

# Championing Respiratory Disease Prevention Through Appropriate Vaccination: Supporting Immunization in LTC Facilities



LTC = long-term care.

# Burden of Respiratory Illness in Long-term Care



Pneumococcal pneumonia, COVID-19, influenza, and RSV have a higher incidence and greater risk among older adults, especially in long-term care (LTC) settings<sup>1-2</sup>



Preventing outbreaks is a public health and patient safety priority in LTC settings with stricter CMS requirements for reporting acute respiratory illness among residents<sup>3-5</sup>



LTC leaders play an essential role in ensuring eligible patients receive necessary immunizations against vaccine-preventable respiratory diseases<sup>3</sup>

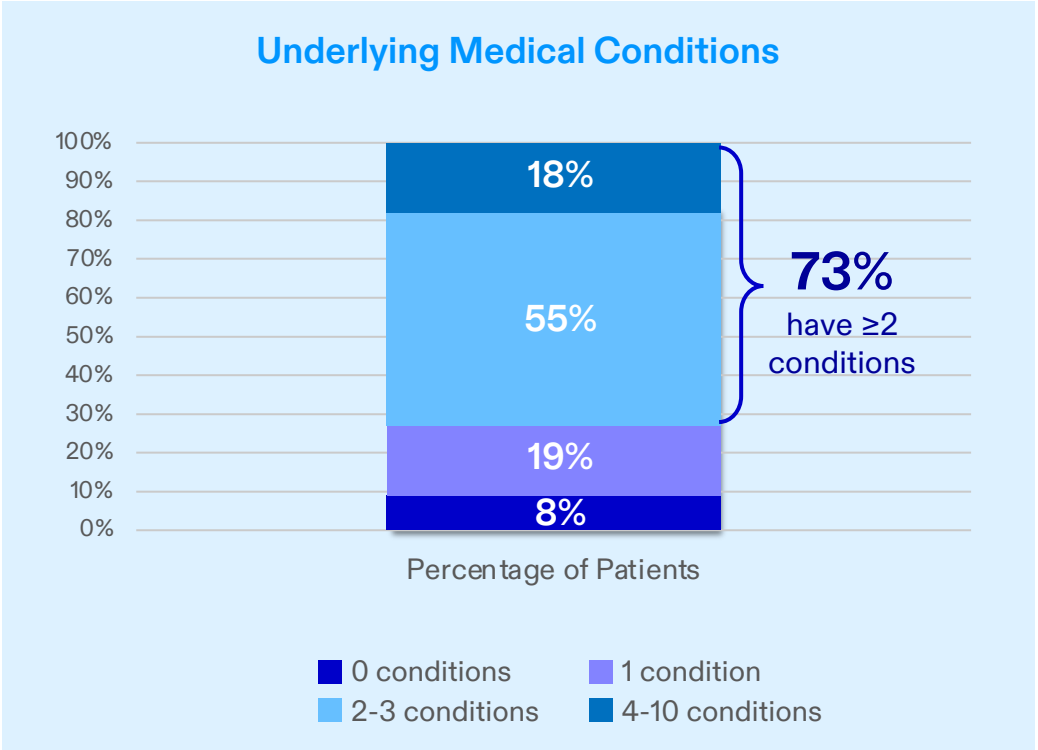
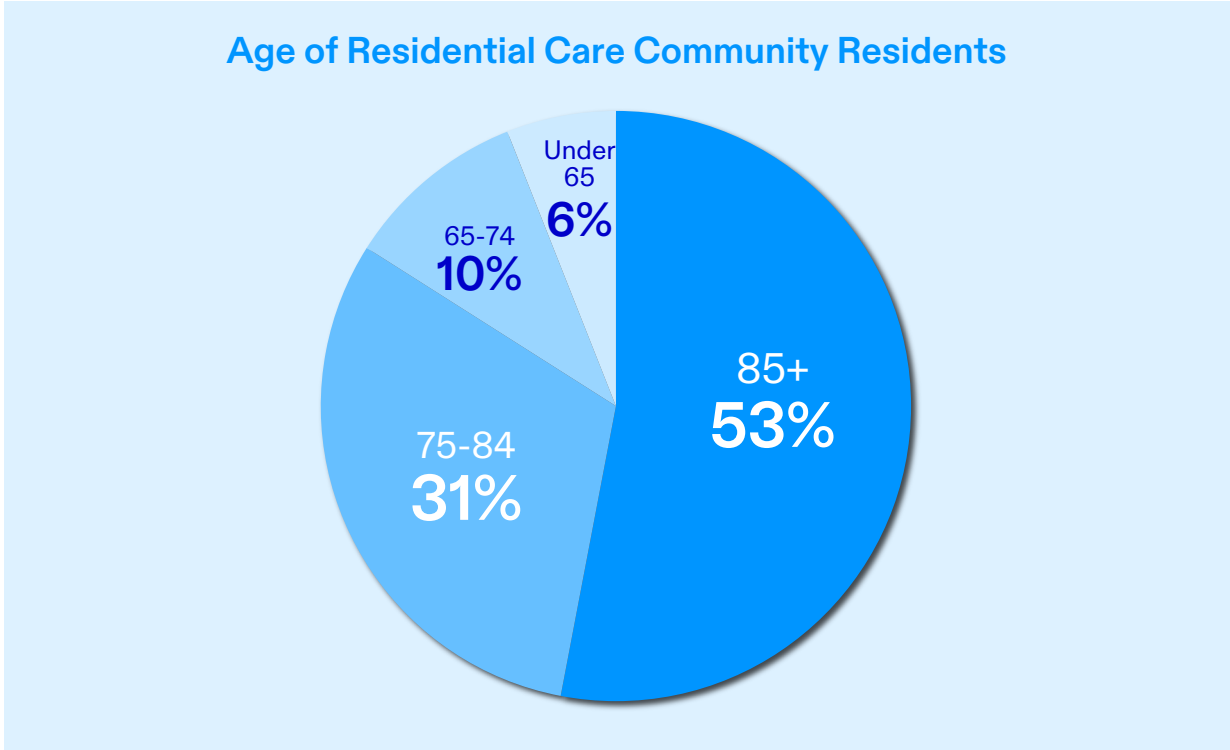
CDC = Centers for Disease Control and Prevention; CMS = Centers for Medicare & Medicaid Services; COVID-19 = coronavirus disease 2019; LTC = long-term care; RSV = respiratory syncytial virus.

