimated that people may need yearly shots to boost their protection against the coronavirus, but some experts say they may only be needed every few years. "I would be surprised if we actually needed a yearly booster shot," said Dr. Paul Offit, a vaccine specialist at the Children's Hospital of Philadelphia who advises the Food and Drug Administration.

Rapid testing highly accurate in children. Important implications for getting back to "regular life."- Brief 19, June 2, 2021

For those who are vaccinated wondering what activities they can do, decisions are getting easier all the time; according to the US Centers for Disease Control and Prevention, most activities are safe, indoors or outdoors, mask or no, especially in areas with low case counts.

But what about the 73 million infants, children, and adolescents living in the United States? More specifically, how safe is "normal life" for the 48 million children and infants in the US who are under the age of 12, and for whom there are currently no authorized coronavirus vaccines? At the moment there are two options: "chance it" or "test it."

The question is: which test? The problem with standard PCR testing (which is the test that most people have had) is that these tests detect the genetic material of SARS-CoV-2, the virus that causes covid-19. But positive results do not tell you whether a person is contagious. In fact, the tests can be positive for days or weeks after the contagious period. But rapid antigen tests are different. These tests detect intact viral particles. Therefore, the results of rapid antigen tests tell us whether the tester is contagious or not. That has implications for whether they need to continue to isolate or not.

A new study in the journal *Pediatrics* tested children with symptoms highly suspicious for covid-19, or known exposure and a combination of possible covid-19 symptoms. All subjects had symptoms for under 7 days, which would capture a majority of the contagious period for most

covid-19 patients. One nostril was tested with the usual PCR test, and the other was tested with a rapid antigen test. For children ages 0-6, 100 percent of the samples that tested positive on the PCR test also tested positive on the rapid antigen test. Among subjects aged 7 to 20, 85 percent of the positive tests matched. This means that rapid tests are not only detecting a grand majority of PCR-confirmed cases, but that our assumptions around contagion in the first week of symptomatic disease appear to be holding up.

Positive tests are important because they send identify kids who might be contagious. But another key to a good test is that a negative result is meaningful. Fortunately, a negative result on a rapid test was 100 percent valid for children ages 0-6, and around 93 percent valid for those ages 7 to 20.

As good as those numbers are, does that mean that up to 7 percent of cases would be “missed” by rapid tests? No. If that were true, we might be worried, though serial (i.e. repeat) testing for symptomatic individuals is likely the safest overall approach in suspicious cases. But in reality, this study used PCR tests as the “gold standard.” That implies that the PCR is the “correct” answer. However, if the question is whether or not the test subject had “contagious disease,” using PCR as the “gold standard” is actually not the correct test at all. Even in light of that, these data show how schools and other public accommodations might use rapid antigen testing to insure a contagion-free zone.

So, what should kids be allowed to do? If case numbers are low enough in any given area, the odds are good that there will be vanishingly few pediatric covid-19 cases serious enough to warrant hospitalization, and even fewer deaths will occur. In those areas, testing will be less essential as a part of “regular” life this fall. But in areas with inadequate vaccination rates, or if vaccine breakthrough variants become prevalent, a small but important number of children could be substantially harmed by covid-19 when in-person learning resumes nationally, as well as other close-contact activities. In such locales, “rapid antigen testing” could be the difference between whether schools and other child-centric activities remain open or not.

—*Jeremy Samuel Faust, MD MS*



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PFAS IN NEW HAMPSHIRE: What you need to know

Per- and poly-fluoroalkyl substances are a group of human-made chemicals (of which there are thousands) **known as PFAS**. These chemicals were developed in the 1940s to repel water or make a surface slippery. Since then, PFAS have been adapted for many consumer products and are now common drinking water contaminants throughout the United States.

HOW ARE WE EXPOSED TO PFAS IN NEW HAMPSHIRE?



Water & Diet

Over many years, PFAS have been discharged to fresh water and ocean water, which contaminates drinking water for people and results in PFAS contamination in fish. Food packaging, such as microwave popcorn bags, also contains PFAS, leading to food contamination.



Air

PFAS outdoor air concentrations are found to be highest near industrial facilities that discharge PFAS emissions. These emissions are transported by wind and deposited in soil and in oceans, lakes, rivers and streams.



Soil

PFAS make their way into soil due to discharge from industry, deposits from the air, leaching from a landfill or sludge from wastewater treatment plants placed on the land. PFAS in soil then enter the water.



Consumer & Industry Products

PFAS are used in industrial processes and are incorporated into many water, stain and grease-resistant products, including clothing, carpet, furniture, non-stick cookware, food packaging, takeout containers, personal care products and ski waxes. PFAS have also been used historically in firefighting foam.



HOW DOES PFAS REACH PEOPLE IN NH?



Industry



Environment



Human Exposure



Consumer & Industry Products



Waste Management

WHO IS AT RISK FROM PFAS EXPOSURE?

EVERYONE! BUT IN PARTICULAR:



Residents living near areas with higher levels of PFAS in the water, air and soil



Anyone drinking water from contaminated water sources including **private wells**



Pregnant women, babies and children who are especially sensitive to PFAS



People who regularly use or produce products containing PFAS



People who eat certain packaged foods or fish that contain PFAS

[Click Here for an FAQ with more information!](#)

PFAS interfere with:

- the body's hormones
- the ability to fight infection
- growth and development in children

PFAS increase risk of:

- high cholesterol
- thyroid disorders
- certain types of cancer



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Yours in Health,
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