

# CDC's State of Vaccine Confidence Insights Report

RSV Vaccination in Older Adults Special Report

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COVID-19 Response, Vaccine Task Force
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The findings and conclusions in this report are those of the author(s) and do not necessarily represent the official position of the Centers for Disease Control and Prevention (CDC).



#### Themes with the potential to impact vaccine confidence and demand:

- Theme 1: Although consumers reported knowing few people affected by respiratory syncytial virus (RSV) infection, concern about the virus and interest in the vaccine are high among older adults.
- Theme 2: Many consumers have limited knowledge and high uncertainty about RSV and RSVrelated illness, including its ability for asymptomatic spread, frequency of severe infections, and the likelihood of reinfection.
- **Theme 3:** Low consumer trust in FDA, CDC, pharmaceutical companies, and vaccines may negatively impact RSV vaccine uptake.

# Ways public health and partners can take action to improve knowledge about RSV-related illness and RSV vaccine for older adults:

- Strong evidence exists that using pre-existing mental models in messaging improves the salience and uptake of messages. Consider crafting and disseminating messages that situate RSV within the broader category of respiratory viruses such as influenza and COVID-19. This approach can help individuals who may be unfamiliar with RSV to grasp its potential severity and take appropriate preventive measures.
- Due to <u>low proportions of people</u> knowing someone that previously had RSV, craft messages
  that raise awareness about the prevalence and incidence of RSV in older adults and young
  children.
  - Consider crafting messages that tell the stories of people impacted by RSV. <u>Evidence</u> supports the effectiveness of emotional narrative messages in reaching those with message fatigue.
  - Consider crafting messages informing older adults about the benefits of RSV vaccination.
     There is a strong evidence base for "gain-framed" messages (highlighting the health benefits of engaging in a particular behavior) compared with "loss-framed" messages (emphasizing the negative consequences of failing to engage in healthy behaviors).
- Due to the high proportion of people surveyed by the Annenberg Public Policy Center (APPC) who were unsure if a person could get reinfected with RSV (60%), create and share messages communicating that people can get infected with RSV multiple times throughout their lives.
- Consider adapting the process and risk messaging about the FDA's vaccine approval process from <u>a recent APPC study</u> among older adult populations, using the examples from APPC as a starting point.
- Due to consumers' concerns about the RSV vaccine approval process, consider disseminating
  messages that clearly outline how vaccines are developed and approved, such as this
  representation of the <u>Vaccine Life Cycle</u> provided by CDC or these <u>English</u> and <u>Spanish</u>
  infographics highlighting FDA's role in the approval process created by FactCheck.org.

**Resources:** The following link contains graphics and assets partners can use to address the themes in this report: <a href="https://centersfordiseasecontrol.sharefile.com/d-s394ec9ecbf484c72845317e525712090">https://centersfordiseasecontrol.sharefile.com/d-s394ec9ecbf484c72845317e525712090</a>

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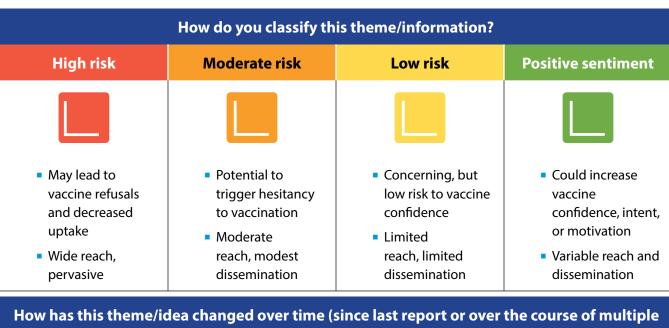
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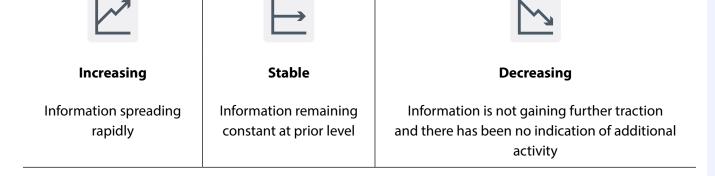
### **Aims and Methods**

By reviewing and analyzing numerous specific sources and inputs, this State of Vaccine Confidence Insights Report emphasizes major themes influencing RSV vaccine confidence and uptake in older adults. In addition, by examining how consumers think and feel, social processes, and the practical issues around vaccination, this Insights Report seeks to identify emerging issues related to the spread of inaccurate health information to help identify where intervention efforts can improve vaccine confidence. Data for this report was specially gathered to help analyze themes among adults ages 60 and older.

The information in this report is only a snapshot, and specific populations may be underrepresented. Images and quotes are illustrative examples and are not meant to comprehensively cover all content related to the highlighted themes.



reports)?



# Theme 1: Although consumers reported knowing few people affected by RSV, concern about the virus and interest in the vaccine are high among older adults.

The US Census Bureau estimates there are **77,565,896** US adults 60 years of age and older.¹ According to a recently published *Morbidity and Mortality Weekly Report (MMWR)*, RSV causes **60,000−160,000 hospitalizations** and **6,000−10,000 deaths** among adults aged ≥65 years each year in the US.² Adults at the highest risk for severe RSV illness include older adults, adults with chronic heart or lung disease, adults with weakened immune systems, and adults living in nursing homes or long-term care facilities.³ In May 2023, two RSV vaccines—<u>GSK's Arexvy (RSVPreF3)</u> and <u>Pfizer's Abrysvo (RSVpreF)</u>—received FDA approval for individuals aged 60 years and older. On June 21, 2023, the Advisory Committee on Immunization Practices (ACIP) voted to recommend that adults aged ≥60 years may receive a single dose of either RSV vaccine, using <u>shared clinical decision-making</u>.⁴ Shared clinical decision-making recommendations are individually based and informed by a decision process between the healthcare provider and the patient about whether vaccination is right for them.