1. Centers for Disease Control and Prevention (CDC). Viral respiratory pathogens toolkit for nursing homes. Accessed December 3, 2024. <https://www.cdc.gov/long-term-care-facilities/hcp/respiratory-virus-toolkit/index.html> 2. CDC. Staying up to date with COVID-19 vaccines. Updated October 3, 2024. Accessed December 3, 2024. <https://www.cdc.gov/covid/vaccines/stay-up-to-date.html> 3. Alliance for Aging Research and American Society of Consultant Pharmacists. A call to action: Expand & ensure access to all vaccines for long-term care residents. A white paper. June 2023. Accessed December 3, 2024. <https://www.agingresearch.org/wp-content/uploads/2023/06/ExpandEnsureAccessToAllVaccinesForLongTermCareResidentsAWhitePaper.pdf>

4. Mylotte JM. Nursing home-associated pneumonia, Part II: Etiology and treatment. *JAMDA*. 2020;21:315-321. 5. Centers for Medicare & Medicaid Services. Center for Clinical Standards and Quality/Quality, Safety & Oversight Group. Updates to the Condition of Participation (CoP) Requirements for Hospitals and Critical Access Hospitals (CAHs) To Report Acute Respiratory Illnesses. QSO-25-05-Hospitals/CAHs. October 22, 2024. Accessed December 3, 2024. <https://www.cms.gov/medicare/health-safety-standards/quality-safety-oversight-general-information/policy-memos-states-and-cms-locations/updates-condition-participation-cop-requirements-hospitals-and-critical-access-hospitals-cahs-report>

# Nearly 85% of Residential Care Community Residents Are Aged $\geq 75$ Years. Many Have 2 or More Underlying Medical Conditions

Data From the National Center for Health Statistics 2022 National Post-acute and Long-term Care Study<sup>1</sup>



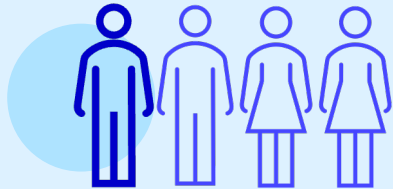
1. Centers for Disease Control and Prevention (CDC). National Center for Health Statistics (NCHS). Residential care community resident characteristics: United States, 2022. NCHS Data Brief No. 506. August 2024. Accessed December 3, 2024. <https://www.cdc.gov/nchs/data/databriefs/db506.pdf>

# More Than 150 Million US Adults May Be at Risk for Pneumococcal Disease<sup>1-3\*</sup>

In October 2024, the CDC expanded the age-based recommendation for pneumococcal vaccination from 65+ to 50+ years of age, making more healthy adults eligible to receive pneumococcal vaccination.<sup>4</sup> CDC recommends pneumococcal vaccination for adults aged 19-49 years with certain medical conditions and/or risk factors, and for those aged ≥50.<sup>4†</sup>

