

Awareness of Vaccine-Preventable Diseases Among US Adults

July 2024



Background

Recent [data from the Centers for Disease Control and Prevention \(CDC\)](#) reveals that fewer kindergarten children are up to date with routine childhood vaccinations compared to before the COVID-19 pandemic. This means that around 250,000 kindergartners may not have full protection against serious diseases including diphtheria, measles, mumps, or polio. Keeping children up to date with recommended vaccines is one of the best ways to protect them from serious diseases. Routine childhood vaccination in the United States has been very successful in preventing illness and death. Serious diseases such as diphtheria, mumps, and rubella, once common at young ages, are rarely seen due to the success of vaccinations.

The Centers for Disease Control and Prevention (CDC) created the “[Keeps It That Way](#)” communication effort to raise awareness about vaccine-preventable diseases and invite parents and caregivers to learn more about the diseases and the protection vaccines can provide to children’s health. To help inform this communications effort, CDC assessed adults’ awareness of vaccine-preventable diseases that were once common among children before vaccinations. CDC also assessed adults’ knowledge of shingles and how getting varicella (also known as chickenpox) as a child puts people at higher risk for shingles later in life.

Methods

Data for this analysis were collected through the Ipsos KnowledgePanel¹ and NORC AmeriSpeak² Omnibus Surveys. CDC uses these surveys for rapid data collection on receipt, intent, knowledge, attitudes, beliefs, and behaviors (KABB) related to COVID-19, influenza (flu), and other routine vaccinations. The two vendors (Ipsos and NORC) use probability-based panels to survey a nationally representative sample of U.S. adults aged 18 years and older. Panel members complete the surveys online. Samples are drawn using an address-based sampling methodology, and data are weighted to represent the non-institutionalized U.S. population and mitigate possible non-response bias. Each month, CDC funds twenty questions, in addition to demographic variables, to be fielded on two survey waves for each panel, for a total of four survey waves per month. A representative sample is selected for each general adult population survey wave from the respective panels. Fielding dates for each wave vary by vendor but generally both vendors field the first wave in the first half of each month and the second wave in the second half of each month. For surveys fielded July 11-29, 2024, there were 4,250 total respondents across the two waves.

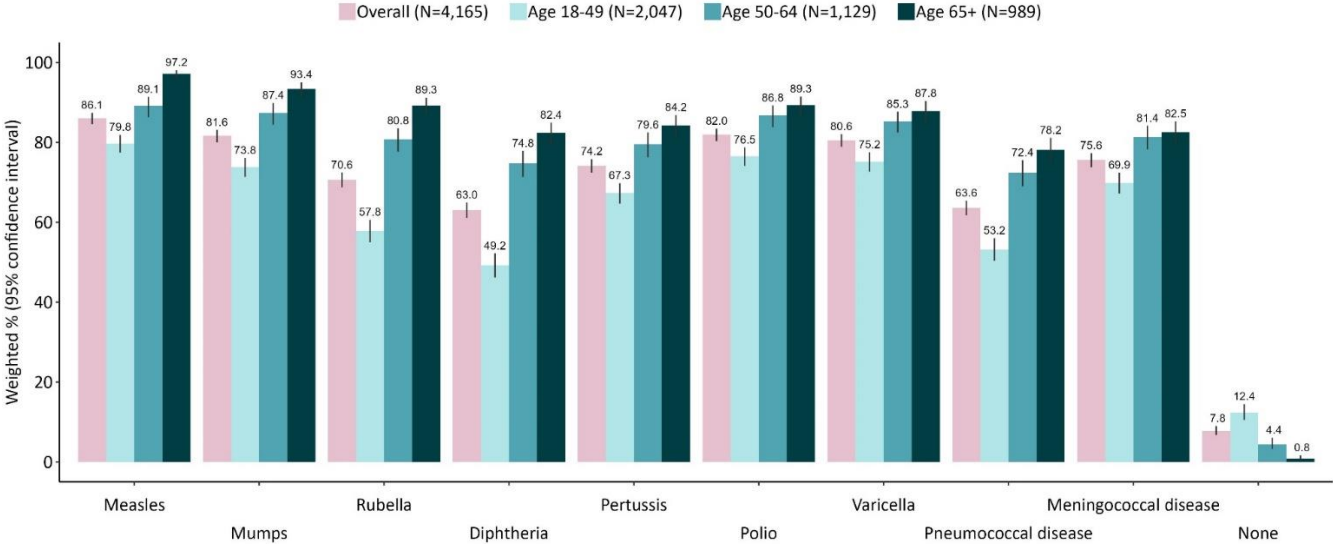
To assess awareness of and experience with vaccine-preventable diseases, the following questions were included on the July surveys:

