

Issue At A Glance:

Vaccines

Vaccines are one of the greatest success stories in public health and have saved millions of lives each year. However, immunization progress has slowly begun to decline in recent years following the COVID-19 pandemic. This brief provides an overview of vaccine hesitancy, the Vaccines National Strategic Plan 2021-2025, and various vaccine safety monitoring systems in the US.

Introduction

August is National Immunization Awareness Month (NIAM), a month dedicated to emphasizing the significance of receiving recommended vaccinations for individuals of all ages.¹ As a global health and development success story, vaccines save millions of lives each year and reduce the risk of disease contraction by working with the body's natural defenses to build protection.² Recent studies have shown that global vaccination efforts have saved nearly 154 million lives, or six lives every minute, over the last 50 years.³

During the COVID-19 pandemic, immunization progress plateaued and is now declining. Although over 4 million more children were vaccinated globally in 2022 compared to 2021, there were still 20 million children who missed one or more recommended vaccines. Factors such as increasing conflicts, economic downturns, and rising vaccine hesitancy prevented efforts to reach these children.⁴ Consequently, there is now sudden outbreaks of diphtheria, tetanus, pertussis, and measles – diseases that were almost eradicated.^{2,4}

This brief provides an overview of vaccine hesitancy, the Vaccines National Strategic Plan 2021-2025, and various vaccine safety monitoring systems in the US.

Key Terms

Immunity	Resistance to a particular infectious disease or pathogen. ⁵
Vaccine	A substance that is used to promote the body's immune response against infectious diseases. ⁵
Live attenuated vaccine	A vaccine made from weakened organisms that cannot cause disease (e.g., measles, mumps, and rubella vaccine). ⁶
Inactivated vaccine	A vaccine made from killed organisms (e.g., polio and hepatitis A vaccines). ⁶

Bringing wholeness to individuals and communities, the Institute for Health Policy and Leadership (IHPL) strives to integrate health policy research and education with leadership development. Our goal is to improve the health of our communities by building on our strong heritage of health promotion and disease prevention.

To learn more, visit us at www.IHPL.llu.edu



LOMA LINDA
UNIVERSITY
HEALTH

Vaccine Hesitancy

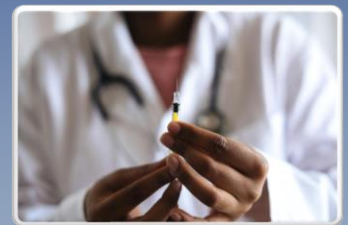
Despite vaccines being acknowledged as one of the most cost-effective preventative measures against life-threatening diseases, vaccine-preventable diseases remain prevalent throughout the world due to not everyone receiving vaccines as recommended.^{7,8} Research has shown that vaccines currently prevent 3 million deaths a year and could prevent another 1.5 million if global coverage of vaccinations improve.⁹ Nationwide, routine vaccination rates for children and adolescents have declined during the COVID-19 pandemic and continues to decline post-pandemic.¹⁰ Though not a new phenomenon, vaccine hesitancy was amplified during the pinnacle of the COVID-19 pandemic.¹¹ For example, globally there has been a 30% increase in cases of measles, with countries that were close to eradicating the disease having re-emergence due to refusal to receive the measles vaccine.⁹

Vaccine hesitancy, or the reluctance or refusal to vaccinate despite the availability of vaccines, has been recognized as a major threat to global health.^{9,12} Many factors contribute to vaccine hesitancy, including lack of knowledge, socio-demographic factors, low perception of risks, and cultural background. Moreover, the spread of unreliable information through social media and other online platforms has contributed to the lack of trust individuals may have in the healthcare system, further exacerbating vaccine hesitancy.¹² Threats of increased vaccine hesitancy continue to endanger individuals who are at higher risk for severe outcomes, including individuals with underlying health conditions, older adults, and infants.¹³

As the nature of vaccine hesitancy continues to change with the growing spread of information via media outlets, it is important that healthcare providers offer correct information, support and encouragement to their patients. It is critical to continue open dialogue about vaccines to identify and address emerging safety concerns as new vaccines become available.¹⁴

Vaccines National Strategic Plan 2021-2025

Despite the significant progress against vaccine-preventable diseases that has been made in the United States, there remain substantial gaps in vaccination coverage that is contributing to preventable morbidity and mortality each year. Therefore, the Vaccines National Strategic Plan 2021-2025 is a 5-year plan outlined by the U.S. Department of Health and Human Services to strengthen vaccination infrastructure and improve health equity across the nation. The Plan aims to eliminate vaccine-preventable diseases through safe and effective vaccination across all ages by supporting ongoing monitoring of vaccine safety and focusing on policies related to vaccines routinely given across all ages.¹⁵



Vaccine Safety Monitoring Systems

The success of vaccination programs relies not only on the vaccines' effectiveness, but also their safety.¹⁶ Since vaccines are provided to millions of individuals each year, it is critical that they are evaluated regularly for safety. The Centers for Disease Control and Prevention (CDC) monitors the safety of vaccines by conducting vaccine safety research, identifying vaccine adverse events through public health surveillance, and making decisions about whether certain vaccines can cause adverse reactions.¹⁷ Both passive (i.e., data is collected from those voluntarily reporting it) and active (i.e., primary data is collected from patients or health records) surveillance systems are utilized by the CDC to monitor the safety and effectiveness of vaccines.^{17,18,19}

Vaccine Adverse Event Reporting System

Co-managed by the CDC and the U.S. Food and Drug Administration (FDA), the Vaccine Adverse Event Reporting System (VAERS) is an early warning surveillance system that monitors the safety of vaccines after they are licensed or authorized by the FDA. Since it is a passive reporting system, VAERS relies on individuals to send in reports of adverse health events after vaccination.²⁰ Instances of adverse reactions from vaccines can be reported by anyone, though VAERS cannot prove that any vaccine caused a specific problem.^{20,21} These reports are then used to provide an early warning of potential safety problems with reported vaccines.²⁰

Clinical Immunization Safety Assessment (CISA) Project

Established in 2001, the CISA project aims to address the need for vaccine safety clinical research in the US by conducting clinical research studies to better understand vaccine safety and identify preventative strategies for adverse reactions following immunizations.²² The CISA project is a partnership between the CDC and seven medical research centers that conducts clinical research on vaccine-associated health events.¹⁷

Vaccine Safety Datalink

Initiated in 1990, the Vaccine Safety Datalink (VSD) is a collaborative effort between the CDC's Immunization Safety Office and 13 healthcare organizations that conduct active vaccine safety monitoring and research about serious and rare adverse events following immunization.^{17,23} Research findings from the VSD are reported to VAERS and other similar vaccine safety systems.²³

V-Safe

V-Safe is a vaccine monitoring safety program that provides personalized and confidential health check-ins via text message or emails to assess side effects after receiving a participating vaccination. Since its launch in 2020, over 10.1 million participants have completed more than 151 million health surveys.²⁴ Currently, V-safe is available for individuals who have received an RSV or COVID-19 vaccine.²⁵