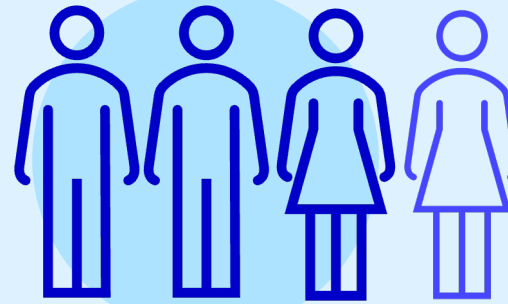
**1 in 4**

at-risk individuals for pneumococcal disease are aged 18-49 with certain conditions or risk factors<sup>1-3†</sup>



**3 in 4**

individuals at increased risk for pneumococcal disease are aged ≥50<sup>1,2</sup>



\*The estimated ~150 million is the entire population aged 18-49 with risk conditions and those aged ≥50, and is not an estimate of those eligible for vaccination, since some have already received recommended pneumococcal vaccination or could be ineligible for other reasons.<sup>1,2</sup>

†Risk conditions vary for those aged 2-18 and aged 19-49. For adults 19-49, risk conditions include: alcoholism; chronic heart disease (including CHF and cardiomyopathies); chronic liver disease; chronic lung disease (including COPD, emphysema, and asthma); chronic renal failure; cigarette smoking; cochlear implant; congenital or acquired asplenia; cerebrospinal fluid lead; diabetes; generalized malignancy; HIV infection; Hodgkin disease; congenital or acquired immunodeficiency (includes B- [humoral] or T-lymphocyte deficiency, complement deficiencies [particularly C1, C2, C3, and C4 deficiencies], and phagocytic disorders [excluding chronic granulomatous disease]); iatrogenic immunosuppression (diseases requiring treatment with immunosuppressive drugs, including long-term systemic corticosteroids and radiation therapy); leukemia; lymphoma; multiple myeloma; nephrotic syndrome; solid organ transplant; sickle cell disease or other hemoglobinopathies.<sup>4</sup>

1. Data on file. Eligible patients at risk. Pfizer Inc. 2. United States Census Bureau. American Community Survey 1 year estimates subject table. Age and sex. Accessed November 20, 2024. <https://data.census.gov/table/ACSST1Y2019.S0101> 3. Grant LR, Meche A, McGrath L, et al. Risk of pneumococcal disease in US adults by age and risk profile. *Open Forum Infect Dis*. 2023;10(5):ofad192. 4. Kobayashi M, Leidner AJ, Gierke R, et al. Expanded recommendations for use of pneumococcal conjugate vaccines among adults aged ≥50 years: Recommendations of the Advisory Committee on Immunization Practices--United States, 2024. *MMWR Weekly*. January 9, 2025. 74(1):1-8.

# RSV Incidence and Hospitalization Rates Increase With Age<sup>1,2</sup>

## Estimated Annual Burden of RSV in US Adults Aged ≥60 Years

### RSV-related Hospitalizations<sup>1\*</sup>

**95,000–153,000  
per year**



**Adults Aged ≥75**  
have the highest rate of RSV-associated hospitalization  
and ICU admission

## Additional Risk Factors



### Multiple Comorbidities

Older adults with certain underlying medical conditions (UMC) are at higher risk of RSV-related hospitalization.<sup>2†</sup>



### ICU Admission

RSV infection is associated with 18,000 - 27,200 annual ICU admissions.<sup>1</sup> Adults aged ≥60 hospitalized with RSV had higher rates of ICU admission when compared to those hospitalized with COVID-19 or influenza.<sup>3‡</sup>



### Disproportion Impact in LTC

From July 2022 to June 2023, among adults aged ≥60 hospitalized with RSV, 17% were LTC residents<sup>4¶</sup>

CDC = Centers for Disease Control and Prevention; CHF = congestive heart failure; CMS = Centers for Medicare & Medicaid Services; COPD=chronic obstructive pulmonary disease; LTC = long-term care; RSV=respiratory syncytial virus.