- *Have you ever heard of any of the following diseases? Please select all that apply.* Response options: Measles, Mumps, Rubella (German measles), Diphtheria, Pertussis (whooping cough), Polio, Varicella (chickenpox), Pneumococcal disease, Meningococcal disease (such as meningitis), I have not heard of any of these diseases.
- *Have you, or has anyone you have personally known, ever had any of the following diseases? Please select all that apply.* Response options: Measles, Mumps, Rubella (German measles), Diphtheria, Pertussis (whooping cough), Polio, Varicella (chickenpox), Pneumococcal disease, Meningococcal disease (such as meningitis), None of the above.
- *Have you heard about an outbreak of any of the following diseases in the United States in the past 5 years? Please select all that apply.* Response options: Measles, Mumps, Rubella (German measles), Diphtheria, Pertussis (whooping cough), Polio, Varicella (chickenpox), Pneumococcal disease, Meningococcal disease (such as meningitis), None of the above.
- *How serious do you think it would be if a child got the following diseases? Measles, Mumps, Diphtheria, Pertussis, Polio.* Response options: Very serious, Somewhat serious, A little serious, Not serious.
- *Do you think any of the following put you at higher risk of shingles as an adult? Please select all that apply.* Response options: Getting varicella disease (chickenpox) as a child; Getting a vaccine for varicella (chickenpox); Weakened immune system; Close contact with poultry (such as chickens or turkeys); None of the above; I do not know what shingles is.

Throughout this report, differences among groups were assessed using t-tests with p-values <0.05 considered statistically significant.

Results

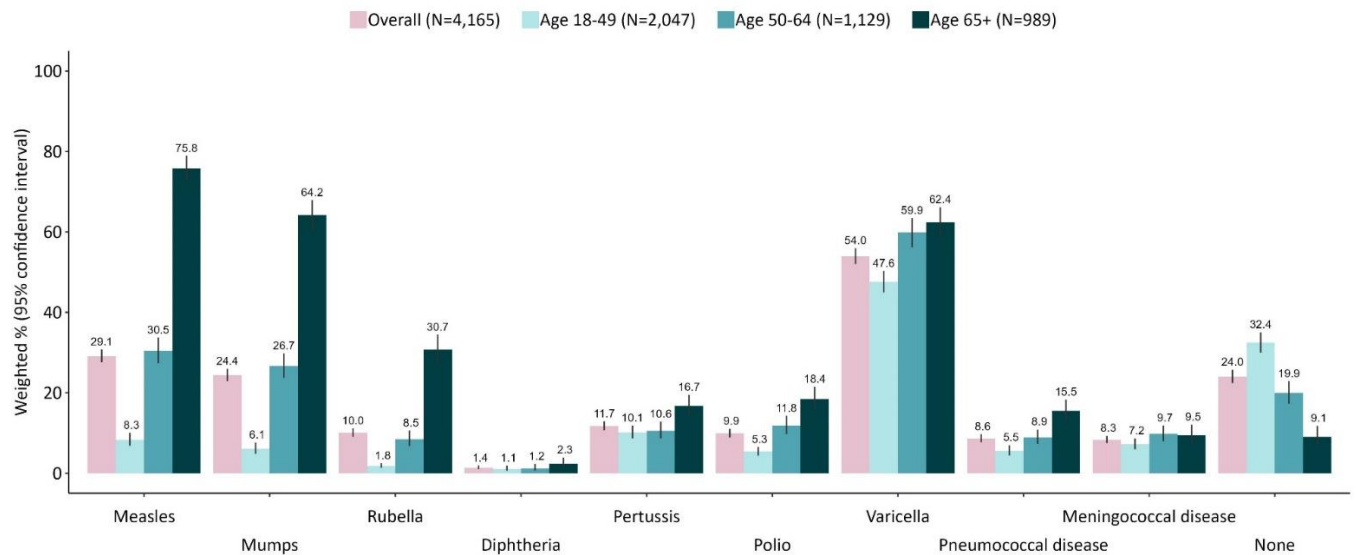
Figure 1: Awareness of vaccine-preventable diseases among U.S. adults, by age group (CDC Omnibus Surveys, July 11-29, 2024)