# Perceptions, Concerns, and Threats that Might Impact Vaccine Confidence and Demand

- A recent MMWR article published in October 2023 analyzed 5,784 adults aged ≥60 years who were hospitalized with acute respiratory illness and laboratory-confirmed RSV, influenza, or COVID-19 between February 1, 2022–May 31, 2023. Findings indicate that RSV hospitalizations were less frequent among this population but were associated with more severe disease than COVID-19 or influenza by most measures, including receipt of standard flow oxygen therapy, high-flow nasal cannula or noninvasive ventilation, and intensive care unit admission.<sup>5</sup>
- Similarly, a <u>recently published German study</u> analyzing 1,541 adults hospitalized with PCR-confirmed RSV, influenza, or COVID-19 between 2017–2020 found more severe outcomes among older adults hospitalized with RSV compared to influenza A, but less severe outcomes compared to COVID-19.
  - In the study sample, chronic obstructive pulmonary disease was more prevalent in patients hospitalized with RSV compared to influenza B or COVID-19. Kidney diseases were more common in patients hospitalized with RSV compared to patients with influenza A or COVID-19.
  - Additionally, the authors found patients with RSV had longer hospital stays than patients with influenza A or influenza B, but not COVID-19.
  - The researchers concluded RSV is an important cause of respiratory hospitalizations in older adults.
- According to an April 2023 STAT-Harris Poll survey, 46% of respondents said they are familiar
  with RSV.<sup>6</sup> Among those familiar with RSV, 57% of respondents were concerned their older
  parents and relatives may contract RSV.
- A January 2023 KFF poll (N = 1,234) surveyed U.S. adults about their attitudes and behaviors regarding the "tripledemic" during the 2022-2023 respiratory disease season. <sup>Z</sup>
  - Roughly one in four (26%) respondents aged 65 and older were very or somewhat worried that they would get sick from RSV.

- 58% of older adults said they became more likely to modify their behavior in reaction to the news of COVID-19, influenza, and RSV spreading during the 2022-2023 winter season, including 43% who were more inclined to wear a mask in public and 34% who were more likely to avoid large gatherings.
- Among respondents with a child under
   18 living in the household, nearly half
   (46%) of parents said they are very or somewhat worried about their children getting sick with RSV.
- More Than Two in Five Adults Say They Are More Likely To Take Precautions Due To News Of The "Tripledemic" Percent who say the news of COVID-19, the flu, and respiratory syncytial virus (RSV) spreading in the U.S. this winter More likely to Less likely to dine Less likely to Any one of these wear a mask in public avoid large gatherings restaurants 20% 18% 46% Total Age 18-29 12% 43% 17% 42% 30-49 50-64 17% 19% 45% 65+ 23% 58%
- 38% of people surveyed reported their households were sick with either COVID-19 (**15%**), RSV (**10%**), or flu (**27%**) over the past month.
- A March 2023 survey from Health Union (N = 3,307) showed that among respondents aged 60 and older, only 35% had heard of an RSV vaccine, but 60% said they would be extremely likely to ask their healthcare professional about the RSV vaccine once it was available.<sup>8</sup>
  - Two-thirds said they would be extremely likely to accept their provider's vaccine recommendation.
  - Despite the low perceived risk of contracting RSV, older respondents were still concerned about contracting the disease. Less than 25% of respondents were at least somewhat concerned about contracting it during 2023, while around 75% were at least somewhat concerned about how contracting RSV would impact their quality of life.
  - Nearly 40% of those who have contracted RSV described their experiences as "severe" or "very severe."
- Survey findings (N = 1,601) from the Annenberg Public Policy Center (APPC) of the University of Pennsylvania found that 33% were concerned about RSV impacting a family member in January 2023 and 27% were concerned in June 2023.<sup>9</sup>
  - **63%** of respondents would be likely to recommend the RSV vaccine to a friend or family member aged 65+, although only **6%** of the sample reported ever having had an RSV illness.
  - Of the respondents who knew someone age 65 or older that had RSV, 77% reported it to be a somewhat or very serious case of infection.
  - **54%** of those that knew a child that had RSV reported that it was a somewhat or very serious case of infection.
  - 12% of the sample knew someone who had been hospitalized with RSV, and 3% knew of someone who had died of RSV.
- Some social media users are enthusiastic about the RSV vaccine's approval in older populations and are sharing their support on social media.<sup>10,11,a</sup>

<sup>&</sup>lt;sup>a</sup>Social media posts referenced throughout this report can be found in this online document.

#### **Commonly Asked Questions**

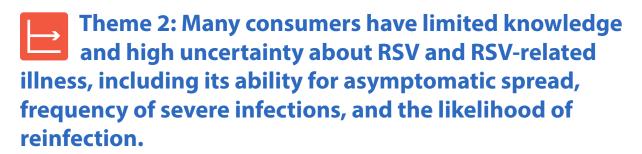
- Why are public health professionals concerned about RSV in adults and older adults?
  - Older adults are at greater risk than young adults for serious complications from RSV because immune systems weaken with age and older adults are more likely to have chronic medical conditions.<sup>12</sup> Each year, it is estimated that between 60,000-160,000 older adults in the United States are hospitalized and 6,000-10,000 die due to RSV infection. Adults at highest risk for severe RSV infection include:
    - Older adults
    - Adults with chronic heart or lung disease
    - Adults with weakened immune systems
    - Adults with certain other underlying medical conditions
    - Adults living in nursing homes or long-term care facilities<sup>13</sup>
- How does someone differentiate between RSV, COVID-19 and influenza?
  - Because RSV, COVID-19, and influenza share some of the same signs and symptoms, specific
    testing is needed to confirm a diagnosis. To learn more, visit CDC's website for information
    about <u>COVID-19 symptoms</u>, <u>flu symptoms</u> and <u>RSV symptoms</u>. Although various resources are
    available that compare symptoms of COVID-19, influenza, and RSV, <u>a diagnosis of any of these
    infections requires testing</u>. If you have a respiratory illness, talk to your provider about testing
    and treatment options.
  - Influenza (flu) can cause mild to severe illness, and at times can lead to severe illness, hospitalization, and death. Flu symptoms usually come on suddenly, and a person may experience symptoms anywhere from **1 to 4 days** after infection. People who have flu often feel some or all of these symptoms: fever or feeling feverish/chills, cough, sore throat, runny or stuffy nose, muscle or body aches, headaches, fatigue (tiredness), and some people may have vomiting and diarrhea, though this is more common in children than adults. It's important to note that not everyone with flu will have a fever.<sup>14</sup>
  - People with COVID-19 can have varying degrees of symptoms, ranging from no symptoms (asymptomatic) to severe illness. Typically, a person may experience symptoms anywhere from 2 to 5 days (and up to 14 days) after infection. Possible symptoms include fever or chills, cough, shortness of breath or difficulty breathing, fatigue, muscle or body aches, headache, loss of taste or smell, sore throat, congestion or runny nose, nausea or vomiting, and diarrhea. Additional information can be found at CDC's Similarities and Differences between Flu and COVID-19 webpage.
  - People infected with RSV usually show symptoms within 4 to 6 days after getting infected.
     Symptoms of RSV infection usually include runny nose, decrease in appetite, coughing, sneezing, fever, or wheezing. These symptoms usually appear in stages and not all at once.
     In very young infants with RSV, the only symptoms may be irritability, decreased activity, and breathing difficulties.<sup>15</sup>

