



Skipped Childhood Immunizations Could Lead to Resurgence of Vaccine-Preventable Diseases

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Childhood vaccination rates dropped drastically during the COVID-19 pandemic, and it could potentially mean a resurgence of diseases we've long had under control.

Approximately 66% of children aged 5 months in the United States were up to date for all CDC-recommended childhood vaccines in 2016-2019. By May 2020, that number declined to 49.7%. ¹

A major driver of the downturn in vaccinations was canceled or skipped well-child visits. Shortly after the United States declared a national state of emergency in March 2020 to control pandemic spread of SARS-CoV-2, the virus that causes coronavirus disease 2019

(COVID-19), public health officials stressed the importance of social distancing and issued shelter-in-place and stay-at-home orders. These strategies slowed spread of the novel coronavirus, but also caused parents and healthcare providers to postpone doctors' appointments and well-child visits. Understandably concerned about potentially exposing their children to a serious contagious disease, many caregivers delayed all non-emergency medical care, including vaccines for children.

Unfortunately, these missed well-child visits resulted in "significant declines in complete vaccination coverage in children at all milestone ages...markedly increasing the risk of VPDs [vaccine-preventable diseases,]" according to a July 2021 Pediatrics article.²

Well-Visits: What They Are and Why They're Important

Healthcare providers monitor children's physical, emotional and social growth and development during regular well-visits. These "checkups," as they're commonly called, usually begin in the hospital shortly after birth and continue throughout childhood. The American Academy of Pediatrics (AAP) recommends 10 well-visits by the age of two, in part because children grow and change so quickly during the first two years of life.³ These visits are often scheduled in accordance with the U.S. Centers for Disease Control and Prevention (CDC)-recommended immunization schedule, which was designed to help protect children against infections from 14 different childhood diseases before age two.⁴

Well-visits for children cared for by the Kaiser Permanente Southern California healthcare system were down 35.5% from January to August 2020, compared to January to August 2019.⁵ Researchers note that well-child visits and vaccination rates have increased since August 2020, but also highlight a "significant decrease in measles vaccination coverage among 16-month-olds that worsened over time, increasing the risks of measles outbreaks...and underscoring the importance of catch-up vaccination in children who missed routine visits during the pandemic."⁶

How Vaccines Prevent Disease Outbreaks

After clean water, vaccines and vaccinations are the tools that have had the most positive impact on public health in all human history. Diseases such as measles, pertussis (whooping cough), and diphtheria spread quickly through families and communities. Since vaccinations have been widely available, deaths due to diphtheria, mumps,

pertussis, and tetanus have declined by 99%.⁷ Cases of and deaths due to hepatitis A, acute hepatitis B, *Haemophilus influenzae* type B, and varicella (chickenpox), vaccine-preventable diseases targeted by immunization since 1980, are down 80% or more.⁸ In the two decades that pneumococcal conjugate vaccines (PCV) have been part of the U.S. national pediatric immunization program, deaths due to invasive pneumococcal disease have declined by 25.4%.⁷

Most vaccines contain a very small number of antigens, which are the parts of germs that cause the body's immune system to respond to diseases.⁹ When a child is vaccinated, their immune system builds up antibodies to disease, so the body is prepared if the child is exposed to the disease.

The U.S. Food and Drug Administration (FDA) reviews safety and efficacy data before approving vaccines for public use; the CDC recommends administration of specific vaccines at different ages, so children are protected when their immune systems are the most vulnerable.¹⁰ Widespread vaccination also protects entire communities, as disease can't spread easily in places where most people are vaccinated.

Declining vaccination rates increase individuals' risk of contracting disease and may lead to disease outbreaks. Even small reductions in measles vaccination coverage can result in exponential increases in measles outbreaks.¹¹ The reductions in vaccination coverage that occurred during the COVID-19 pandemic are "of great public health concern because...the increased risk of outbreaks of VPDs...will likely worsen" as communities lift COVID-19-related restrictions on movement, according to a *Pediatrics* article about pediatric vaccination during the pandemic.¹²

It's Never Too Late to Catch Up

Currently, millions of children are under-vaccinated or unvaccinated against preventable diseases like measles, meningitis, pertussis, and pneumococcal disease. If you're not sure if your child is up to date, check with your child's healthcare provider. You can also view the recommended immunization schedule for children from birth through 18 years of age on the CDC's website and request an immunization records form for your child's doctor or state immunization registry. BabyCheckUpsCount.com is another resource for parents; it includes detailed information about what to expect at each well-check, as well as links to helpful tools such as a personalized vaccination calendar and text-based reminders.

If a child has missed one or more doses of an important vaccination, a doctor or local health clinic can help get them back on track. Re-prioritizing childhood immunizations

and well-visits can prevent the re-emergence of vaccine preventable diseases.

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