Among all adults, the percent who reported they had heard about a vaccine-preventable disease varied by disease and ranged from 63.0% for diphtheria to 86.1% for measles (Figure 1). Overall, 7.8% of all adults had not heard of any of the vaccine-preventable diseases listed: measles, mumps, rubella, diphtheria, pertussis (whooping cough), polio, varicella (chickenpox), pneumococcal disease, or meningococcal disease.

Adults aged 18-49 years were significantly less likely to have heard about vaccine-preventable diseases than adults aged ≥50 years.

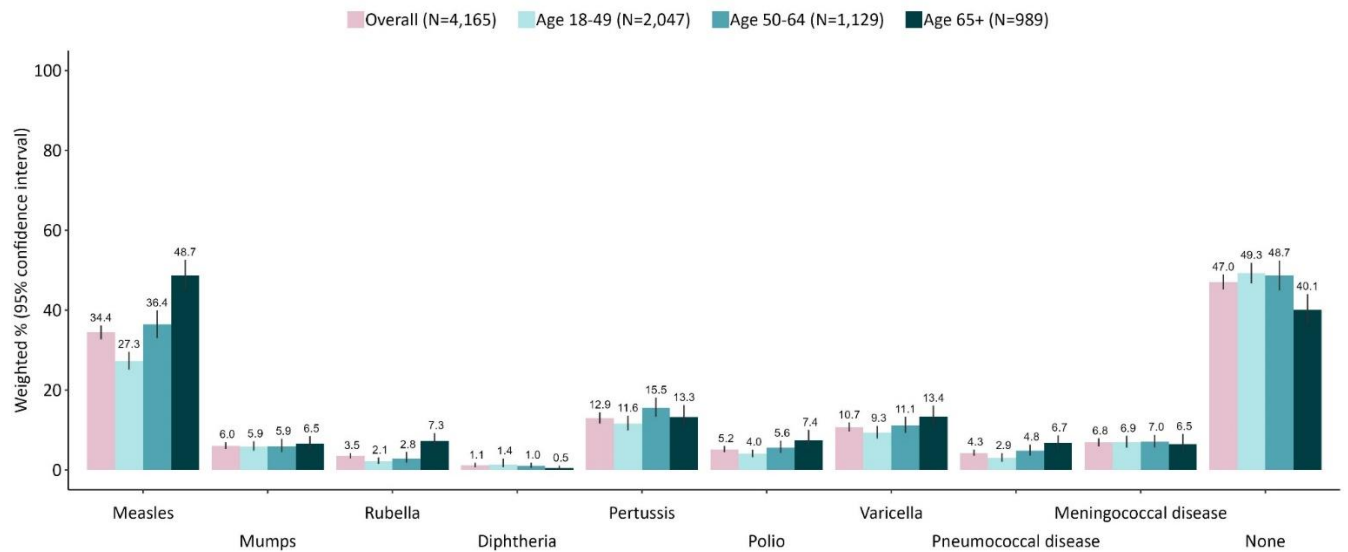
Figure 2: Had or know someone who had vaccine-preventable disease among U.S. adults, by age group (CDC Omnibus Surveys, July 11-29, 2024)



More than half (54.0%) of all adults have had or know someone who has had varicella (chickenpox) (Figure 2). About a quarter of all adults have had or knew someone who has had measles or mumps (29.1% and 24.4%, respectively). Nearly a quarter (24%) of all adults reported they have neither had nor known someone who has had any of the listed vaccine-preventable diseases.

Adults aged 18-49 years were significantly less likely than adults aged ≥ 50 years to have had or know someone who has had the following diseases: measles, mumps, rubella, polio, varicella (chickenpox), and pneumococcal disease.