#### **Inaccurate Health Information Themes**

 Older adults are using social media to share their belief that RSV does not cause them serious illness. 16,17

#### **Ways to Take Action**

- Messaging should aim to improve awareness of RSV and its complications, improve awareness of RSV vaccine availability, and encourage discussions between patients and providers about RSV vaccination.
- Strong evidence exists that using pre-existing mental models in messaging improves the salience and uptake of messages.<sup>18</sup> Consider crafting and disseminating messages that situate RSV within the broader category of respiratory viruses such as influenza and COVID-19. This approach can help individuals who may be unfamiliar with RSV to grasp its potential severity and take appropriate preventive measures.
- Consider working with partners that serve people 60 years and older with chronic obstructive pulmonary disease, kidney diseases, and other chronic illnesses that increase the risk of severe RSV to create and disseminate messages highlighting the increased likelihood of severe outcomes in these populations if they get RSV and the availability of a vaccine.
- Due to a perception that RSV only impacts or seriously impacts children, work with community partners and partners that serve older adults to create and disseminate messages encouraging to talk to their providers about RSV vaccination.
- Due to low proportions of people knowing someone that previously had RSV, craft messages that raise awareness about the prevalence and incidence of RSV in older adults and young children.
  - Consider crafting messages that tell the stories of people impacted by RSV. Evidence supports
    the effectiveness of emotional narrative messages in reaching those with message fatigue.
  - Consider crafting messages informing older adults about the benefits of RSV vaccination and talking with your provider about RSV vaccine. There is a strong evidence base for "gain-framed" messages (highlighting the health benefits of engaging in a particular behavior) compared with "loss-framed" messages (emphasizing the negative consequences of failing to engage in healthy behaviors).<sup>20</sup>
- Due to difficulties in distinguishing between RSV, influenza, and COVID-19, create or disseminate messages that describe the symptoms of each and recommend people talk to their healthcare provider about testing and treatment options if they feel sick.
- When creating social media messages, due to social media users' support for the RSV vaccine, include a request to social media followers to share messages and advocate for local and state partners to do the same.
- Work with partners that serve long-term care residents to create and disseminate messages for staff and residents of long-term care facilities that address their RSV vaccine-related questions and concerns.
  - Since evidence suggests that in-person attendance of long-term care residents at educational sessions is high, work with community partners to offer small educational sessions for residents in long-term care facilities.<sup>21</sup>



Although RSV was first identified in 1956 and serious outcomes are common,<sup>22</sup> the April 2023 Stat-Harris Poll survey found that 54% of Americans are unfamiliar with RSV.<sup>6</sup> Additionally, the March 2023 survey from Health Union found that 65% of respondents aged 60 and older had not heard of an RSV vaccine.<sup>8</sup> Low knowledge of RSV and the vaccine has the potential to influence risk perception and vaccine seeking.

#### Perceptions, Concerns, and Threats that Might Impact Vaccine Confidence and Demand

- Findings from the June 2023 APPC survey (N = 1,601) found 18% of individuals accurately stated that RSV usually causes mild cold-like symptoms, compared with 38% who thought RSV usually caused serious breathing problems, and 44% who were unsure. (RSV usually causes mild, coldlike symptoms, though some young children or older adults may be at increased risk of severe illness.)
  - 17% of all respondents accurately indicated that RSV can survive on surfaces for many hours, 9% believed it could not survive, and 75% were unsure. (Per CDC's RSV transmission page, RSV can survive for many hours on hard surfaces such as tables, and typically lives on soft surfaces such as tissues and hands for shorter amounts of time.)
  - 60% of all respondents were unsure if a person could get RSV multiple times. (Per CDC's RSV transmission page, repeat infections may occur throughout life, and people of any age can be infected.)
  - 54% of all respondents were unsure if RSV was contagious before symptoms appeared. (Per CDC's RSV transmission page, people infected with RSV are usually contagious for 3 to 8 days and may become contagious a day or two before they start showing signs of illness.)

