Clinical Study Results

This summary reports the results of only one study. Researchers must look at the results of many types of studies to understand if a study vaccine works, how it works, and if it is safe to prescribe to study participants. The results of this study might be different than the results of other studies that the researchers review.

Sponsor: Pfizer Inc.

Vaccine(s) Studied: 20-valent Pneumococcal Conjugate Vaccine (CRM_{197} protein), Compound Number: PF-06482077

Protocol Number: B7471004

Dates of Study: 01 September 2020 to 29 June 2021

Title of this Study: Safety and Immunogenicity of 20vPnC Coadministered With SIIV in Adults ≥65 Years of Age

[Final Report: A Phase 3, Randomized, Double-Blind Trial to Evaluate the Safety and Immunogenicity of a 20-valent Pneumococcal Conjugate Vaccine (20vPnC) When Coadministered With Seasonal Inactivated Influenza Vaccine (SIIV) in Adults ≥65 Years of Age]

Date(s) of this Report: 17 February 2022

– Thank You –

If you participated in this study, Pfizer, the Sponsor, would like to thank you for your participation.

This summary will describe the study results. If you have any questions about the study or the results, please contact the doctor or staff at your study site.

Why was this study done?

What are *Streptococcus pneumoniae* and influenza?

Streptococcus pneumoniae is a type of bacteria that can cause serious diseases, including infections of the lung (pneumonia), brain lining (meningitis), blood (bacteremia), or ear (otitis). These infections may be very serious in older adults. *Streptococcus pneumoniae* is also known as *S. pneumoniae* or pneumococcus.

Influenza (or "the flu") is a respiratory illness caused by influenza viruses. The flu may cause symptoms like fever, body aches, or sore throat. The flu can be serious in older adults.

What are 20vPnC and SIIV?

A vaccine is used to help prevent infection by helping the body to fight off germs. After a vaccine is injected into a person's body, the body responds to help fight infections and prevent diseases. The response to vaccines includes making "antibodies", which are proteins that fight infections and help to prevent disease.

The "20-valent pneumococcal conjugate vaccine", or 20vPnC, may help to prevent infections caused by *S. pneumoniae*. It is called "20-valent" because 20vPnC may help to prevent 20 of the most common types of *S. pneumoniae*. 20vPnC is an investigational vaccine and it was not approved for general use at the time of this study.

The seasonal inactivated influenza vaccine (SIIV) is commonly known as a "flu shot". The SIIV used in the study is currently approved in the United States for helping to prevent influenza ("the flu") in adults 65 years of age and over.

What was the purpose of this study?

The main purpose of this study was to learn about the safety and the effects of 20vPnC and SIIV in participants 65 years and older, when given together or separately.

Researchers wanted to know:

Did participants who received 20vPnC and SIIV together have antibody responses against *S. pneumoniae* that were considered to be not lower (noninferior) to those who received 20vPnC separately?

Did participants who received 20vPnC and SIIV together have antibody responses against influenza that were considered to be not lower (noninferior) to those who received SIIV separately?

How many participants had redness, swelling, or pain at the injection site within 10 days after vaccination with 20vPnC?

How many participants had fever, headache, tiredness, muscle pain, or joint pain within 7 days after vaccination with 20vPnC?

How many participants had medical problems within 1 month after each vaccination?

How many participants had serious medical problems within 6 months after the last vaccination?

How many participants had newly diagnosed chronic medical conditions within 6 months after the last vaccination?

What happened during the study?

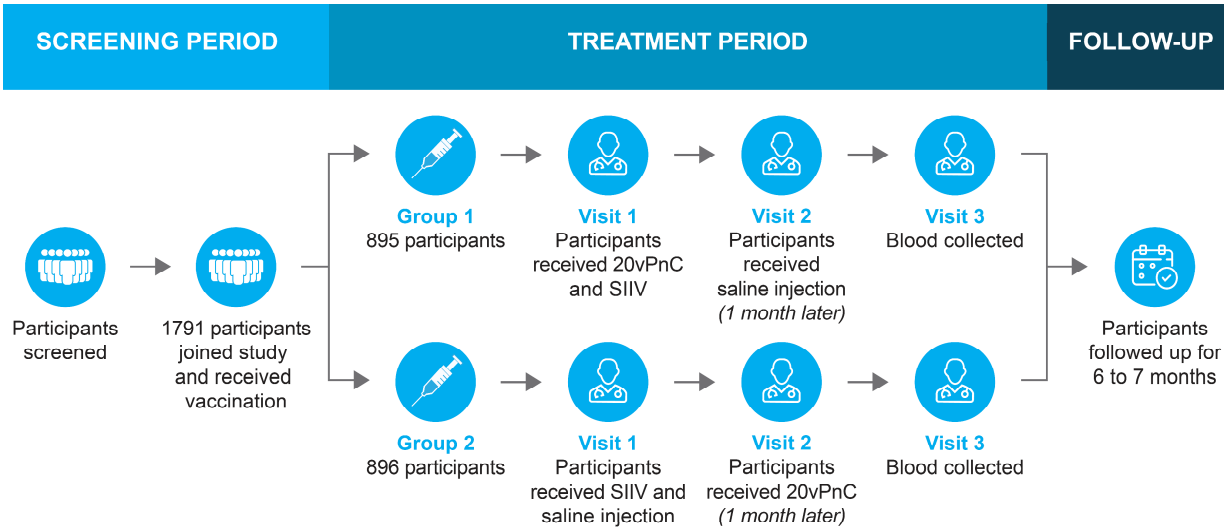
How was the study done?