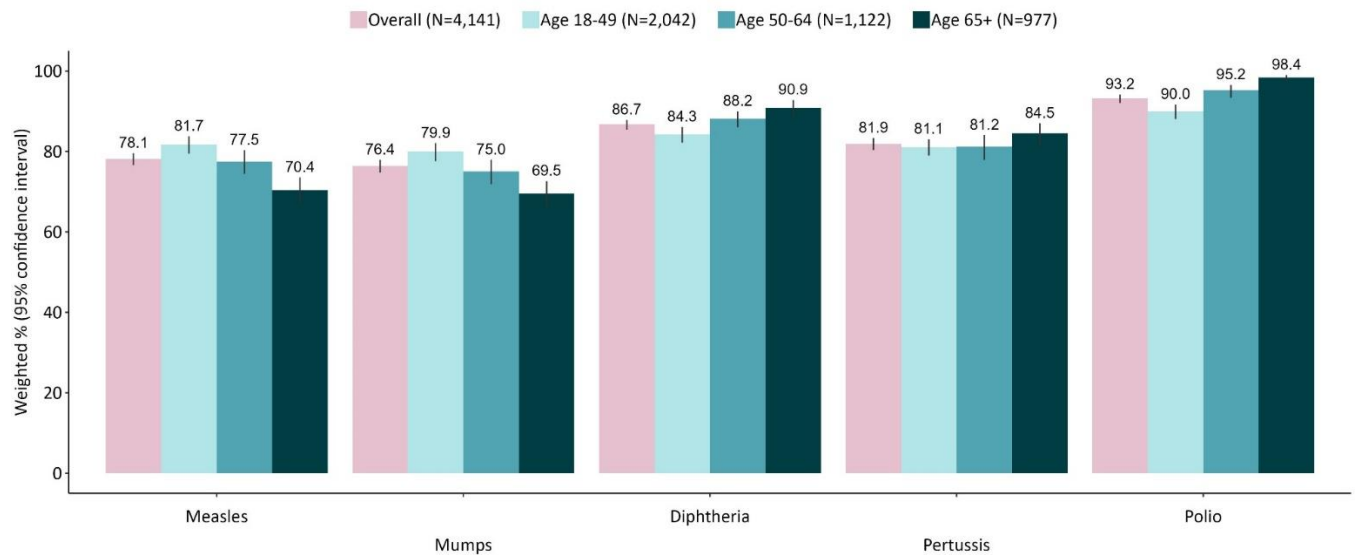
Figure 3: Awareness of outbreaks in past 5 years among U.S. adults, by age group (CDC Omnibus Surveys, July 11-29, 2024)



Just over a third (34.4%) of all adults had heard about a measles outbreak in the past five years, 12.9% heard about a pertussis (whooping cough) outbreak, and 10.7% had heard about a varicella (chickenpox) outbreak (Figure 3). Adults aged 18-49 years were significantly less likely than adults aged ≥ 50 years to have heard about a measles outbreak in the past five years.

Nearly half (47.0%) of all adults had not heard about an outbreak for any of the vaccine-preventable diseases listed in the past five years.

Figure 4: Belief that vaccine-preventable diseases* would be ‘very’ or ‘somewhat’ serious if a child got it among U.S. adults, by age group (CDC Omnibus Surveys, July 11-29, 2024)