\*Data estimates from 2016 through 2023 RSV seasons. Rates of RSV-associated hospitalizations in RSV-NET were adjusted for underdetection due to testing practices. 2020 to 2021 and 2021 to 2022 seasons were excluded from these ranges given atypical RSV circulation.<sup>1</sup>

<sup>†</sup>Results from the 2022-23 RSV season in adults aged ≥65. Data shows the percentage of hospitalized patients who required ICU admission.<sup>3</sup>

<sup>‡</sup>Based on an analysis of surveillance data gathered by the National Respiratory Syncytial Virus-Associated Hospitalization Surveillance Network (RSV-NET) from a random sample of 1634 adults aged ≥ 60 years hospitalized during October 2022-April 2023.<sup>2</sup>

<sup>¶</sup>Based on data reported by CMS-certified nursing homes for the week of November 10, 2024.<sup>3</sup>

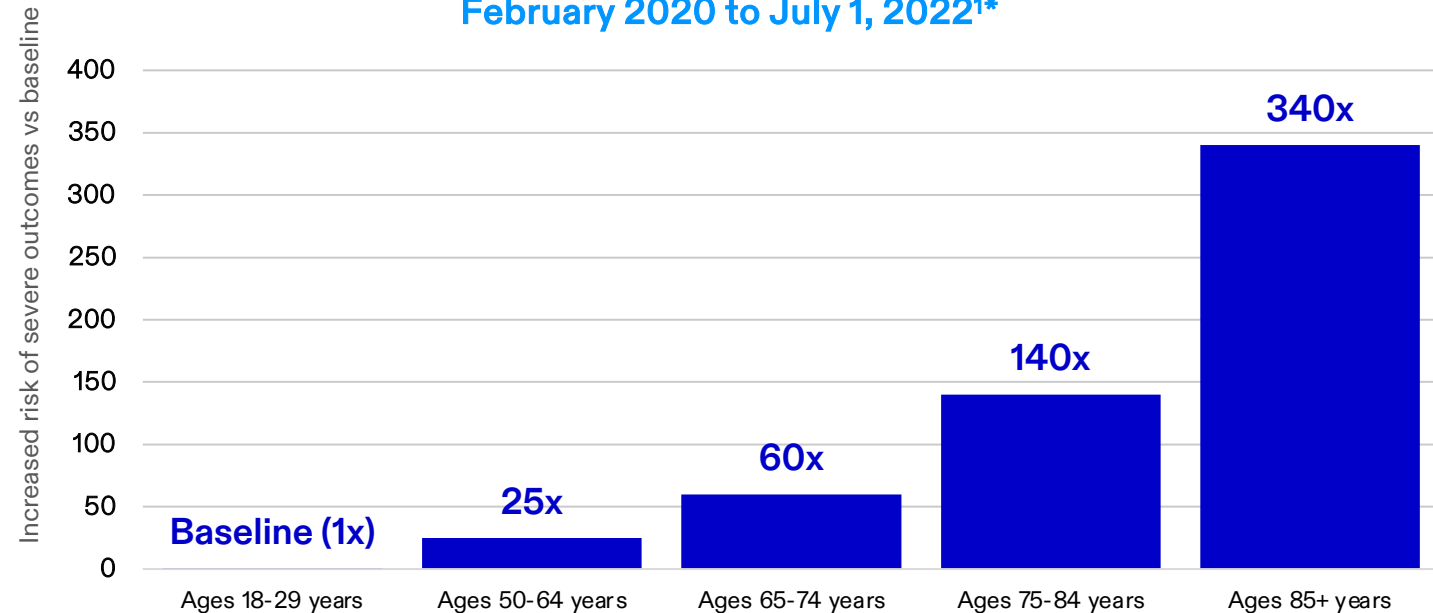
1. Havers FP, Whitaker M, Melgar M, et al. Burden of respiratory syncytial virus-associated hospitalizations in US adults, October 2016 to September 2023. *JAMA Network Open*. 2024;7(11):e2444756. 2. Havers FP, Whitaker M, Melgar M, et al. Characteristics and outcomes among adults aged ≥60 years hospitalized with laboratory-confirmed respiratory syncytial virus-RSV-NET, 12 States, July 2022-June 2023. *MMWR Morbid Mortal Wkly Rep*. October 6, 2023. 72(40):1075-1082. 3. Surie D, Yuengling KA, DeCuir J, et al. Disease severity of respiratory syncytial virus compared with COVID-19 and influenza among hospitalized adults aged ≥60 years - IVY Network, 20 US States, February 2022-May 2023. *MMWR Morb Mortal Wkly Rep*. 2023;72(40):1083-1088. 4. Reses HE, Segovia G, Dubendris H, et al. Coverage with influenza, respiratory syncytial virus, and COVID-19 vaccines among nursing home residents—National Healthcare Safety Network, United States, November 2024. *MMWR Morbid Mortal Wkly Rep*. 73(46):1052-1057.

