

WHITE PAPER

Vaccinations During the COVID-19 Pandemic

Why They Matter More Than Ever



Childhood immunizations and adult vaccines help prevent millions of deaths. Vaccinating children born in the U.S. from 1994–2013 is estimated to prevent 322 million illnesses, 21 million hospitalizations, and 732,000 deaths over the course of their lifetimes.¹

Vaccines have been shown to reduce the incidence and prevalence of a range of diseases, as well as decrease morbidity and mortality rates. Yet, the U.S. spends nearly \$27 billion on treating vaccine-preventable deaths among adults.²

One study, conducted in 94 low- and middle-income countries, estimated the return on investment (ROI) for immunization programs during the Decade of Vaccines to be between \$16 to \$44 for every dollar invested.³

The novel coronavirus has disrupted both health and economies around the world, and there are no cures or vaccines available for it. Understandably, therefore, much of the focus currently is on a vaccine for the coronavirus. At the same time, there are other serious infections that can be prevented that are all too often ignored or dismissed — and vaccination rates for which, are falling. This fall the ongoing pandemic will coincide with the annual influenza season.

If people do not get the flu vaccine — which is easily available, often at no cost to the consumer — it could put them at greater risk for either getting sick and needing medical treatment, or for complications from COVID-19.

Getting a flu shot can help reduce the impact of respiratory illnesses. More people getting sick because they didn't get a flu shot could place an added burden on the system.



Vaccinating children born in the U.S. from 1994–2013 is estimated to prevent:¹

322M
illnesses

21M
hospitalizations

732K
deaths

Childhood
immunizations
↓ ~60%
in April 2020⁴



Maintaining vaccination rates during the pandemic is critical to preventing illnesses that could lead to more people needing medical care, and a potential increase in the number of hospitalizations that could further strain the health care system.⁵ Vaccination rates for seasonal diseases aren't the only concern.

Even before the pandemic, only 58 percent of children were current with recommended immunizations between the ages of 19 months to 35 months, according to one report.⁶ The COVID-19 pandemic has made the challenge even greater. According to recently published data, childhood immunizations were down about 60 percent, in aggregate, in April of this year compared to a year ago.⁴ Declines in vaccination rates ranged from 75 percent for meningococcal and HPV to 33 percent for Rotavirus and the family of vaccines that includes diphtheria, tetanus toxoids, and acellular pertussis, according to a report from the World Health Organization (W.H.O.), UNICEF, and Gavi, the Vaccine Alliance.

The falling rates of vaccinations could signal a looming health crisis. Disruption to immunization programs from the COVID-19 pandemic threatens to unwind decades of progress against vaccine-preventable diseases like measles, according to Dr. Tedros Adhanom Ghebreyesus, Director-General of the W.H.O.

The Cost of Not Vaccinating⁷



- **About one out of 1,000** children infected with chickenpox will develop severe pneumonia (infection of the lungs) or encephalitis (infection of the brain).
- **Five to 10 percent** of people who get meningococcal meningitis die even with antibiotic treatment. Of those who live, another 11 percent to 19 percent lose their arms or legs, become deaf or intellectually disabled, have problems with their nervous systems, or suffer seizures or strokes.
- **Rubella infection during pregnancy** can cause birth defects including deafness, cataracts, heart defects, intellectual and developmental disabilities, and liver and spleen damage.
- **Most newborns and about 50 percent** of children who are infected with hepatitis B develop chronic hepatitis. Chronic hepatitis damages the liver and can lead to liver cancer or cirrhosis.

Why Vaccination Matters

Immunization is key to preventing disease and staying healthy. Vaccines have been so successful in helping keep people healthy that they are considered one of the greatest public health achievements of the 20th century. In one year, vaccines prevent more than 33,000 deaths in the U.S., and between 2 and 3 million deaths worldwide.^{8,9}

Vaccination isn't just about an individual's health, either. A majority of people within a community getting vaccinated helps protect those who are not by bestowing what is known as "herd immunity" or "community immunity."¹⁰ This is because, for each person who gets vaccinated, there will be one less potential "spreader" — someone who may transmit the disease to others in the community.