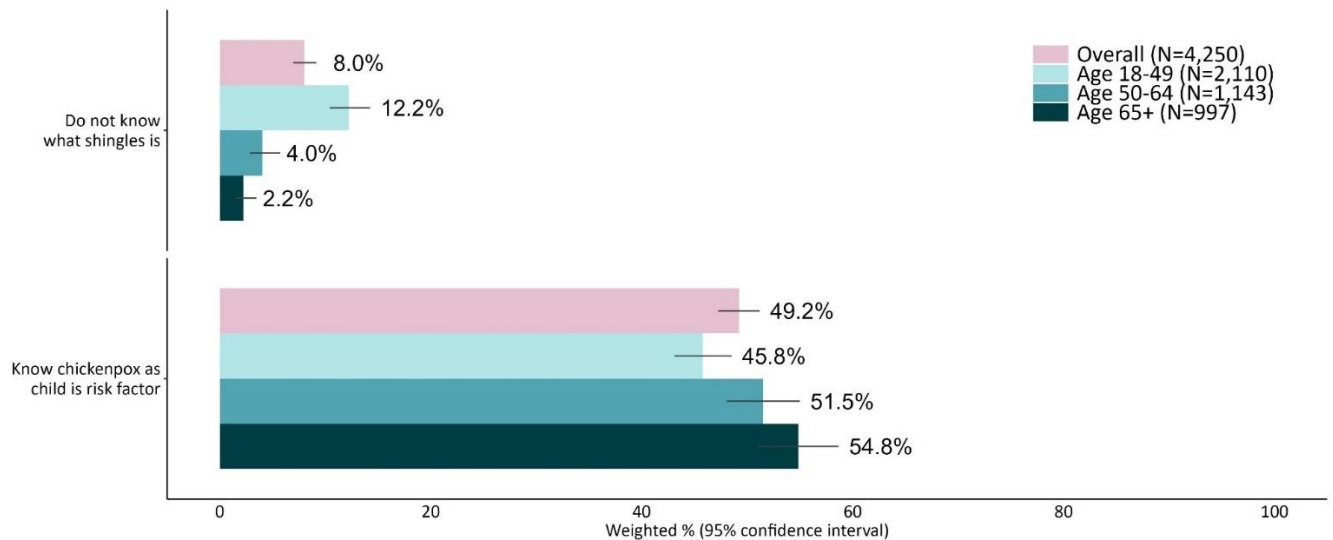


*Question was not asked for rubella, varicella, pneumococcal disease, or meningococcal disease.

The percent of adults who believed it would be very or somewhat serious if a child got a vaccine-preventable disease ranged from 76.4% for mumps to 93.2% for polio (Figure 4).

Adults aged ≥ 50 years were significantly more likely than adults aged 18-49 years to believe that it would be serious if a child got polio or diphtheria. However, younger adults aged 18-49 years were significantly more likely than adults aged ≥ 50 years to believe that it would be serious if a child got measles or mumps.

Figure 5: Knowledge about shingles among U.S. adults, by age group (CDC Omnibus Surveys, July 11-29, 2024)



Overall, only 8.0% of all adults reported they did not know what shingles is (Figure 5). However, adults aged 18-49 years were significantly more likely to report not knowing what shingles is compared to adults aged ≥ 50 years.

Nearly half (49.2%) of all adults knew getting varicella (chickenpox) as a child puts you at higher risk of getting shingles as an adult. Adults aged ≥ 50 years were significantly more likely than adults aged 18-49 years to know that varicella (chickenpox) put people at higher risk of getting shingles.

Discussion

- According to our analysis, younger adults were generally less likely than older adults to be aware of or have had personal experience with vaccine-preventable diseases. This may be a result of the success of vaccinations. Older adults may be more likely to remember certain diseases that were once common before vaccines became available.
- While most adults believed that it would be serious if a child got one of the listed vaccine-preventable disease, it varied by disease and age group.
- Measles cases are increasing this year in the United States and around the world. As of August 22, 2024, there have been 13 reported outbreaks and a total of 227 reported cases of measles in the United States this year. Pertussis (whooping cough) is common in the United States, with frequent outbreaks. Yet, only about a third of adults reported hearing about a measles outbreak in the past 5 years, and even fewer reported hearing about a pertussis (whooping cough) outbreak. It is possible that most adults do not consider a few cases to be an ‘outbreak.’

- Adults aged ≥ 50 years were more likely to know that getting varicella (chickenpox) puts people at higher risk of getting shingles. This is likely due to this age group being recommended to get the shingles vaccine and thus being more likely to have seen communications efforts or talked with their healthcare provider about shingles vaccination.
- There is an opportunity to develop improved communications that educate people about the risks of vaccine-preventable diseases and the importance of vaccination to help reduce death and disease.

Limitations

The findings in this study are subject to several limitations. All responses are self-reported and may under or overestimate awareness. Low survey response rates could introduce selection bias. While the sampling procedure and post-stratification weighting mitigate selection effects, some bias may persist. All figures include whiskers to indicate 95% confidence intervals around the point estimate.

Footnotes

¹ <https://www.ipsos.com/sites/default/files/ipsosknowledgepanelmethodology.pdf>.

² <https://amerispeak.norc.org/content/dam/amerispeak/research/pdf/AmeriSpeak%20Technical%20Overview%202019%2002%2018.pdf>.

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