# Age Is the Strongest Risk Factor for Severe COVID-19 Outcomes<sup>1</sup>

The risk of severe COVID-19 outcomes is higher in people who are aged  $\geq 50$ , with risk increasing substantially at ages  $>65$  years.<sup>1</sup>

Residents of LTC facilities make up less than 1% of the US population, but accounted for more than 35% of all COVID-19 deaths.<sup>1</sup>

**Adults Aged  $\geq 65$  Years Had a Significantly Higher Risk of Death From COVID-19 vs Young Adults Aged 18-29 From February 2020 to July 1, 2022<sup>1\*</sup>**







COVID-19 = coronavirus disease 2019; LTC = long-term care.

<sup>\*</sup>Data include all deaths in the United States that occurred throughout the pandemic, from February 2020 to July 1, 2022, including deaths among unvaccinated individuals.<sup>1</sup>

<sup>1</sup>. Centers for Disease Control and Prevention (CDC). Underlying conditions and the higher risk for severe COVID-19. Updated July 30, 2024. Accessed December 3, 2024. <https://www.cdc.gov/covid/hcp/clinical-care/underlying-conditions.html>

# Role of Vaccination in Prevention of Respiratory Disease in the Long-term Care Setting

# CDC Adult Vaccination Recommendations for the 2024–2025 Respiratory Disease Season<sup>1</sup>

Vaccine Type	Recommendation
 <b>Pneumococcal Disease</b>	<ul style="list-style-type: none"> <li>CDC recommends pneumococcal vaccination for: <ul style="list-style-type: none"> <li>All adults aged ≥50 years who have never received a pneumococcal conjugate vaccine or whose previous vaccination history is unknown<sup>1</sup></li> <li>Adults aged 19-49 with certain chronic conditions at increased risk for pneumococcal disease<sup>1*</sup></li> </ul> </li> </ul>
 <b>RSV</b>	<ul style="list-style-type: none"> <li>All adults aged 75+ should receive a single dose of an RSV vaccine<sup>1</sup></li> <li>Adults aged 60-74 should get a single dose of an RSV vaccine if they are at increased risk of severe RSV disease based on certain chronic conditions, such as lung or heart disease, or if they live in a nursing home<sup>1†</sup></li> </ul>
 <b>COVID-19</b>	<ul style="list-style-type: none"> <li>The CDC recommends all adults get a 2024-2025 COVID-19 vaccine, including people who previously received a COVID-19 vaccine or had COVID-19. Adults aged ≥65 and individuals who are moderately or severely immunocompromised should talk to their healthcare provider about additional doses<sup>1</sup></li> </ul>
 <b>Influenza</b>	<ul style="list-style-type: none"> <li>All adults should get vaccinated every flu season<sup>3</sup></li> </ul>

CDC = Centers for Disease Control and Prevention; COVID-19 = coronavirus disease 2019; LTC = long-term care; RSV = respiratory syncytial virus.

\*For more information from CDC about risk factors for pneumococcal disease go to: <https://www.cdc.gov/pneumococcal/downloads/Vaccine-Timing-Adults-JobAid.pdf><sup>2</sup>