UF expert answers questions about the newly approved RSV vaccine

- Many public health professionals and healthcare workers are answering common questions about RSV disease and the vaccine. 23.24
- Some experts agree it might be difficult to vaccinate older individuals due to limited knowledge about RSV risk, especially because there is a low perceived sense of urgency and need for vaccination among older adult populations, and since CDC recommends shared clinical decision making.25

#### **Commonly Asked Questions**

- Which RSV vaccines are available for older adults?<sup>b</sup>
  - There are two RSV vaccines—Arexvy and Abrysvo—licensed by the U.S. Food and Drug
    Administration for use in adults 60 and older in the United States.<sup>26</sup> CDC recommends adults
    60 years and older may receive a single dose of either RSV vaccine, based on discussions
    between the patient and their healthcare provider.<sup>27</sup>
- What are the possible side effects of the RSV vaccines?
  - Side effects such as pain, redness, and swelling where the shot is given, fatigue, fever, headache, nausea, diarrhea, and muscle or joint pain are possible after RSV vaccination. These side effects are usually mild.<sup>26</sup>
  - A small number of participants in clinical trials developed serious neurologic conditions, including Guillain-Barré syndrome (GBS), after RSV vaccination. GBS is a rare condition in which your immune system attacks your nerves, causing symptoms such as weakness. However, given the small number of cases in the trial, it is unclear whether the vaccine caused these events, or whether they occurred due to chance.<sup>26</sup>
  - People who experience side effects from RSV vaccination should report them to the Vaccine Adverse Event Reporting System (VAERS). Anyone can report to VAERS, including patients and healthcare providers. Reports can be filed through the <u>VAERS website</u> or by calling 1-800-822-7967.<sup>26</sup>
- Were RSV vaccines made using mRNA technology?
  - No. Both Abrysvo and Arexvy are protein subunit vaccines, meaning they contain a part of the RSV virus. Both vaccines work by causing an immune response that can prevent respiratory disease if infected with RSV in the future.<sup>26</sup>
- Are RSV vaccines approved for infants and toddlers?
  - There are currently no RSV vaccines approved for infants or toddlers. However, two monoclonal antibody products—nirsevimab (Beyfortus) and palivizumab (Synagis)—can help protect babies and young children from severe disease from an RSV infection. Monoclonal antibodies are not vaccines; they are proteins that the body's immune system uses to help fight RSV infections and protect children from getting very sick. The protection these antibodies provide wanes over time. These products are not treatments for a child who already has RSV infection.<sup>28</sup>
  - Abrysvo received FDA approval in August 2023 and was subsequently recommended by ACIP and CDC in September 2023 for use in pregnant individuals to prevent lower respiratory tract disease (LRTD) and severe LRTD caused by RSV in infants from birth through 6 months of age. Abrysvo is approved for use at 32 through 36 weeks gestational age of pregnancy.<sup>29</sup> Vaccination during pregnancy has been shown to reduce the risk of RSV-related illness in infants during their first months of life.

- Are RSV vaccines approved for immunocompromised adults 60 years old of age and older?
  - Older adults with immunocompromising conditions are recommended to receive the RSV vaccine under shared clinical decision-making given the potential for significant benefit.
     Adults with immunocompromising conditions are at risk of severe RSV associated disease and death. They may benefit from RSV vaccination but were not included in the clinical trials, so vaccine efficacy in this population is unknown. These individuals, including those receiving immunosuppressive therapy, may have a diminished immune response to RSV vaccination.<sup>30</sup>

#### **Inaccurate Health Information Themes**

- Some experts have stated their belief that some doctors and consumers incorrectly assume RSV is strictly a pediatric disease.<sup>31</sup>
- The belief that infection-induced immunity is a more effective method to prevent illness from RSV, rather than vaccines,<sup>32</sup> is circulating on social media.<sup>33,34</sup>
- 22% of people in the RSV survey by APPC incorrectly believed the time of year that a person was most likely to contract RSV was not the fall and winter, while 34% were unsure.<sup>9</sup>

#### **Ways to Take Action**

- Consider crafting and disseminating messages that dispel the belief that RSV only seriously
  impacts children by explicitly calling attention to RSV being a virus that significantly affects older
  adults.
- Since COVID-19, influenza, and RSV have been discussed in the news and on social media as a
   "tripledemic," consider conducting a survey that investigates the possibility that perceptions of
   COVID-19 and the COVID-19 vaccine have carried over to RSV and the RSV vaccine.
  - Based on this survey's results, consider whether combined messaging about the COVID-19, annual flu, and RSV vaccines is appropriate.
- Due to the relatively high proportion of people in the APPC study<sup>2</sup> that reported being unsure if RSV usually produces cold-like symptoms or serious breathing problems (**44%**), disseminate messages about the risk of these symptoms due to RSV infection.
- Due to the relatively high proportion of people in the APPC study<sup>2</sup> unsure if RSV could survive on hard surfaces (75%), disseminate messages about the possibility for RSV to live for many hours on hard surfaces and direct them to <u>CDC's RSV transmission page</u> for more information.
- Due to the high proportion of people in the APPC study<sup>2</sup> unsure if a person could get reinfected with RSV (60%), create and share messages communicating that people can get infected with RSV multiple times throughout their lives.<sup>35</sup>
  - Note: These messages would also support the mitigation of the belief that infection-induced immunity is superior to vaccine-induced immunity.
- Due to the high proportion of people in the APPC study<sup>2</sup> that were unsure if a person with RSV could spread it before symptoms appeared (54%), create and share messages that people infected with RSV may be contagious a day or two before they start showing symptoms and as long as 4 weeks after they stop showing symptoms. Direct them to CDC's RSV transmission page for more information.
- Due to the significant number of people from the APPC study<sup>2</sup> who were unable to correctly identify the seasons in which a person is most likely to contract RSV, create messages highlighting the importance of vaccination prior to RSV season for those that choose to get vaccinated and the importance of mitigation efforts during the fall and winter seasons.

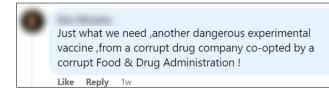
 Due to a lack of general knowledge about RSV, consider creating messages that describe RSV's impact on older adults in previous years, especially before the COVID-19 pandemic.

# Theme 3: Low consumer trust in FDA, CDC, pharmaceutical companies, and vaccines may negatively impact RSV vaccine uptake.

Patterns of <u>eroding public trust in government over the past two decades</u> as well as <u>recent declines</u> <u>in trust associated with the COVID-19 pandemic</u> may contribute to people's perceptions of vaccines, including the RSV vaccine.<sup>36</sup> Additionally, continual messaging from those opposed to vaccines and public health interventions adds to a complex information environment.

