

Key Points for NHIS data non-influenza adult vaccination coverage among adults-United States, 2012,
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Coverage Estimates: Summary

- In February 2014, CDC released immunization coverage estimates. from the 2012 National Health Interview Survey (NHIS) for six vaccines routinely recommended for adults including pneumococcal, tetanus and Tdap, Hepatitis A, Hepatitis B, herpes zoster (shingles), and Human papillomavirus (HPV).
- These data indicate little overall improvement in vaccination coverage among adults in the United States from 2011 to 2012.
- Compared with 2011, modest increases occurred in three vaccines.
 - **Tdap vaccination** among adults aged 19–64 years increased from 12.4% in 2011 to 15.6% in 2012,
 - **herpes zoster vaccination** among adults aged 60 years or older increased from 15.8% in 2011 to 20.1% in 2012, and
 - **HPV vaccination** among women aged 19-26 years for 1 or more doses increased from 29.5% in 2011 to 34.5% in 2012.
 - While it is still low, coverage for HPV vaccination among all women aged 19-26 years has doubled from 17.1% in 2009 to 34.5% in 2012.
 - HPV vaccination of non-Hispanic white women aged 19-26 years (9.7 percentage point increase to 42.2% coverage)
 - HPV vaccination of women aged 22-26 years (≥ 1 dose) (6.7 percentage point increase to 28.2% coverage)
- Pneumococcal vaccination among Hispanic adults aged 19-64 years with certain high-risk medical conditions decreased in 2012 to 13.8% compared to 18.3% in 2011.
- Coverage for overall tetanus vaccination during the past 10 years for all age groups did not change compared with 2011.
- Vaccination coverage estimates for pneumococcal, herpes zoster, and hepatitis B for healthcare professionals are below the Healthy People 2020 target levels.
(<http://www.healthypeople.gov/2020/topicsobjectives2020/pdfs/Immuneization.pdf>)
 - The Healthy People 2020 target for pneumococcal vaccine is 60% for high-risk adults aged 19-64.
 - Coverage among high-risk adults aged 19-64 years was 20%, similar to coverage in 2011.
 - The Healthy People 2020 target for pneumococcal vaccine is 90% for adults aged 65 years and older.
 - Pneumococcal vaccine coverage among adults aged 65 years and older was 59.9%, similar to coverage in 2011.
 - The Healthy People 2020 target for Herpes Zoster (Shingles) vaccine is 30% for adults aged 60 years and older.
 - Among adults aged 60 years and older, 20.1% reported receiving herpes zoster vaccination, an increase of 4.4 percentage points from 2011.
 - The Healthy People 2020 target for hepatitis B vaccine among healthcare professionals is 90%.
 - Overall hepatitis B vaccination coverage among healthcare professionals was 65%, similar to coverage in 2011.

Calls to Action

- You can protect your health and the health of those around you by getting vaccinated.
 - For example, giving the Tdap vaccine to close contacts of infants, including their parents and grandparents, can help prevent spread of whooping cough and its severe complications to infants too young to be vaccinated.
 - Vaccination of pregnant women with Tdap vaccine can help protect their infants from whooping cough.
 - Additionally, people with certain medical conditions (like pregnant women or people undergoing cancer treatment) may not be able to get certain vaccines, but are very vulnerable to illness.
- Most adults are not up to date on their recommended vaccines. Find out if you are and what steps to take to get vaccinated:
 - You can visit www.cdc.gov/vaccines/adult quiz to find out what vaccines you should talk to your healthcare provider about.
 - You can get vaccines at doctors' offices, pharmacies, workplaces, community health clinics and health departments.
 - Most health insurance plans cover the cost of recommended vaccines. You can check with your insurance provider to find an immunization provider.
 - You can also find vaccine providers near you by visiting <http://vaccine.healthmap.org/>.
- Healthcare professionals play a critical role in ensuring that their patients are fully immunized:
 - Your patients trust you to give them the best advice on how to protect their health.
 - Your recommendation is one of the most important factors in whether a person chooses to get recommended vaccines.
 - All healthcare professionals, whether they provide immunization services or not, should routinely assess patient vaccination needs at every visit, provide a strong recommendation for needed vaccines, and administer needed vaccines or refer to a provider who can immunize.

Background on the NHIS

- The National Health Interview Survey (NHIS) on adult vaccination coverage provides us with a "report card" to let us know how well we are doing in protecting our nation's adults against six vaccine-preventable diseases.
- The NHIS is a random survey of civilian, non-institutionalized adults aged 19 years and older conducted annually in respondents' homes.
- This report provides immunization coverage estimates for six vaccines routinely recommended for adults: pneumococcal, tetanus (including Tdap), hepatitis A, hepatitis B, herpes zoster (shingles), and human papillomavirus (HPV).
- The estimates are provided based on the different age and high-risk groups recommended for each of the vaccines and by race/ethnicity. High-risk groups can be based on certain medical conditions, occupation, and/or travel.