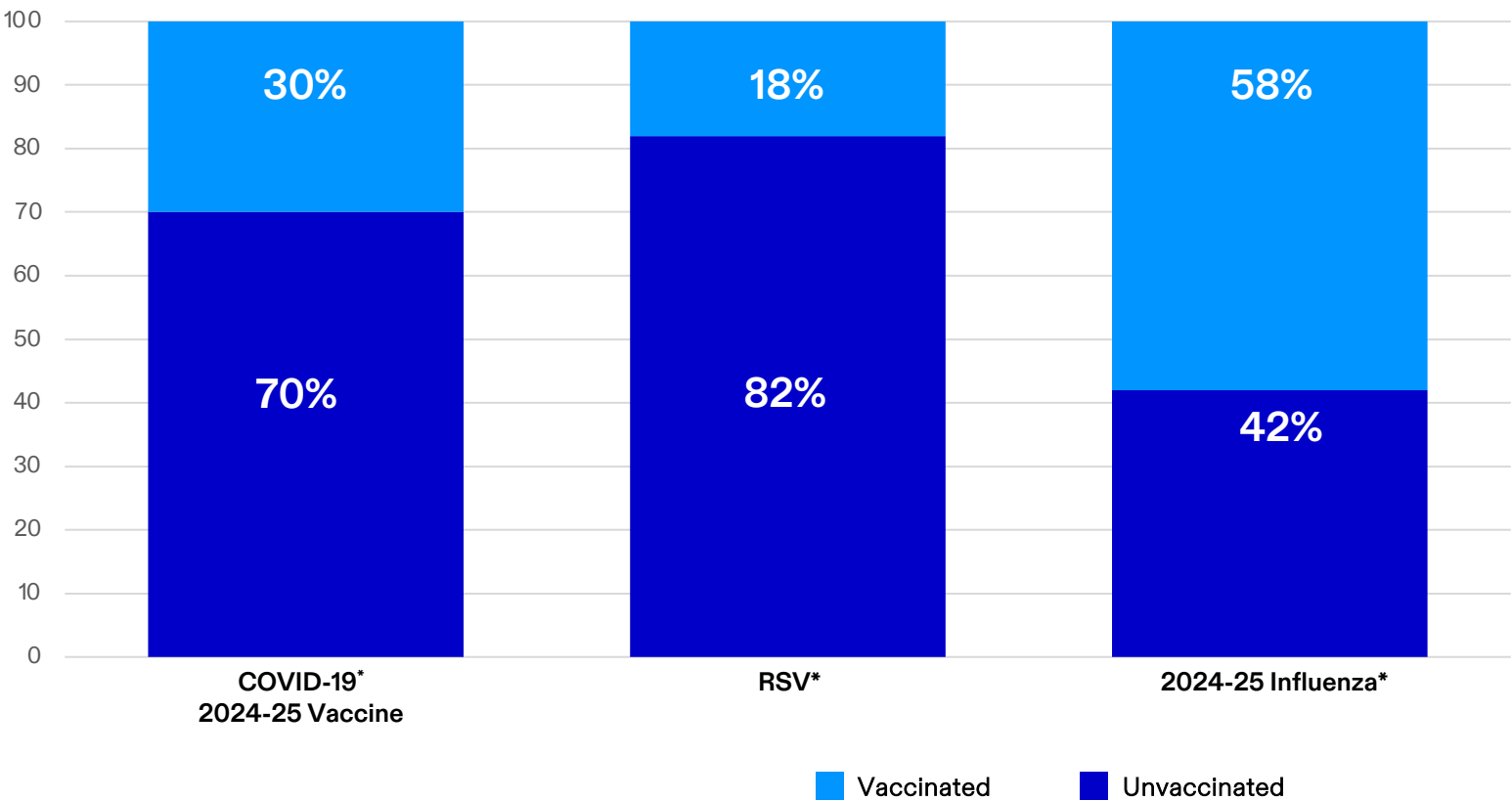
†For more information from CDC about risk factors for severe RSV go to: <https://www.cdc.gov/rsv/hcp/clinical-overview/index.html><sup>3</sup>

1. Centers for Disease Control and Prevention (CDC). Adult immunization schedule notes. Updated November 21, 2024. Accessed December 17, 2024. <https://www.cdc.gov/vaccines/hcp/imz-schedules/adult-notes.html#note-pneumo> 2. CDC. Pneumococcal vaccine timing for adults. Updated September 12, 2024. Accessed December 17, 2024. <https://www.cdc.gov/pneumococcal/downloads/Vaccine-Timing-Adults-JobAid.pdf> 3. CDC. Clinical overview of RSV. Updated August 30, 2024. Accessed December 17, 2024. <https://www.cdc.gov/rsv/hcp/clinical-overview/index.html>



# Many At-Risk LTC Residents May Not Be Up To Date With Respiratory Disease Vaccinations

Estimated Unvaccinated Rates Among LTC Residents, November 2024<sup>1</sup>



Among all LTC residents aged ≥18 years, **63%** had been vaccinated against pneumococcal disease and **37%** were unvaccinated<sup>2†</sup>

<sup>\*</sup>COVID-19, RSV, and influenza vaccination rates reported as of November 10, 2024 among reporting nursing homes.<sup>1</sup>  
<sup>†</sup>Pneumococcal vaccine rate data from CDC, AdultVaxView nursing home resident dataset in 2020.  
<sup>1</sup> Reses HE, Segovia G, Dubendris H, et al. Coverage with influenza, respiratory syncytial virus, and COVID-19 vaccines among nursing home residents — National Healthcare Safety Network, United States, November 2024. *MMWR Morb Mortal Wkly Rep.* November 21, 2024. 73(46):1052-1057. <sup>2</sup> CDC. AdultVaxView. Vaccination coverage among nursing home residents. Accessed January 27, 2025. <https://www.cdc.gov/adultvaxview/about/nursing-home-residents.html>