# Perceptions, Concerns, and Threats that Might Impact Vaccine Confidence and Demand

- Researchers and scientists encountered significant challenges during previous attempts to develop an RSV vaccine dating back to the 1960s. This may impact vaccine confidence if older individuals perceive these earlier unsuccessful clinical trials as a reason to doubt the safety of the new RSV vaccine formulations.
- News outlets are reporting that although a majority of FDA independent advisors recommended Pfizer's RSV vaccine, some are concerned about vaccine safety after 2 recipients, out of approximately 20,000, developed Guillain-Barré syndrome.<sup>38</sup>
- Many adults are sharing posts on social media highlighting minimal trust in pharmaceutical companies, which might negatively impact vaccine confidence in and uptake of the RSV vaccine.<sup>39,40,41,42</sup>
- Many consumers are using social media to share their belief that older adults should avoid the RSV vaccine because the government and pharmaceutical companies cannot be trusted. 43,44,45



- Some individuals are still concerned about the management of the COVID-19 pandemic, dissuading them from receiving the RSV vaccine.
- New research from APPC indicates that communicating the FDA's vaccine approval process can increase acceptance of RSV vaccination.<sup>49</sup> In a survey experiment, 57% of respondents who were presented with a flowchart detailing FDA's rigorous vaccine approval process were very or somewhat likely to recommend the RSV vaccine to a pregnant family member or friend, compared with 40% of respondents in a control group who were not exposed to the flowchart.

#### **Commonly Asked Questions**

- What was the approval process for the RSV vaccine?
  - The FDA's Center for Biologics Evaluation and Research (CBER) is responsible for regulating vaccine use in the United States. Once a vaccine receives FDA approval, it is reviewed by the Advisory Committee on Immunization Practices (ACIP), a group of medical and public health experts who develop recommendations for use of a vaccine in the United States. If the CDC Director approves ACIP's recommendation, it becomes the official CDC public health guidance and can lead to a vaccine becoming a part of the official U.S. adult and childhood immunization schedules. Even after vaccines are approved and recommended for public use, CDC and FDA use different systems to monitor their safety, which helps ensure a vaccine's continued success in the United States. The general stages of vaccine development are:
    - 1. Research and discovery
    - 2. Proof of concept
    - 3. Testing the vaccine
    - 4. The manufacturing process
    - 5. Approving the vaccine (FDA)
    - 6. Recommending the vaccine for use (ACIP and CDC)
    - 7. Monitoring safety after approval (CDC and FDA)<sup>50</sup>
  - More information about the vaccine approval process can be found on CDC's website: <u>How Vaccines are Developed and Approved for Use</u>. You can also view an infographic of the <u>Vaccine Life Cycle</u> provided by CDC as well an <u>infographic highlighting FDA's role in the vaccine approval process</u> created by FactCheck.org.
- Will the RSV vaccine be covered through Medicare or Medicaid?
  - The Inflation Reduction Act of 2022 states that any vaccine recommended by ACIP must be covered under Medicare prescription drug plans (Part D) and Medicaid in 2023 without consumer cost sharing.<sup>51</sup> This means that individuals covered through Medicare Part D or Medicaid can receive an RSV vaccine without any co-payment or deductible, provided they are eligible for vaccination. The Affordable Care Act requires private insurance plans to cover CDC-recommended vaccines without cost sharing.
  - Medicare Part D plans identify covered vaccines through formularies. Part D plan formularies
    must include all commercially available vaccines (except those covered by Part B). A new
    preventive vaccine may not specifically appear in the formulary, but the plan may still cover
    the vaccine.<sup>52</sup> Contact your plan to find out about coverage for vaccines.
- Will the RSV vaccine be free for older adults that do not have insurance?
  - Older adults without health insurance coverage may experience financial hardship obtaining an RSV vaccine.<sup>53</sup> Medicare enrollees without a Part D plan may have to pay for the RSV vaccine out of pocket.<sup>54</sup> If you do not currently have health insurance, visit <a href="www.HealthCare.gov">www.HealthCare.gov</a> to learn more about health coverage options.

#### **Inaccurate Health Information Themes**

- Many social media posts depict the RSV vaccine as a ploy to help pharmaceutical companies make more money.<sup>55,56,57</sup>
- Some social media users believe there is insufficient clinical trial data to support the FDA approval of RSV vaccines.<sup>58,59,60</sup>

#### **Ways to Take Action**

- Consider adapting the process and risk messages about the FDA's vaccine approval process from <u>APPC's study</u> to older adult populations, using the examples from APPC as a starting point.
- Due to consumers' concern about the RSV vaccine approval process, consider disseminating
  materials that clearly outline how vaccines are developed and approved, such as this
  representation of the <u>Vaccine Life Cycle</u> provided by CDC or these <u>English</u> and <u>Spanish</u>
  infographics highlighting FDA's role in the approval process created by FactCheck.org.
- Identify trusted messengers and community partners to craft and/or support the dissemination
  of messages about the risks of RSV infection, the availability of an RSV vaccine, and to talk with
  their provider about RSV vaccine.
  - Consider working with local personalities and trusted messengers that have been impacted by RSV to craft and disseminate messages about the RSV disease and the benefits of vaccination.
  - To leverage search engine and social media algorithms, monitor news media for reports of
    celebrities or prominent figures impacted by RSV and, when identified, disseminate messages
    about the seriousness of RSV for older adults, especially those with high risk conditions, and
    the availability of vaccination without mentioning the person affected.

## References

Note: omitted numbers are social media citations, which can be found in this online document.