2012 NHIS Data By Recommended Vaccine

Pneumococcal Vaccine

- Coverage among high-risk adults aged 19-64 years was 20%, similar to coverage in 2011.
- Coverage among high-risk non-Hispanic whites age 19-64 (21.4%) was higher than among Hispanics (13.8%) and non-Hispanic Asians (13.2%).
- Coverage among high-risk Hispanics age 19-64 was 13.8%, a 4.6 percentage point decrease from 2011.

- No other significant differences between 2011 and 2012 coverage by race/ethnicity among adults age 19-64.
- Coverage among adults aged 65 years and older was 59.9%, similar to coverage in 2011.
- Coverage among non-Hispanic whites (64%) aged 65 years and older was higher than among all other racial and ethnic groups, including non-Hispanic blacks aged 65 years and older (46.1%), Hispanics aged 65 years and older (43.4%), non-Hispanic Asians aged 65 years and older (41.3%), and non-Hispanics who reported other race (44.7%).

Tetanus and Tdap Vaccines

- The proportion of adults who received a tetanus vaccination during the past 10 years was 64.2% for those aged 19-49 years, 63.5% for those aged 50-64 years, and 55.1% for those aged 65 years and older.
- Coverage for all age groups in 2012 was similar to 2011 for tetanus vaccination.
- Non-Hispanic whites in all age groups had higher coverage than non-Hispanic Asians, Hispanics, and non-Hispanic blacks.
- Overall Tdap vaccination of adults aged 19-64 was 15.6%, a 3.3 percentage point increase from 2011 (denominator for estimate includes adults who reported they were not vaccinated with any type of tetanus vaccine)
- 36.3% of respondents reported they knew what type of tetanus vaccine they received during 2005-2012:
 - Of the 36.3% of respondents who reported they knew what type of tetanus vaccination they received, 65.4% reported that they received Tdap.
- Tdap coverage among non-Hispanic whites aged 19-64 years (18.2%) was higher than among non-Hispanic blacks (10.5%) and Hispanics (9.2%).
- Tdap coverage for people aged 19-64 years who have household contact with an infant less than one year old was 25.9%, similar to the estimate for 2011.
- Among all healthcare professionals aged 19-64 years Tdap coverage was 32.6%, a 5.8 percentage point increase from 2011.

Hepatitis A Vaccine

- Coverage (≥ 2 doses) among adults aged 19-49 years remained low at 12.2%, similar to 2011 coverage.
- Coverage was higher for non-Hispanic Asians (18.7%) than for non-Hispanic whites (12.2%), but coverage for Hispanics (10.5%) was lower compared with whites.
- Coverage was higher (18.9%) among people who traveled since 1995 to countries where hepatitis A has been prevalent (outside the United States, Europe, Japan, Australia, New Zealand, and Canada).

Hepatitis B Vaccine

- Coverage (≥ 3 doses) among adults aged 19-49 years remained similar to 2011 at 35.3%.
- Coverage was lower for non-Hispanic blacks (34.2%) and Hispanics (27.1%) compared with non-Hispanic whites (37.5%).
- For people with diabetes, coverage was 28.6% for adults aged 19-59 years and 15.1% for adults aged 60 years and older.
- Overall hepatitis B vaccination coverage among healthcare professionals was 65%, similar to coverage in 2011.
 - There were no racial/ethnic differences in hepatitis B coverage among healthcare professionals.

Herpes Zoster (Shingles) Vaccine

- Among adults aged 60 years and older, 20.1% reported receiving herpes zoster vaccination, an increase of 4.4 percentage points from 2011.

- Coverage was higher for non-Hispanic whites (22.8%) than for non-Hispanic blacks (8.8%), Hispanics (8.7%), and non-Hispanic Asians (16.9%).
 - Coverage for non-Hispanic whites aged 60 years and older rose more than 5 percentage points from 2011.
 - Data indicate a widening gap in coverage among non-Hispanic blacks and Hispanics when compared with non-Hispanic whites.

Human Papillomavirus (HPV) Vaccine

- Among all women aged 19-26 years, 34.5% reported receiving at least one dose of HPV vaccine, an increase from 29.5% in 2011, 20.7% in 2010, and 17.1% in 2009.
- Coverage was 44.3% among women aged 19-21 years and 28.2% among those aged 22-26 years.
- Among women aged 19-26 years, non-Hispanic blacks (29.1%), Hispanics (18.7%), and non-Hispanic Asians (15.6%) each had lower coverage compared with non-Hispanic whites (42.2%).
 - Data indicate a widening gap in coverage among non-Hispanic blacks, Hispanics, and non-Hispanic Asians when compared with non-Hispanic whites.
- HPV vaccination coverage was 2.4% for males aged 19-21 years and 2.2% for those aged 22-26 years.