# Multiple Barriers May Limit Vaccine Access for Older Adults in LTC Settings

<b>Low Awareness or No Strong Recommendation</b>	<ul style="list-style-type: none"> <li>• In August 2024, fewer than 1 in 5 US adults expressed concern about themselves or a family member getting a respiratory infection, including RSV, flu, pneumococcal disease, or COVID-19, during the upcoming fall and winter<sup>1*</sup> <ul style="list-style-type: none"> <li>— Adults with a chronic health condition were about 2x as likely as those without to be concerned that they or a family member could get a respiratory infection<sup>†</sup></li> </ul> </li> <li>• Concerns about vaccination side effects were cited by nearly half of survey respondents as the major reason for not getting recommended respiratory vaccines<sup>1</sup></li> <li>• There is generally low awareness of the potential severity of RSV illness or the hospitalization burden of RSV in the elderly<sup>2‡</sup></li> <li>• Only half of adults aged ≥65 years would get a flu and COVID-19 vaccine at the same time<sup>1</sup></li> </ul>
<b>Needed Advancements for Operationalization</b>	<ul style="list-style-type: none"> <li>• Most state-level nursing home regulations require that certain vaccinations be offered to residents and staff (including all states for COVID-19 vaccination), and some states require documentation of vaccination status; nevertheless, immunization rates remain low<sup>3-5</sup></li> </ul>
<b>SDOH &amp; Vaccine Hesitancy</b>	<ul style="list-style-type: none"> <li>• Gender, race/ethnicity, social media, and access to healthcare may influence vaccine hesitancy<sup>6</sup></li> </ul>

COVID-19 = coronavirus disease 2019; HCP =healthcare provider; LTC = long-term care; RSV = respiratory syncytial virus; SDOH = social determinants of health; VA = U.S. Department of Veterans Affairs.

\*Survey conducted August 8-12, 2024 included 1,160 complete responses from US adults aged 18 years and older, representing the 50 states and DC.<sup>1</sup>

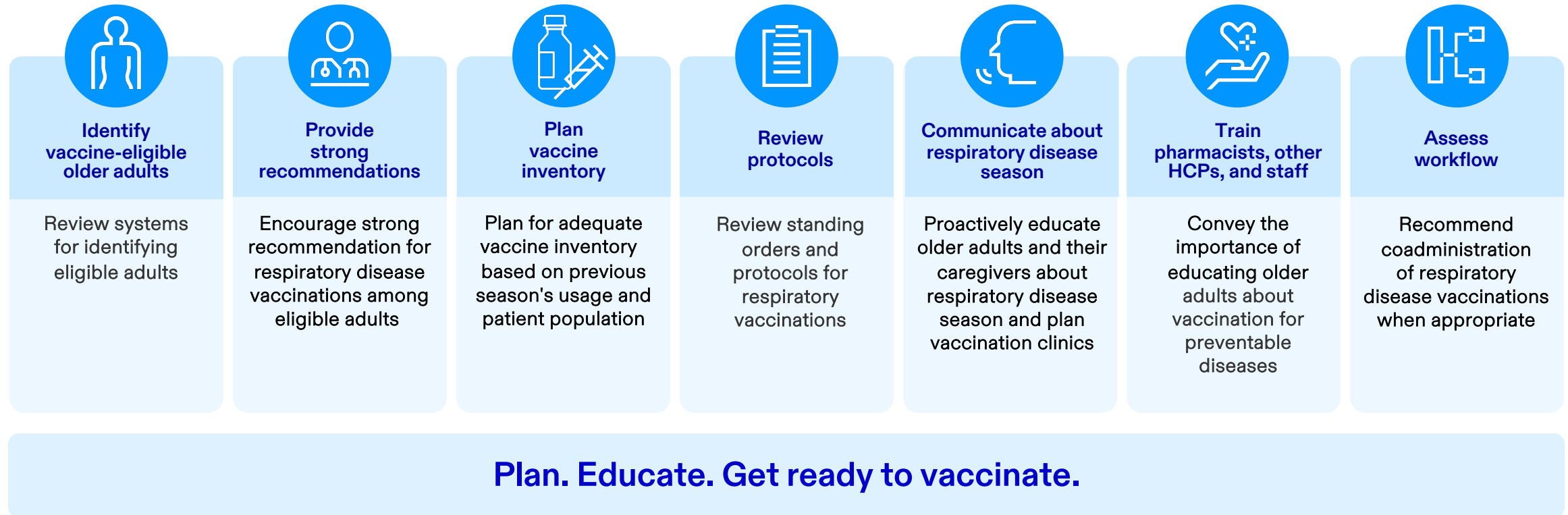
†NFID survey defined people at higher risk of complications as those aged ≥65, and adults who have or have had asthma, chronic obstructive pulmonary disease, diabetes, heart disease or stroke, kidney disease, liver disease, or a weakened immune system due to cancer treatment or other immune therapy.<sup>1</sup>

‡Data from a non-interventional, cross-section, web-based survey of US adults at increased risk of severe RSV infections (n=827), administered between May and June 2022.<sup>2</sup>