This is especially important to protect:

- ✓ Babies too young to receive vaccines
- ✓ Unvaccinated children and adults
- ✓ Pregnant women
- ✓ The elderly
- ✓ Individuals with weakened immune systems, such as those with asthma, chronic illness, or undergoing cancer treatment
- ✓ Individuals who are allergic to vaccine components

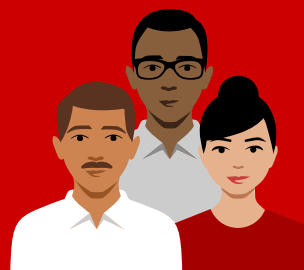
It may seem that getting vaccinated against diseases that have become very rare in the U.S. — such as polio or diphtheria — is not especially important. Why keep vaccinating children, or even adults, against diseases that aren't a major threat? The important thing to remember is that these conditions have become rare primarily because a vast portion of the population has been vaccinated against them. If we stop vaccinating, we take away the protection vaccines offer, meaning more people will once again become infected by and spread preventable diseases to others — potentially undoing years or even decades of progress.

A good example of this is measles. In many communities in the U.S. measles vaccination rates have fallen over the years for different reasons — often because parents are reluctant to vaccinate their children based on either religious or other beliefs.

There were nearly 1,300 individual cases of measles in 31 states across the country last year — **the highest since 1992.**¹¹

Of these, 128 were hospitalized and 61 reported complications such as pneumonia and encephalitis.¹¹ A majority of those who got sick had not been vaccinated.

Getting vaccinated is not just about personal choice — **it is a public health issue.**



More than 73 percent of the cases were in New York and it nearly lost the U.S. its measles elimination status, which it has maintained for nearly two decades.¹² Measles outbreaks continue to occur in countries around the world, so there is always a risk of measles importations into the U.S. When measles is imported into a community with a highly vaccinated population from elsewhere, outbreaks either don't happen or are usually small.¹³

Adults who do not get vaccinated also put others — like children — at risk. For instance, adults are the most common source of pertussis, also known as whooping cough, which can be deadly in infants.

Falling vaccination rates could jeopardize the herd immunity that communities have built up against a disease like measles. Public health officials estimate that a community vaccination rate between **93 percent to 95 percent** is necessary to prevent a widespread outbreak of measles.¹⁴

Recommended Vaccines



The U.S. Centers for Disease Control and Prevention (CDC) recommend the following vaccinations:¹⁵

✓ **Flu (Influenza)**

All adults get a flu vaccine each year, especially those at higher risk of complications from the flu — including pregnant women, older adults, and those with chronic health conditions.

✓ **Tdap (Tetanus, Diphtheria, Pertussis)**

One dose for adults if they did not receive it when they were younger to protect against whooping cough and a Td (tetanus and diphtheria) booster shot every 10 years.

For pregnant women during the third trimester to protect themselves and their newborn against whooping cough.

✓ **HPV (Human Papillomavirus)**

for adults between 19 and 49 years of age to protect against six HPV-related cancers and genital warts. This is also recommended for men and women up to age 26 if they weren't vaccinated when they were younger.

✓ **MMR (Measles, Mumps, Rubella)**

At least one dose for anyone born after 1957 unless they have had measles in the past or are immune to it.

✓ **Shingles**

Two doses for adults 50 years and older to protect against the disease and complications.

✓ **Pneumococcal**

For those over 65 years old and those younger than 65 years with certain chronic health conditions.

Vaccinating Against Seasonal Influenza

Seasonal flu is one of several potentially serious — even deadly — diseases that can be prevented by a vaccine. The disease affects different people differently, and the virus usually changes every season. Despite the easy availability of a vaccine, often at no cost to the consumer, millions of people get the flu every year, and thousands to even hundreds of thousands of people get hospitalized or die from flu-related causes every year.