Improving Adult Immunization Coverage: Opportunities for action

Clinicians, public health partners and other stakeholders are all critical in increasing adult vaccination. Ways to support these efforts include:

- Increase awareness about adult vaccines other than influenza.
- Increase awareness of the need for adult vaccine assessments as a part of routine medical care.
- Increase partnership opportunities within healthcare and public health to improve awareness and vaccination coverage among partner constituents.
- Promote the new Standards for Adult Immunization Practice.
 - These standards will be published in *Public Health Reports* in March 2014.
 - These standards were approved by the National Vaccine Advisory Committee (NVAC) and supported by the CDC and a number of national medical associations including American Academy of Family Physicians (AAFP), American Congress of Obstetricians and Gynecologists (ACOG), American Pharmacists Association (APhA), Association of Immunization Managers (AIM), Infectious Diseases Society of America (IDSA), American Academy of Physician Assistants (AAPA), National Foundation for Infectious Diseases (NFID), Association of State and Territorial Health Officials (ASTHO), American Academy of Pediatrics (AAP), and others.
 - The new standards acknowledge:
 - The current low levels of vaccine coverage among adults
 - The critical role that all healthcare providers, including those who do not offer all recommended adult vaccines in their practices, have in ensuring that their patients are up-to-date on recommended vaccines.
 - And the fact that adults patients often see more than one provider and may receive vaccinations in a variety of settings (e.g. doctor's office, pharmacy, and work)
- Healthcare professionals play a critical role in ensuring that their patients are fully immunized:
 - Your patients trust you to give them the best advice on how to protect their health.
 - Your recommendation is one of the most important factors in whether a person chooses to get recommended vaccines.

- All healthcare professionals, whether they provide immunization services or not, should routinely assess patient vaccination needs at every visit, provide a strong recommendation for needed vaccines, and administer needed vaccines or refer to a provider who can immunize.

Adult Vaccine Information – Background

Full recommendations for each vaccine can be found at: <http://www.cdc.gov/vaccines/hcp/acip-recs/index.html>.

Pneumococcal Vaccine Information

- Pneumococcal polysaccharide vaccine is recommended for all adults aged 65 years and older.
- In addition, adults younger than 65 years should be vaccinated if they have certain high-risk conditions such as cardiovascular disease, pulmonary disease, diabetes, alcoholism, cirrhosis, cerebrospinal fluid leak, or a cochlear implant, or if they have a suppressed immune system.
- Adults aged 19 years and older should also get a pneumococcal polysaccharide vaccine if they have asthma or smoke cigarettes.
- Preliminary data report approximately 32,000 cases of invasive pneumococcal disease in 2012. Of those cases, there were about 3,000 deaths.
- The majority of cases and deaths occur among adults 50 years or older, with the highest rates among those 65 years or older. Almost everyone who gets invasive pneumococcal disease needs treatment in the hospital.
- Overall, pneumococcal polysaccharide vaccine (PPSV23) is 30% to 70% effective in preventing invasive pneumococcal disease, such as meningitis and bloodstream infections.
 - Effectiveness is highest among otherwise healthy adults.
 - Effectiveness is lowest among adults with significant underlying illness.
- There is not consensus regarding the effectiveness of PPSV23 against non-invasive pneumococcal pneumonia.
- Certain adults with significant underlying illness should also get the pneumococcal conjugate vaccine (PCV13), which has proven highly effective among children.
 - A large clinical trial is underway in the Netherlands that is studying the effectiveness of PCV13 against pneumococcal pneumonia among adults.
- Adults at high risk for pneumococcal disease who haven't gotten the vaccine yet should talk with their doctor about getting it now.

Tetanus and Tdap Vaccine Information

- All adults 19 years and older, including those 65 years and older, should get a dose of Tdap (tetanus, diphtheria, and pertussis) vaccine to protect against tetanus, diphtheria, and pertussis (whooping cough).
 - Td vaccine should be given every 10 years after receipt of Tdap vaccine. Tdap vaccine is especially important for adults who will have close contact with infants less than 1 year old.
 - Adults need to get Tdap even if they were vaccinated as a child or have been sick with pertussis in the past; neither provides lifelong protection.
 - Except for pregnant women, only one dose of Tdap is recommended in a lifetime.
- **Pregnant women** are recommended Tdap vaccination during each pregnancy, preferably at 27 through 36 weeks' gestation, to help protect their newborns from whooping cough.
 - Tdap vaccine can be safely given at any time during pregnancy, but is recommended during the third trimester to pass the most amount of protection to the baby.
- Tetanus, diphtheria, and pertussis are all caused by bacteria.