1. National Foundation for Infectious Diseases. 2024 National Survey: Attitudes and behaviors about influenza, COVID-19, respiratory syncytial virus, and pneumococcal disease. September 25, 2024. Accessed January 26, 2025. <https://www.nfid.org/resource/2024-national-survey-attitudes-and-behaviors-about-influenza-covid-19-respiratory-syncytial-virus-and-pneumococcal-disease/> 2. La EM, Bunniran S, Garbinsky D, et al. Respiratory syncytial virus knowledge, attitudes, and perceptions among adults in the United States. *Hum Vac & Immunother.* 2024;20(1):2303796. 3. Centers for Disease Control and Prevention (CDC) Public Health Law: Appendix 1-Influenza vaccination laws for healthcare workers (HCWs) in state long-term care facilities. Accessed December 5, 2024. [https://www.cdc.gov/phlp/php/publications/appendix-1-influenza-vaccination-laws-hcw-state-ltc-facilities.html#cdc\\_report\\_pub\\_study\\_section\\_3-healthcare-worker-type](https://www.cdc.gov/phlp/php/publications/appendix-1-influenza-vaccination-laws-hcw-state-ltc-facilities.html#cdc_report_pub_study_section_3-healthcare-worker-type) 4. CDC. Public Health Law: Appendix 2-Influenza vaccination laws for patients in state long-term care facilities. Accessed December 5, 2024. [https://www.cdc.gov/phlp/php/publications/appendix-1-influenza-vaccination-laws-hcw-state-ltc-facilities.html#cdc\\_report\\_pub\\_study\\_section\\_3-healthcare-worker-type](https://www.cdc.gov/phlp/php/publications/appendix-1-influenza-vaccination-laws-hcw-state-ltc-facilities.html#cdc_report_pub_study_section_3-healthcare-worker-type) 5. Reses HE, Segovia G, Dubendris H. Coverage with influenza respiratory syncytial virus, and COVID-19 vaccines among nursing home residents--National Healthcare Safety Network, United States, November 2024. *MMWR Morbid Mortal Wkly Rep.* November 21, 2024. 73(46):1052-1057. 6. Moon I, et al. *Prev Med Rep.* 2023;33:102200.

# Creating a Vaccination Action Plan: Considerations for Long-term Care

# Pragmatic Steps to Help Improve Respiratory Disease Vaccination Rates Among Eligible Older Adults in LTC<sup>1,2</sup>



HCP = healthcare provider; LTC = long-term care.

1. Centers for Disease Control and Prevention (CDC). Immunization strategies for healthcare practices and providers. Accessed December 5, 2024. <https://www.cdc.gov/pinkbook/hcp/table-of-contents/chapter-3-immunization-strategies.html>

2. Independent Pharmacy Cooperative. Stay ahead of the curve: be prepared for flu season. Published January 23, 2023. Accessed December 5, 2024. <https://www.ipcrx.com/pharmacy-blog/pharmacy-services/stay-ahead-of-the-curve-preorder-flu-vaccine/>

# Activating a Vaccination Plan for LTC Patients: Start Now



**Use every patient evaluation as an opportunity to assess immunization status**

Most adults are not aware that they need vaccines<sup>1</sup>



**Prioritize vaccination and coadministration**

Review CDC recommendations for vaccination of older and high-risk adults and educate staff, HCPs, and patients<sup>2</sup>



**Start planning now to get all patients up to date**

Engage with colleagues to determine processes to ensure all eligible patients are vaccinated against respiratory illnesses<sup>3</sup>

**Imagine a future  
where all eligible  
patients get the  
vaccines they need**

CDC = Centers for Disease Control and Prevention; HCP = healthcare provider; LTC = long-term care.

<sup>1</sup>. Centers for Disease Control and Prevention (CDC). Adult immunization standards: standards for adult immunization practice. Updated August 9, 2024. Accessed December 5, 2024. <https://www.cdc.gov/vaccines-adults/hcp/imz-standards/index.html> <sup>2</sup>. CDC. What vaccines are recommended for you. Updated June 12, 2024. Accessed December 5, 2024. <https://www.cdc.gov/vaccines-adults/recommended-vaccines/index.html>

<sup>3</sup>. Alliance for Aging Research and American Society of Consultant Pharmacists. A call to action: Expand & ensure access to all vaccines for long-term care residents. A white paper. June 2023. Accessed December 5, 2024. <https://www.agingresearch.org/wp-content/uploads/2023/06/ExpandEnsureAccessToAllVaccinesForLongTermCareResidentsAWhitePaper.pdf>