



Unvaccinated Adults Cost the U.S. More Than \$7 Billion a Year

Vaccine-preventable diseases among adults cost the U.S. economy \$8.95 billion in 2015, and unvaccinated individuals are responsible for 80 percent, or \$7.1 billion, of the tab, according to the most comprehensive analysis to date from the University of North Carolina at Chapel Hill.

Researchers at the UNC Eshelman School of Pharmacy, led by Associate Professor Sachiko Ozawa, studied 10 vaccines recommended by the Centers for Disease Control and Prevention. The study, which will be published today in the journal *Health Affairs*, examined the actual cost of inpatient and outpatient care, cost of medication and the value of productivity lost from time spent seeking care. The 10 vaccines protect against hepatitis A, hepatitis B, the herpes zoster virus that causes shingles, human papillomavirus, influenza, measles, mumps, rubella, meningococcal disease, pneumococcal disease, tetanus, diphtheria, pertussis and chickenpox.

The flu was the most costly disease with a vaccine available, accounting for nearly \$5.8 billion in health care costs and lost productivity in 2015. The Centers for Disease Control and Prevention estimates that 42 percent of U.S. adults received the flu vaccine during the 2015-2016 flu season. Other notable diseases with significant economic burdens include pneumococcal disease, such as meningitis and pneumonia, which is associated with nearly \$1.9 billion in costs, and herpes zoster that causes shingles rounding out at \$782 million.

"We believe our estimates are conservative and highlight the potential economic benefit of increasing adult immunization coverage and the value of vaccines," Ozawa said. "We hope our study will spur creative health care policies that minimize the negative spillover effects from people choosing not to be vaccinated while still respecting patients' right to make informed choices."

The statistical model researchers developed determined the unvaccinated cost to the U.S. economy at \$9 billion. Inpatient and outpatient care accounted for 95 percent of costs with lost productivity making up the other 5 percent.

The new UNC-led research is a more comprehensive review of the economic burden of vaccine-preventable diseases among U.S. adults than previous studies, as the focus to date has been on one or a few specific vaccine-preventable diseases. The researchers consulted existing research and data from the Medical Expenditure Panel Survey and the Nationwide Inpatient Sample database in their analysis.



Of all the illness that resulted from the missed vaccinations, influenza was the most costly, according to the report, resulting in an annual cost of \$5.8 billion in healthcare costs and lost productivity. An estimated 42% of adults were vaccinated against the flu last year, according to the CDC.

Significant costs were also associated with pneumococcal disease, at \$1.9 billion in treatment and lost productivity costs, and herpes zoster, costing roughly \$782 million, according to the study.

Ozawa told Medical Economics the figures are believed to be conservative estimates of the true cost of missed adult vaccinations, and that she hopes the results of the study will motivate more adults to improve vaccination compliance.

Vaccine-preventable diseases in adults cost almost \$9 billion in 2015 alone, and 80% of that cost is due to poor vaccine compliance, according to a new report. Inpatient and outpatient medical care to treat the disease-preventable conditions accounts for about 95% of the costs, and lost productivity accounted for another 5%.

"With rising healthcare costs, it is important to discuss the value of vaccines," Ozawa said, adding that PCPs should remind patients that vaccines can prevent diseases and save costs to individuals, families and the healthcare system.

"Unvaccinated individuals cost the U.S. economy \$7 billion on treatment of vaccine preventable diseases," she said. "This includes the actual cost of inpatient and outpatient care, cost of medication and the value of productivity lost from time spent seeking care. This is on top of the health impact of actually feeling sick and the chance of passing the illness in the family, school or workplace. Why not prevent diseases we can prevent and save healthcare costs?"

The study was funded by the pharmaceutical company Merck, a leading producer of vaccines.

Links to original sources:

<http://uncnews.unc.edu/2016/10/12/unvaccinated-adults-cost-u-s-7-billion-year/>

<http://medicaleconomics.modernmedicine.com/medical-economics/news/unvaccinated-adults-cost-us-billions-care-lost-productivity?page=0,1>