- U.S. Census Bureau. (2021). American Community Survey S0101: Age and Sex. U.S. Department of Commerce. Retrieved August 23, 2023 from <a href="https://data.census.gov/table?q=PEP-AGE&t=Age+and+Sex&tid=ACSST1Y2021.S0101">https://data.census.gov/table?q=PEP-AGE&t=Age+and+Sex&tid=ACSST1Y2021.S0101</a>
- Hamid, S., Winn, A., Parikh, R., Jones, J. M., McMorrow, M., Prill, M. M., Silk, B. J., Scobie, H. M., & Hall, A. J. (2023). Seasonality of Respiratory Syncytial Virus United States, 2017–2023. Morbidity and Mortality Weekly Report, 72(14), 355–361. <a href="https://doi.org/10.15585/mmwr.mm7214a1">https://doi.org/10.15585/mmwr.mm7214a1</a>
- Centers for Disease Control and Prevention. (2023, June 29). CDC Recommends RSV Vaccine For Older Adults [Media statement]. U.S. Department of Health and Human Services. <a href="https://www.cdc.gov/media/releases/2023/s0629-rsv.html">https://www.cdc.gov/media/releases/2023/s0629-rsv.html</a>
- Melgar, M., Britton, A., Roper, L. E., Talbot, H. K., Long, S. S., Kotton, C. N., & Havers, F. (2023). Use of respiratory syncytial virus vaccines in older adults: Recommendations of the Advisory Committee on Immunization Practices United States, 2023. Morbidity and Mortality Weekly Report, 72(29), 793–801. https://doi.org/10.15585/mmwr.mm7229a4
- Surie, D., Yuengling, K. A., DeCuir, J., Zhu, Y., Gaglani, M., Ginde, A. A., Talbot, H. K., Casey, J. D., Mohr, N. M., Ghamande, S., Gibbs, K. W., Files, D. C., Hager, D. N., Ali, H., Prekker, M. E., Gong, M. N., Mohamed, A., Johnson, N. J., Steingrub, J. S., ... IVY Network (2023). Disease Severity of Respiratory Syncytial Virus Compared with COVID-19 and Influenza Among Hospitalized Adults Aged ≥60 Years IVY Network, 20 U.S. States, February 2022–May 2023. Morbidity and Mortality Weekly Report, 72(40), 1083–1088. http://dx.doi.org/10.15585/mmwr.mm7240a2
- 6. Silverman, E. (2023, July 25). STAT-Harris Poll: Most Americans are worried about RSV. STAT. <a href="https://www.statnews.com/pharmalot/2023/04/19/rsv-respiratory-virus-vaccines-pfizer-gsk-kids-fda/">https://www.statnews.com/pharmalot/2023/04/19/rsv-respiratory-virus-vaccines-pfizer-gsk-kids-fda/</a>
- 7. Schumacher, S., Sparks, G., Presiado, M., Kirzinger, A., & Brodie, M. (2023, February 7). *KFF COVID-19 Vaccine Monitor: January 2023*. KFF. <a href="https://www.kff.org/coronavirus-covid-19/poll-finding/kff-covid-19-vaccine-monitor-january-2023/">https://www.kff.org/coronavirus-covid-19/poll-finding/kff-covid-19-vaccine-monitor-january-2023/</a>
- 8. *Health Union survey reveals older individuals receptive to RSV vaccine.* (2023, June 12). Health Union. <a href="https://health-union.com/press-releases/rsv-vaccine/">https://health-union.com/press-releases/rsv-vaccine/</a>
- 9. Annenberg Public Policy Center. (2023, June 21). *RSV is a serious health threat, but the public knows little about it*. University of Pennsylvania. <a href="https://www.annenbergpublicpolicycenter.org/rsv-is-a-serious-health-threat-but-the-public-knows-little-about-it/">https://www.annenbergpublicpolicycenter.org/rsv-is-a-serious-health-threat-but-the-public-knows-little-about-it/</a>
- 12. Centers for Disease Control and Prevention. (2023, August 4). *RSV Prevention*. U.S. Department of Health and Human Services. <a href="https://www.cdc.gov/rsv/about/prevention.html">https://www.cdc.gov/rsv/about/prevention.html</a>

- 13. Centers for Disease Control and Prevention. (2023, July 14). *RSV in Older Adults and Adults with Chronic Medical Conditions*. U.S. Department of Health and Human Services. <a href="https://www.cdc.gov/rsv/high-risk/older-adults.html">https://www.cdc.gov/rsv/high-risk/older-adults.html</a>
- Centers for Disease Control and Prevention. (2022, October 3). Flu Symptoms & Complications.
   U.S. Department of Health and Human Services. <a href="https://www.cdc.gov/flu/symptoms/symptoms.htm">https://www.cdc.gov/flu/symptoms/symptoms.htm</a>
- Centers for Disease Control and Prevention. (2023, August 16). Symptoms and Care of RSV. U.S.
   Department of Health and Human Services. <a href="https://www.cdc.gov/rsv/about/symptoms.html">https://www.cdc.gov/rsv/about/symptoms.html</a>
- 18. Chan, M. S., Jones, C. R., Jamieson, K. H., & Albarracin, D. (2017). Debunking: A Meta-Analysis of the Psychological Efficacy of Messages Countering Misinformation. *Psychological Science*, 28(11), 1531–1546. https://doi.org/10.1177/0956797617714579
- 19. Okuhara, T., Okada, H., & Kiuchi, T. (2023). Addressing message fatigue for encouraging COVID-19 vaccination. *Journal of Communication in Healthcare*, 1–6. <a href="https://doi.org/10.1080/17538068.2023.2207246">https://doi.org/10.1080/17538068.2023.2207246</a>
- 20. Gallagher, K. M., & Updegraff, J. A. (2011). Health message Framing Effects on Attitudes, Intentions, and Behavior: A Meta-analytic review. *Annals of Behavioral Medicine*, *43*(1), 101–116. https://doi.org/10.1007/s12160-011-9308-7
- Lazowski, D., Ecclestone, N. A., Myers, A. M., Paterson, D. H., Tudor-Locke, C., Fitzgerald, C., Jones, G. R., Shima, I. N., & Cunningham, D. A. (1999). A randomized outcome evaluation of group exercise programs in Long-Term Care institutions. *The Journals of Gerontology*, *54*(12), M621–M628. <a href="https://doi.org/10.1093/gerona/54.12.m621">https://doi.org/10.1093/gerona/54.12.m621</a>
- 22. Zeng, R., Li, C., Li, N., Wei, L., & Cui, Y. (2011). The role of cytokines and chemokines in severe respiratory syncytial virus infection and subsequent asthma. *Cytokine*, *53*(1), 1–7. <a href="https://doi.org/10.1016/j.cyto.2010.09.011">https://doi.org/10.1016/j.cyto.2010.09.011</a>
- 23. Martin, E. T. (2023, April 25). As RSV vaccines near, CID study details RSV prevalence and outcomes in hospitalized adults. Infectious Diseases Society of America. <a href="https://www.idsociety.org/science-speaks-blog/2023/as-rsv-vaccines-near-cid-study-details-rsv-prevalence-and-outcomes-in-hospitalized-adults/#/+/0/publishedDate\_na\_dt/desc/">https://www.idsociety.org/science-speaks-blog/2023/as-rsv-vaccines-near-cid-study-details-rsv-prevalence-and-outcomes-in-hospitalized-adults/#/+/0/publishedDate\_na\_dt/desc/</a>
- 24. Pease, J. (2023, May 4). *UF expert answers questions about the newly approved RSV vaccine*. University of Florida Health. <a href="https://ufhealth.org/news/2023/uf-expert-answers-questions-about-newly-approved-rsv-vaccine">https://ufhealth.org/news/2023/uf-expert-answers-questions-about-newly-approved-rsv-vaccine</a>
- 25. Gonzalez, O. (2023, May 31). RSV vaccines for older adults under the spotlight. *Axios*. <a href="https://www.axios.com/2023/05/31/rsv-vaccines-older-adults-pfizer-fda">https://www.axios.com/2023/05/31/rsv-vaccines-older-adults-pfizer-fda</a>
- 26. Centers for Disease Control and Prevention. (2023, August 30). *RSV Vaccination for Older Adults* 60 Years of Age and Over. U.S. Department of Health and Human Services. <a href="https://www.cdc.gov/vaccines/vpd/rsv/public/older-adults.html">https://www.cdc.gov/vaccines/vpd/rsv/public/older-adults.html</a>

