

INVESTMENT IN RESEARCH SAVES LIVES AND MONEY

Influenza

Influenza viruses can cause life-threatening illness for all individuals, especially the elderly, infants and those with suppressed immune systems. These viruses are highly contagious, and circulate globally. While vaccines help prevent infection, coverage is not complete and millions still suffer from the flu annually. New vaccines must be made annually because the virus changes each year. All individuals age six months and older (without contraindications) should be vaccinated annually to combat that particular year's flu strain. Influenza can reach epidemic proportions during the winter months. Robust funding for research is needed for scientists in their search for a universal vaccine.

TODAY

Every year, depending on what strain of the virus is most prevalent,

3 to 11%

of the U.S. population is infected with the flu.¹

Only **37.1%** of U.S. adults received an influenza vaccine during the 2017-2018 season, a drop of more than 6% from the previous flu season.²

The 2017-2018 flu season, the most severe in decades, resulted in the death of over

80,000 Americans.³

186 children

died from influenza during the 2017-2018 flu season. Of those who died, approximately 80% had not been vaccinated.⁴

Research Delivers Solutions

On average, influenza **vaccinations** reduce the risk of being **admitted to an ICU** with flu by **82%**. Researchers found that the **children of mothers who received a flu vaccine** during pregnancy were **81% less likely to be hospitalized** for flu-related reasons in their first 6 months of life.^{7,8}

The **National Institute of Allergy and Infectious Diseases** released a **Universal Influenza Vaccine Strategic Plan** in February of 2018. The plan focuses on research to examine transmission, natural history, and pathogenesis of the virus; to increase our understanding of influenza immunity; and to spur the development of a **universal flu vaccine**.⁹

The FDA recently approved **baloxavir marboxil**, the first truly **novel antiviral flu treatment** approved in over two decades. While other antiviral treatments help stop the flu virus from spreading within the body, baloxavir marboxil **stops the flu virus from multiplying**. This treatment reduces both the **duration and severity** of influenza infections.^{10,11}

While **seniors** accounted for **58%** of influenza-related hospitalizations during the 2017-2018 flu season, there are safe and effective flu vaccines specifically designed to provide greater protection against influenza for older adults. For example, researchers found that using a **high-dose trivalent influenza vaccine** for seniors **could significantly reduce flu-related mortality and morbidity** for this population.^{4,12}

COST

\$3,990:

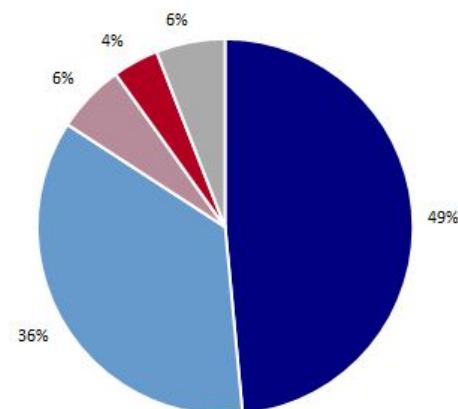
Out-of-pocket medical costs for each child hospitalized with the flu.⁵

\$11.2 billion:

Average annual economic burden of the flu in the U.S., an estimate that includes direct medical costs, lost productivity, loss of life, and other indirect impacts.⁶

Strong Majority Favor Increased Federal Spending on Vaccine Research

Do you favor or oppose increased federal spending on research to improve and find new vaccines?



■ Strongly favor ■ Somewhat favor
■ Somewhat oppose ■ Strongly oppose
■ Don't know/refused

Source: A Research!America poll of U.S. adults conducted in partnership with Zogby Analytics in May 2018

Influenza

Then. Now. Imagine.

THEN

In the 1940s, influenza caused 10.2 deaths per 100,000 individuals.¹³

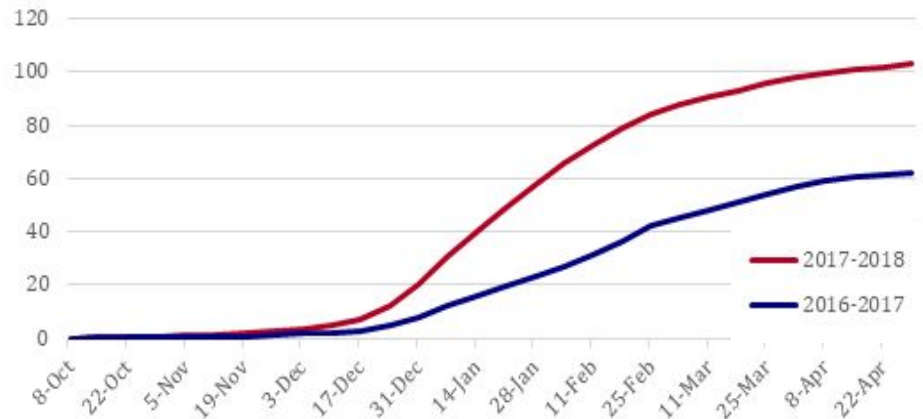
NOW

Current vaccines and treatments have reduced influenza death rates to only 0.9 deaths per 100,000, but millions still suffer from the flu each year.¹⁴

IMAGINE

A universal flu vaccine and advanced treatments that end deaths from flu.