During the 2018–2019 flu season, vaccines prevented an estimated 4.4 million cases of the disease, along with 2.3 million medical visits, 58,000 hospitalizations, and 3,500 deaths.¹⁶

Getting vaccinated reduced the risk of severe illness needing admission to an intensive care unit by 82 percent from 2012 to 2015, according to one study. In recent years vaccines have reduced hospitalizations among older adults by an average of about 40 percent.¹⁷

DID YOU KNOW?

In the 2018–2019 Flu Season:¹⁸



- There were **490,600 hospitalizations** and **34,200 deaths**
- **More than 46,000 children** under the age of 18 years were hospitalized for flu-related reasons
- **57 percent of all flu-related hospitalizations** were among adults older than 65 years of age
- **75 percent of deaths** were among older adults
- **8,100 working-age adults** died from the flu

The ongoing COVID-19 pandemic has made getting a flu vaccine even more important this season, especially among high-risk groups. Those at high risk from flu — the elderly and those with underlying conditions — are also at high risk for the illness spread by the coronavirus. It is important to remember that flu can spread easily in schools and that children are also particularly vulnerable. More people in every age group getting a flu vaccine will help protect everyone and reduce the overall burden on the health care system, leaving more resources available for COVID-19 patients.¹⁹

Those who get the flu could also get infected with COVID-19 and may be at potentially higher risk for serious complications.





Vaccines — What You Need to Know

Often, the reason people don't get vaccinated or want their children to do so are misconceptions about immunizations. These could be concerns about vaccines not being safe, or a failure to understand the importance of vaccinations and the risks of not obtaining them. Here we try to answer some common questions.

- **Are vaccines safe?**

Vaccines are among the most rigorously tested medical products on the market. The rush to develop a coronavirus vaccine notwithstanding, it takes years — as well as millions of dollars and extensive testing — to develop a vaccine, get it licensed and make it available to the public. Even after a vaccine is launched, there are systems and processes in place to help scientists monitor the safety of vaccines and identify any rare side effects that may not have been found in clinical trials.

- **Are combination vaccines safe?**

Combination vaccines, just like individual ones, undergo rigorous testing to ensure safety and effectiveness before they are approved or recommended for use in the U.S. and have similar safety protocols in place to identify rare side effects. Combination vaccines also offer the same protection from disease — with fewer shots.

- **Do children need to be vaccinated if they are homeschooling or learning virtually?**

As workplaces, places of worship, and other social venues begin to open — even at limited capacity — there still could be a risk of infection. Schools are not the only places where infections among children occur. Getting children vaccinated even when studying online and/or at home can help protect them from preventable, and potentially serious diseases.²⁰

- **Are “required” vaccines more important than “recommended” ones?**

While schools don't require all children to obtain all recommended childhood vaccines, that doesn't make them less essential. Required vaccines are those that everyone in each age group should get with very few exceptions. However, all recommendations are based on science.

Schools don't require all vaccines for their students, but that doesn't make non-required vaccines — like HPV and flu vaccines — any less essential.

The Advisory Committee on Immunization Practices only adds a vaccination to the routine schedule if they think everyone in that age group should get it, with few exceptions. To keep your family protected, it is more important to follow the CDC's recommended vaccination schedule — whether a child is in school or not.

- **Isn't natural immunity better than vaccines?**

While both naturally acquired and vaccine-induced immunity can bestow long-term, even life-long immunity, getting vaccinated has greater benefits with fewer risks.⁷

Though natural immunity generally lasts longer, certain vaccines, including HPV, tetanus (DTaP), haemophilus influenzae type b (Hib), and pneumococcal, offer longer-lasting protection than natural immunity.

Diseases like influenza, HPV, polio, and pneumococcus have more than one infectious strain. A single vaccine can protect against multiple strains of a virus, while natural immunity acquired after an infection, only provides immunity to one strain. What's more, for diseases like pertussis, infections do not offer life-long immunity to even a single strain.

- **Does a flu vaccine increase your risk of getting COVID-19?**

There is no evidence that getting a flu vaccine increases your risk of getting sick from COVID-19.

