VACCINES: A LANDMARK ACHIEVEMENT

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:
  - 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. 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.

Vaccines save money.

- CDC estimates that vaccination of children born between 1994 and 2018 will save $406 billion in direct costs and nearly $1.9 trillion in total society costs.
- Flu, pneumococcal disease, shingles, and whooping cough cost $27 billion to treat annually in adults over age 50.
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, 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
- For example, vaccination against chickenpox over the last 25 years has practically eliminated U.S. deaths 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.

<table>
<thead>
<tr>
<th>Disease</th>
<th>Outbreak Details</th>
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<tbody>
<tr>
<td><strong>Measles</strong></td>
<td>1,282 measles cases were reported in the U.S. in 2019 across 31 states and 94 counties.</td>
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<tr>
<td><strong>Mumps</strong></td>
<td>In 2019, CDC reported that there were 3,486 people infected with mumps in 48 states and DC.</td>
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<td><strong>Hepatitis A</strong></td>
<td>Since the hepatitis A outbreaks were first identified in 2016, 30 states have reported:</td>
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<tr>
<td><strong>Influenza</strong></td>
<td>CDC estimates that flu leads to between:</td>
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- Klugman and Black. PNAS. Impact of existing vaccines in reducing antibiotic resistance: Primary and secondary effects. December 17, 2018115 (51) 12896-12901 https://doi.org/10.1073/pnas.1721095115
- CDC. Increase in Measles Cases — United States, January 1–April 26, 2019. https://www.cdc.gov/mmwr/volumes/68/wr/mm6817e1.htm
- CDC. Mumps Cases and Outbreaks. https://www.cdc.gov/mumps/outbreaks.html