- 27. Centers for Disease Control and Prevention. (2023, July 24). RSV Vaccine Information Statement. U.S. Department of Health and Human Services. <a href="https://www.cdc.gov/vaccines/hcp/vis/vis-statements/rsv.html">https://www.cdc.gov/vaccines/hcp/vis/vis-statements/rsv.html</a>
- 28. Centers for Disease Control and Prevention. (2023, August 4). *RSV in Infants and Young Children*. U.S. Department of Health and Human Services. <a href="https://www.cdc.gov/rsv/high-risk/infants-young-children.html">https://www.cdc.gov/rsv/high-risk/infants-young-children.html</a>
- 29. Food and Drug Administration. (2023, August 21). FDA approves first vaccine for pregnant individuals to prevent RSV in infants [News release]. U.S. Department of Health and Human Services. <a href="https://www.fda.gov/news-events/press-announcements/fda-approves-first-vaccine-pregnant-individuals-prevent-rsv-infants">https://www.fda.gov/news-events/press-announcements/fda-approves-first-vaccine-pregnant-individuals-prevent-rsv-infants</a>
- 30. Britton, A. & Melgar, M. (2023, June 21). Summary of proposed clinical considerations for RSV vaccines [presentation]. Advisory Committee on Immunization Practices, Centers for Disease Control and Prevention, Atlanta, GA. <a href="https://www.cdc.gov/vaccines/acip/meetings/downloads/slides-2023-06-21-23/07-RSV-Adults-Britton-508.pdf">https://www.cdc.gov/vaccines/acip/meetings/downloads/slides-2023-06-21-23/07-RSV-Adults-Britton-508.pdf</a>
- 31. Christensen, J. (2022, November 15). RSV hospitalization rate for seniors is 10 times higher than usual for this point in the season. *CNN*. <a href="https://www.cnn.com/2022/11/15/health/rsv-adults-wellness/index.html">https://www.cnn.com/2022/11/15/health/rsv-adults-wellness/index.html</a>
- 32. Bont, L., Versteegh, J. F. M., Swelsen, W., Heijnen, C. J., Kavelaars, A., Brus, F., Draaisma, J. M., Pekelharing-Berghuis, M., Van Diemen-Steenvoorde, R. A., & Kimpen, J. L. L. (2002). Natural Reinfection with Respiratory Syncytial Virus Does Not Boost Virus-Specific T-Cell Immunity. *Pediatric Research*, *52*(3), 363–367. https://doi.org/10.1203/00006450-200209000-00009
- 35. Carvajal, J. J., Avellaneda, A. M., Salazar-Ardiles, C., Maya, J. E., Kalergis, A. M., & Lay, M. K. (2019). Host components contributing to respiratory syncytial virus pathogenesis. *Frontiers in Immunology*, 10. https://doi.org/10.3389/fimmu.2019.02152
- 36. Voegeli, C. D. (2015). *Perceived credibility of government health information* [Doctoral dissertation, Wichita State University]. Available at <a href="https://soar.wichita.edu/han-dle/10057/12130">https://soar.wichita.edu/han-dle/10057/12130</a>
- 37. Haelle, T. (2023, March 20). RSV Vaccines Are Finally Here after Decades of False Starts. *Scientific American*. <a href="https://www.scientificamerican.com/article/rsv-vaccines-are-finally-here-after-decades-of-false-starts/">https://www.scientificamerican.com/article/rsv-vaccines-are-finally-here-after-decades-of-false-starts/</a>
- 38. Kimball, S. (2023, March 2). FDA advisors recommend first-ever RSV vaccine from Pfizer, despite possible Guillain-Barre risks. *CNBC*. <a href="https://www.cnbc.com/2023/02/28/rsv-vaccine-fda-committee-votes-on-pfizer-shot-for-older-adults.html">https://www.cnbc.com/2023/02/28/rsv-vaccine-fda-committee-votes-on-pfizer-shot-for-older-adults.html</a>
- 49. Annenberg Public Policy Center. (2023, August 8). How to increase acceptance of an RSV vaccine? Explain the FDA's vaccine approval process. University of Pennsylvania. <a href="https://www.annen-bergpublicpolicycenter.org/how-to-increase-acceptance-of-an-rsv-vaccine-explain-the-fdas-vaccine-approval-process/">https://www.annen-bergpublicpolicycenter.org/how-to-increase-acceptance-of-an-rsv-vaccine-explain-the-fdas-vaccine-approval-process/</a>
- 50. Centers for Disease Control and Prevention. (2023, March 30). How Vaccines are Developed and Approved for Use. U.S. Department of Health and Human Services. <a href="https://www.cdc.gov/vaccines/basics/test-approve.html">https://www.cdc.gov/vaccines/basics/test-approve.html</a>