- Both diphtheria and pertussis are spread from person to person.
- Tetanus enters the body through cuts, scratches, or wounds.
- In 2012, 48,277 cases of pertussis were reported, 10,785 cases of which occurred among adults. .
- Our current estimate is that Tdap vaccination protects about 7 out of 10 people who receive it.

Hepatitis A Vaccine Information

- Hepatitis A vaccine is recommended for adults who are working in or traveling to any area of the world outside of Canada, Western Europe and Scandinavia, Japan, New Zealand, and Australia.
- Other adults that should get the vaccine include men who have sex with men, people who use illegal drugs, people who have clotting factor disorders, people with chronic liver disease, and people who might be exposed to hepatitis A on the job (such as those who work with hepatitis A virus in laboratory settings or with hepatitis A-infected primates).
- Hepatitis A is caused by a virus and spreads primarily by oral contact with fecal matter, either through person-to-person or by contaminated food or water.
- More than 95% of adults will develop immunity within one month of a single dose of hepatitis A vaccine, and nearly 100% will develop immunity after receiving two doses.

Hepatitis B Vaccine Information

- Hepatitis B vaccination is recommended for adults at high risk of infection by sexual or blood exposure to hepatitis B virus and any other adult that wants to reduce their risk of hepatitis B.
- People at high risk of sexual exposure include sex partners of people who are positive for Hepatitis B, people who've had more than one sex partner in the last six months, people seeking evaluation or treatment for a sexually transmitted disease, and men who have sex with men.
- People at risk of blood exposure include current or recent injection-drug users, household contacts of people who are positive for Hepatitis B, residents and staff of facilities for the developmentally disabled, people with end stage renal disease, and some health-care and public safety workers.
- Other groups at risk include international travelers to regions with high or intermediate levels of Hepatitis B infection and people with HIV infection.
- Hepatitis B is caused by a virus and is spread from person to person primarily through blood or semen.
- In healthy adults, the vaccine is 80% to 95% effective in preventing infection or clinical hepatitis in those who complete a hepatitis B vaccine series (usually 3 doses).

Herpes Zoster Vaccine Information

- A single dose of herpes zoster (shingles) vaccine is recommended for adults aged 60 years and older.
- Shingles occurs when latent varicella zoster (chickenpox) virus reactivates later in life.
- Shingles causes a painful, blistering skin rash that can last 2 to 4 weeks. It can lead to severe nerve pain (post-herpetic neuralgia) that can last for months or years after the rash goes away.
- Adults age 60 years or older are more likely to get shingles, experience severe pain from the disease, and have post-herpetic neuralgia.
- Almost 1 out of 3 people in America will develop shingles during their lifetime.
- Shingles vaccine reduces the risk of shingles and post-herpetic neuralgia in people 60 years of age and older.
- Shingles vaccine is effective for at least six years but may last longer; research is being done in this area.

HPV Vaccine Information

- HPV is a common virus that is spread through sexual contact with another person.
- About 79 million people are currently infected with HPV and 14 million more people become infected with HPV each year. Most HPV infections occur in teens and young adults.

- Persistent infection with human papillomavirus (HPV) can cause cervical, vulvar and vaginal cancer in women and penile cancer in men. Persistent HPV infection can also cause anal cancer, throat cancer and genital warts in both men and women.
- There are two vaccines licensed by the Food and Drug Administration (FDA) and recommended by CDC to protect against HPV-related illness; these vaccines are the bivalent HPV vaccine or HPV2 (Cervarix, made by GlaxoSmithKline) and the quadrivalent HPV vaccine or HPV4 (Gardasil, made by Merck). HPV2 or HPV4 is recommended for females; HPV4 is recommended for males.
 - Both vaccines are very effective against HPV types 16 and 18, which cause most cervical cancers, so both vaccines prevent cervical cancer in women.
 - Only Gardasil protects against HPV types 6 and 11 – the types that cause most genital warts in females and males.
 - Only Gardasil has been tested and shown to protect against cancers of the vulva, vagina, and anus.
 - Only Gardasil has been tested and licensed for use in males.
- HPV vaccine is recommended for routine vaccination of females and males at age 11 or 12 years. Vaccination is also recommended for females 13-26 years of age and for males 13-21 years of age, if not previously vaccinated. Males aged 22-26 years may be vaccinated.
- HPV vaccine is also routinely recommended for gay and bisexual men, or any man who has sex with a man (MSM) through age 26. It is also recommended for men with compromised immune systems (including people living with HIV/AIDS) through age 26, if they did not get fully vaccinated when they were younger. MSM may especially benefit from vaccination to prevent genital warts and anal cancer. HPV4 is recommended for MSM through age 26 years who did not get any or all doses when they were younger.
- HPV vaccine does not treat existing infection or disease.
- Prior infection with one HPV type did not lessen the effectiveness of the vaccine against other vaccine HPV types.
- It is important to note that women who are vaccinated against HPV still need to have regular Pap tests to screen for cervical cancer.