VALUE OF VACCINES: A LANDMARK ACHIEVEMENT

Vaccination is often cited among the 10 greatest public health achievements of the 20th century.[1] Only access to safe and clean water has had a larger effect on human health by preventing disease and extending lifespans.[2]

In addition to their societal benefit, vaccines deliver significant benefits to individuals across their lifespan:

- **Children and adolescents are less threatened by diseases** that once damaged or cut short young lives.
- **Older adults are protected from diseases,** allowing them to remain productive and enjoy healthier years later in life.
- **Individuals are able to work, learn, and participate** in community life and travel in the US and abroad in safer, healthier environments.

Vaccines help children grow and develop free from preventable diseases.

- Over the course of their lifetimes, U.S. children born between 1994 and 2018 who are vaccinated according to the recommended immunization schedule **will prevent:**[3]
  - **419 million illnesses**
  - **26.8 million hospitalizations**
  - **936,000 deaths**

Vaccines benefit the individuals who receive them, their families, *and* their communities.

- For the U.S. population in 2019 (328 million people), childhood vaccines were universally recommended.[4] These vaccines have:
  - **Prevented more than 24 million illnesses spanning all ages**
  - **Decreased hospitalizations**
    - » **91%** for rotavirus hospitalizations and pertussis
    - » **84%** for pneumococcal pneumonia
- Antibiotic resistance, a persistent and challenging problem for healthcare providers and hospitals in the community, may be reduced because of vaccines.[5]

Vaccines save money.

- CDC estimates that vaccination of children born between 1994 and 2018 will saved **$406 billion** in direct costs and nearly **$1.9 trillion** in total society costs.[6]
- Flu, pneumococcal disease, shingles, and whooping cough cost **$27 billion** to treat annually in adults over age 50.[7]

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Vaccination helps protect vulnerable people.

- Young children, minorities, and the elderly bear the most significant burden of infections from vaccine preventable diseases.
- Vaccination helps reduce the risk of acquiring a disease spread from person to person,[6] especially among vulnerable groups, which include:
  - Young babies and children too young to be vaccinated
  - People undergoing chemotherapy for cancer or who have HIV
  - Children on steroids for asthma
  - The elderly who may not have an adequate immune response
  - Those without adequate access to vaccines
  - Those who choose to remain unvaccinated[8]
- For example, vaccination against chickenpox over the last 25 years has practically eliminated U.S. deaths[9] and annually prevents more than:
  - 3.8 million cases
  - 10,500 hospitalizations
  - 100 deaths

OUTBREAKS OF VACCINE PREVENTABLE DISEASE CONTINUE TO OCCUR IN MANY U.S. STATES, HIGHLIGHTING THE NEED FOR CONTINUED VACCINATION EFFORTS.

Measles

1,282 measles cases were reported in the U.S. in **2019** across **31** states and **94** counties.[10]

Mumps

In 2019, CDC reported that there were **3,486** people infected with mumps in **48** states and DC.[11]

Hepatitis A

Since the hepatitis A outbreaks were first identified in 2016, **30 states** have reported:[12]

- **42,049** cases
- **25,524** hospitalizations
- **383** deaths

Influenza

CDC estimates that flu leads to between:

- **9 million** and **41 million** illnesses every year
- **140,000** and **710,000** hospitalizations every year
- **12,000** and **52,000** deaths every year

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[2] Vaccines, Plotkin and Mortimer, 1988.
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[6] CDC. Vaccines for Children. Protecting America's Children Every Day. https://www.cdc.gov/vaccines/programs/vfc/protecting-children.html
[7] Vaccinate Your Family. The cost of vaccine-preventable disease. https://vaccinateyourfamily.org/why-vaccinate/vaccine-benefits/costs-of-disease-outbreaks/
[8] Vaccinate Your Family. Vaccines Protect Communities. https://vaccinateyourfamily.org/why-vaccinate/vaccine-benefits/community-immunity/
[9] Meissner, H. Cody. Understanding Vaccine Safety and the Roles of the FDA and the CDC. N Engl J Med 2022;386:1638-45. DOI:10.1056/NEJMra2200583
[10] CDC. Increase in Measles Cases — United States, January 1–April 26, 2019. https://www.cdc.gov/mmwr/volumes/68/wr/mm6817e1.htm
[11] CDC. Mumps Cases and Outbreaks. https://www.cdc.gov/mumps/outbreaks.html
[12] CDC. Widespread person-to-person outbreaks of hepatitis A across the United States. https://www.cdc.gov/hepatitis/outbreaks/2017March-HepatitisA.htm