- **Can I get seasonal flu even though I got a flu vaccine this year?**

Yes. It's possible to get sick with the flu even if you have been vaccinated. This is possible if you have been exposed to the flu virus shortly before getting vaccinated or during the period that it takes the body to gain protection after getting vaccinated. It takes two weeks from the time of vaccination to develop immunity.

- **Who should not get the flu shot?**

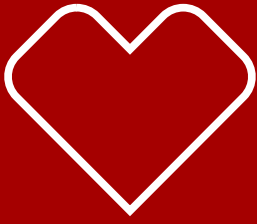
Children younger than 6 months and people with severe, life-threatening allergies to the flu vaccine or any of its ingredients.

- **If I am social distancing and wearing a mask, can I still get the flu?**

Yes, but people who are social distancing 100 percent of the time and wearing a mask may be at lower risk of catching the flu. However, with colder weather arriving it is likely that more activities will be held indoors increasing the risk of transmission.

- **Is it true that the flu season is likely to be mild this year?**

While Australia, where the flu season peaks from June to August, has experienced a much milder flu season this year, the likely causes are a record-high vaccination rate, and social distancing measures as well as travel restrictions.²¹ Given the variation in coronavirus mitigation measures across the U.S., that may not hold true for us.



Routine vaccination is an essential preventive care service for children, adolescents, and adults (including pregnant women). As we try to bring the COVID-19 pandemic under control, making sure all routine vaccinations are current is even more critical to prevent more people from getting sick from preventable diseases and keeping the health care system from being overwhelmed.

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1. <https://www.vaccinateyourfamily.org/why-vaccinate/vaccine-benefits/costs-of-disease-outbreaks>.
2. <https://www.ajmc.com/view/assessing-the-cost-of-vaccinepreventable-diseases>.
3. Sim SY, Jit M, Constenla D, Peters DH, Hutubessy RCW. A scoping review of investment cases for vaccines and immunization programs. Value Health. 2019;22(8):942–52.
4. <https://healthcostinstitute.org/hcci-research/the-impact-of-covid-19-on-the-use-of-preventive-health-care>.
5. <https://www.cdc.gov/vaccines/pandemic-guidance/index.html>.
6. <https://pediatrics.aappublications.org/content/145/3/e20190783>.
7. <http://www.immunizeforgood.com/fact-or-fiction/natural-immunity>.
8. <https://teamvaccine.com/2015/04/01/april-2015-immunization-observances/>.
9. <https://www.who.int/news-room/facts-in-pictures/detail/immunization>.
10. <http://www.immunizeforgood.com/fact-or-fiction/benefits-vs.-risks>.
11. <https://www.cdc.gov/measles/cases-outbreaks.html>.
12. <https://www.hhs.gov/about/news/2019/10/04/end-new-york-outbreak-united-states-keeps-measles-elimination-status.html>.
13. <https://www.cdc.gov/measles/elimination.html>.
14. <https://www.nytimes.com/2020/05/18/health/vaccinations-rates-coronavirus.html?action=click&module=RelatedLinks&pgtype=Article>.
15. <https://www.vaccinateyourfamily.org/adults/>.
16. <https://www.cdc.gov/flu/vaccines-work/burden-averted.htm>.
17. https://www.cdc.gov/flu/spotlights/2017-2018/vaccine-reduces-risk-severe-illness.htm?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fflu%2Fspotlights%2Fvaccine-reduces-risk-severe-illness.htm.
18. <https://www.cdc.gov/flu/about/burden/2018-2019.html>.
19. <https://www.ucsf.edu/news/2020/09/418406/why-covid-19-means-you-need-flu-shot-year>.
20. <https://shotofprevention.com/2020/08/20/do-kids-need-vaccines-if-theyre-doing-virtual-learning-or-homeschool-this-fall/>.
21. <https://www.health.gov.au/ministers/the-hon-greg-hunt-mp/media/record-165-million-flu-vaccines-to-protect-australians>.

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