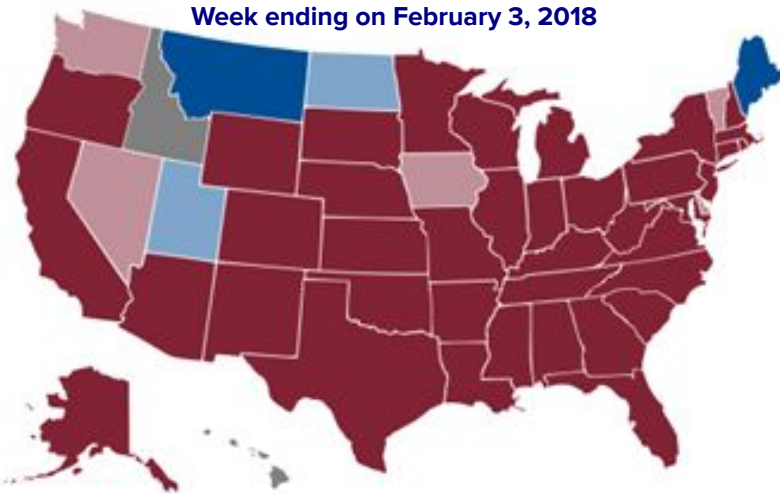
Cumulative Rates of Influenza Hospitalizations per 100,000 Population



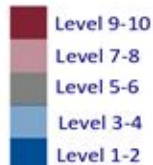
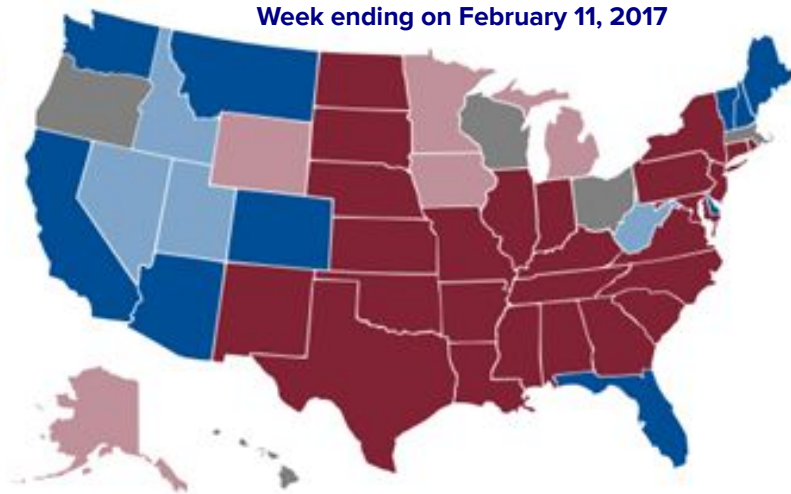
SOURCE: "FluView: Laboratory Confirmed Influenza Hospitalizations." CDC, 2019

Influenza-Like Illness (ILI) Activity at Height of Season, 2017 and 2018

Week ending on February 3, 2018



Week ending on February 11, 2017



"Levels reflect 'intensity' of outpatient visits for flu-like symptoms, with Level 10 representing the highest number of these visits as a percentage of total outpatient visits."

SOURCE: "FluView: A Weekly Influenza Surveillance Report Prepared by the Influenza Division." CDC, 2019.

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The Albert and Mary Lasker Foundation is a founding partner in this series of fact sheets. www.laskerfoundation.org

¹ "Key Facts About Influenza (Flu)." CDC, 2018
² "Estimates of Influenza Vaccination Coverage." CDC, 2018
³ "National Press Conference 2018-2019 Flu Vaccination Campaign." CDC, National Foundation for Infectious Diseases Annual News Conference, 2018
⁴ "Summary of the 2017-2018 Influenza Season." CDC, 2018
⁵ Ortega-Sanchez et al. "Medical costs from Influenza-related Illness." 2012
⁶ Putri et al. "Economic burden of seasonal influenza in the US." 2018
⁷ "Study Shows Flu Vaccine Reduces Risk of Severe Illness." CDC, 2018
⁸ Shakib et al. "Infants Born to Women Vaccinated During Pregnancy." 2016
⁹ Erbeiding et al. "A Universal Influenza Vaccine: The Strategic Plan." 2018
¹⁰ "FDA Approves New Drug to Treat Influenza." FDA, 2018
¹¹ Kuritzkes. "Baloxavir (Xofluza): A New Antiviral Drug for the Flu." 2019
¹² Chit et al. "High-dose Trivalent Influenza Vaccine in US Seniors." 2015
¹³ Doshi. "Trends in Recorded Influenza Mortality." 2008
¹⁴ "Influenza." CDC, 2015