Building a Shingles Atlas for Adult Vaccination

United States of America

National Vaccine Recommendations Process

Established in 1964, the Advisory Committee on Immunization Practices (ACIP) is the National Immunization Technical Advisory Group of the United States of America (US). The ACIP is responsible for advising the Centers for Disease Control and Prevention (CDC) on vaccination recommendations for all Americans[1]. This includes determining which vaccines individuals should receive, at what age, as well as any precautions or contraindications to vaccination.

The committee is composed of experts selected by the US Secretary of Health and Human Services, with most members being specialists in fields such as vaccinology, immunology, pediatrics, and internal medicine. ACIP members meticulously examine data on vaccine safety and effectiveness, considering factors such as the severity of the disease and the vaccine's ability to address its burden[1].

The recommendation development process incorporates the GRADE (Grading of Recommendations, Assessment, Development, and Evaluation) standard to assess available information.(2) This includes evaluating the balance of benefits and harms, quality of evidence, values and preferences of affected individuals, and health economic analyses. Community impacts, health equity considerations, and practical feasibility also inform decision-making. Once a recommendation is formulated, it undergoes approval by the CDC Director. Approved recommendations are published in the CDC's Morbidity and Mortality Weekly Report, serving as the official vaccination guidance for the nation.[2]

Shingles Vaccine Recommendations and Schedules

The ACIP recommends the recombinant zoster vaccine (RZV) as a routine vaccination for individuals aged 50 years or older.[3] Two doses of RZV are recommended regardless of previous history of herpes zoster or receipt of the zoster live vaccine. The second dose is typically administered 2 to 6 months after the first dose. As of 2021, the ACIP recommended 2 RZV doses for prevention of herpes zoster and related complications in adults 19 years of age or older who are or will be immunodeficient or immunosuppressed because of disease therapy. For individuals who are or will be immunodeficient or immunosuppressed, the second dose can be given 1 to 2 months after the first.[3]

Adult Shingles Vaccine Funding

In the US, most of the funding for the shingles vaccine is through either federal insurance programs or private insurances. Most private insurance plans, including all Health Insurance Marketplace plans, cover certain vaccines without charging copayments or coinsurance.[4] The list of vaccines typically includes Shingles. Medicare is a federal health insurance program with multiple parts. Medicare Part B covers certain doctor's services, outpatient care, medical supplies, and preventive services, whereas Medicare Part D covers the cost of prescription drugs, including many recommended shots or vaccines.[5] Medicare Part D plans cover all adult vaccines recommended by the ACIP.(4) Medicaid is a joint federal and state program that also helps cover medical costs for people with limited income and resources.[6] Since October 2023, most adults with coverage from Medicaid and the Children's Health Insurance Program (CHIP) have coverage for all ACIP-recommended vaccines.(4) Similarly, individuals who are in the military or served in the military are eligible for TRICARE, a uniformed services health care program. Under TRICARE, vaccines are covered according to the CDC recommended schedule, including the shingles vaccine.[7]

Vaccine Coverage Rates

According to the most recently published National Health Interview Survey as of 2021, the overall herpes zoster vaccination coverage in the US was 32.6% among adults aged 50 or older and 41.1% among adults aged 60 or older.[8] More specifically, the RZV coverage for individuals who have had one or more doses was 18.6% among adults aged 50 or over, 12.2% among adults aged 50 to 59, 20.1% among adults aged 60 to 64, and 22.8% among adults aged over 65 years.[8] The RZV coverage of those who had at least two doses was 15.4% for 50+, 9.5% among 50-59, 16.8% among adults 60-64, and 19.2% among those 65 and older. In 2021, ZVL coverage was 16.6% among adults aged 50+, 23.3% among adults 60+, and 38.3% among those aged 65 and older.[8] These figures were all lower than the estimated reported for 2020, possibly due to the discontinuation of ZVL since November 2020. Lastly, White adults aged 50 and 60+ had higher coverage compared to Black, Hispanic, and other adults.

Monitoring Mechanisms for Vaccination Coverage

The CDC analyzes data from the National Health Interview Survey (NHIS) to assess vaccination coverage among adults aged 19 years or older.(8) The NHIS is a continuous, cross-sectional national household survey of the noninstitutionalized US civilian population. The interviews are conducted over the course of the year in a probability sample of households, and data is compiled and released on an annual basis.(8)

Prevalence Rate on Burden of Shingles

In the United States, it is reported that approximately 1 in every 3 individuals will develop shingles in their lifetime. Furthermore, about 1% to 4% of those affected by shingles require hospitalization. A study conducted in 2022 examined the incidence rate of herpes zoster between 1998 and 2019.[9] The findings revealed a steady increase in the crude incidence rate over the years, rising from 4.0 to 6.3 per 1000 persons.[9] Additionally, the incidence rate exhibited an age-dependent pattern, with rates ranging from 2.2 to 4.9 per 1000 in individuals aged 30 to 49 years, and 8.2 to 11.2 per 1000 in those aged 70 years and older.[9] However, recent data indicates that the incidence rates for some older age groups have started to plateau, and a decline in herpes zoster incidence has been observed among individuals aged 70 years or older since 2016. This decline may be attributed to the increased uptake of vaccines.

Shingles Vaccination Pathway

Individuals seeking the shingles vaccination have the option to receive it either from a pharmacy or a doctor's office.[10] The vaccine is typically covered with no copayment or coinsurance if the individual has private insurance, Medicare, Medicaid, or Tricare, and also meets the eligibility criteria set by the CDC.[10] For uninsured individuals, the vaccine is available at pharmacies or doctor's offices; however, they will need to pay for the vaccine out of pocket, with costs varying depending on the pharmacy.

Barriers

Ethnic Disparities

A study conducted in 2021, alongside the NHIS 2021 survey, highlighted significant ethnic disparities in shingles vaccination rates. Those who are Hispanic and Black were found to experience lower vaccination rates compared to other ethnic groups.[11] Several potential barriers contributing to these disparities were identified, including medical mistrust, lower rates of provider recommendation among minority populations, and a lack of education on the shingles disease among these communities.[11]

Access and Affordability:

A study in 2024 also shed light on access and affordability challenges affecting shingles vaccination rates. Cost emerged as a prevalent barrier, particularly among rural and economically disadvantaged individuals.[12] Rural older adults in particular did not schedule shingle vaccination appointments due to cost concerns. Additionally, the prevalence of transportation barriers to vaccination may vary depending on the region of the United States individuals reside in. Although transportation barriers were not a major barrier in North Dakota, individuals may encounter hinderances differently depending on their geographical location.[12]

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