#### State of Vaccine Confidence Insights Report | September 1, 2023

- 51. Centers for Medicare & Medicaid Services (2023, 16 August). Anniversary of the Inflation Reduction Act: Update on CMS Implementation. U.S. Department of Health and Human Services. <a href="https://www.cms.gov/newsroom/fact-sheets/anniversary-inflation-reduction-act-update-cms-implementation">https://www.cms.gov/newsroom/fact-sheets/anniversary-inflation-reduction-act-update-cms-implementation</a>
- 52. Centers for Disease Control and Prevention. (2017, March 31). *How to Pay for Vaccines*. U.S. Department of Health and Human Services. <a href="https://www.cdc.gov/vaccines/adults/pay-for-vaccines.html">https://www.cdc.gov/vaccines/adults/pay-for-vaccines.html</a>
- 53. Centers for Disease Control and Prevention. (2023, July 20). *ACIP Evidence to Recommendations* for Use of Pfizer Bivalent RSVpreF Vaccine (ABRSYVO) in Older Adults. U.S. Department of Health and Human Services. <a href="https://www.cdc.gov/vaccines/acip/recs/grade/Pfizer-Bivalent-RSVpreF-adults-etr.html">https://www.cdc.gov/vaccines/acip/recs/grade/Pfizer-Bivalent-RSVpreF-adults-etr.html</a>
- 54. Smith, D. G. (28, August 2023). Some older adults are being charged over \$300 for the new R.S.V. vaccine. *The New York Times*. <a href="https://www.nytimes.com/2023/08/25/well/live/rsv-vaccines-health-insurance-medicare.html">https://www.nytimes.com/2023/08/25/well/live/rsv-vaccines-health-insurance-medicare.html</a>



#### Social Media Listening & Media Monitoring Data Sources

Input	Cadence	Sources	Tactics for Utilization
Communication Surveillance Report	Daily on weekdays	<ul><li>Google news</li><li>Meltwater</li><li>CrowdTangle</li><li>Native platform searches</li></ul>	<ul><li>Share of voice topic analysis to identify themes</li><li>Emerging topics</li></ul>
Meltwater	Daily	<ul><li>Facebook, Twitter, Instagram</li><li>Blogs</li><li>News media</li><li>Online forums</li></ul>	<ul> <li>Share of voice topic analysis</li> <li>Emerging theme topics</li> <li>Identify high reach/velocity topics</li> </ul>
OADC (Office of the Associate Director of Communication) Channel COVID-19 Post metrics	Weekly	<ul> <li>Sprout Social</li> <li>Native OADC (Office of the Associate Director of Communication) account analytics</li> </ul>	<ul> <li>Analyze # of posts, topics</li> <li>Success of messages, # of impressions, reach, # engagements</li> </ul>
OADC Channel Comment Analysis	Daily on weekdays	Native platform searches	<ul><li>Sentiment analysis</li><li>Identify message gaps/voids</li></ul>

#### **Direct Report Data Sources**

Input	Cadence	Sources	Tactics for Utilization
CDC-INFO Metrics	Weekly	<ul><li>CDC-INFO inquiry line list</li><li>Prepared response (PR) usage report</li></ul>	<ul> <li>Cross-compare PR usage with inquiry theme analysis</li> <li>Sentiment analysis</li> <li>Identify information gaps/voids</li> </ul>
VTF Media Requests	Weekly	- Media request line list	Leading indicator for news    coverage    Identify information gaps/voids
Web Metrics	Weekly	<ul><li>Top pages</li><li>Google search queries</li><li>Top FAQs</li><li>Referring domains</li></ul>	<ul> <li>Identify information gaps/voids,</li> <li>Identify keywords/search terms,</li> <li>changes in web traffic</li> </ul>



Input	Cadence	Sources	Tactics for Utilization
Poll Review	Weekly	<ul> <li>Harris Poll, PEW     research, Gallup Poll,     KFF, Annenberg Public     Policy Center</li> <li>New data related to     vaccine hesitancy</li> </ul>	<ul> <li>Identify socio-behavior indicators related to motivation and intention to vaccinate</li> </ul>
Literature Review	Weekly	<ul> <li>PubMed, LitCovid, ProQuest Central, Altmetric</li> <li>New data related to vaccine hesitancy</li> </ul>	<ul><li>Identify current vaccination intention</li><li>Identify barriers to vaccination</li></ul>

#### **Third Party Report Data Sources**

Input	Cadence	Sources	Tactics for Utilization
Tanaq Social Listening +Media Monitoring Report	Weekly	<ul><li>Meltwater</li><li>Sprout Social</li><li>First Draft</li><li>Native platform searches</li></ul>	Trending topics  Demographic and geographic conversation monitoring
Washington St. Louis iHeard	Weekly	- Proprietary methods	<ul><li>Survey results</li><li>Emerging threats and data deficits</li><li>Vaccine narratives</li></ul>
Project VCTR	Weekly	- Proprietary methods	<ul> <li>National and regional trends         <ul> <li>in negative attitudes toward</li> <li>vaccination</li> </ul> </li> <li>Conversations around Legislation</li> </ul>