Researchers studied 2 groups of study participants. Group 1 received injections of 20vPnC and SIIV at the same visit, followed by an injection of saline (a mix of salt and water) 1 month later. Group 2 received injections of SIIV and saline at the same visit, followed by a separate injection of 20vPnC 1 month later. The saline injections were given so that the participants and researchers did not know who was in each treatment group. This is known as a "blinded" study. Study participants were first sorted according to whether they had ever had a vaccine for *S. pneumoniae*, and then assigned to each group by chance alone.

- Group 1: 895 participants received a study vaccine
- Group 2: 896 participants received a study vaccine

Participants were first screened by medically-qualified study staff to make sure they met the requirements to join the study. Participants were in the study for about 7 months, and were expected to attend 4 study visits during this time. At these visits, participants had their blood drawn, received study injections, and were monitored for any medical problems.

The figure below shows what happened during the study.



Where did this study take place?

The Sponsor ran this study at 66 locations in the United States.

When did this study take place?

It began 01 September 2020 and ended 29 June 2021.

Who participated in this study?

The study included men and women 65 years and older. Study participants:

- Were examined by the study doctor and determined to be appropriate for study participation
- Had either never received a vaccine for *S. pneumoniae*, or had received their last vaccine for *S. pneumoniae* at least 6 months before starting the study
- Had received their last flu vaccine at least 6 months before starting the study
- Were not allergic to any of the ingredients in the study vaccines

- A total of 812 men (45%) participated
- A total of 979 women (55%) participated
- All participants were between the ages of 65 and 103 years.

A total of 1796 participants joined the study, and 1791 participants (more than 99%) received at least 1 study vaccine. 1727 participants (96%) completed the study. A total of 69 participants (4%) left the study early for the following reasons:

- 2 participants (less than 1%) had a medical problem
- 5 participants (less than 1%) passed away
- 18 participants (1%) were "lost to follow-up" (stopped participating in the study and could not be reached)
- 16 participants (1%) no longer met the criteria to participate in the study
- 4 participants (less than 1%) were withdrawn from the study due to an unplanned variation from the study design
- 21 participants (1%) chose to leave the study early
- 3 participants (less than 1%) left the study early for other reasons

How long did the study last?

Study participants were in the study for up to 7 months. The entire study took about 10 months to complete.

When the study ended in June 2021, the Sponsor began reviewing the information collected. The Sponsor then created a report of the results. This is a summary of that report.

What were the results of the study?

Did participants who received 20vPnC and SIIV together have antibody responses against *S. pneumoniae* that were considered to be not lower (noninferior) to those who received 20vPnC separately?

The researchers measured the amount of antibodies against *S. pneumoniae* in participants' blood 1 month after being vaccinated with 20vPnC. The researchers found that antibody levels in participants from Group 1 (20vPnC and SIIV given together) were within a range considered to be not lower (noninferior) to those in participants from Group 2 (20vPnC and SIIV given separately). Therefore, the participants who received 20vPnC and SIIV given together had antibody responses that were not lower to the participants who received 20vPnC given separately.

Did participants who received 20vPnC and SIIV together have antibody responses against influenza that were considered to be not lower (noninferior) to those who received SIIV separately?

The researchers measured the amount of antibodies against influenza in participants' blood 1 month after being vaccinated with SIIV. The researchers found that antibody levels in participants from Group 1 (20vPnC and SIIV given together) were within a range considered to be not lower (noninferior) to those in participants from Group 2 (20vPnC and SIIV given separately). Therefore, the participants who received 20vPnC and SIIV given together had antibody responses that were not lower to the participants who received SIIV given separately.

This is a summary of just some of the main results of this study. Other studies may have different results.

What medical problems did participants have during the study?

The researchers recorded any medical problems the participants had during the study. Participants could have had medical problems for reasons not related to the study (for example, caused by an underlying disease or by chance). Or, medical problems could also have been caused by a study vaccine or by another medicine the participant was taking. Sometimes the cause of a medical problem is unknown. By comparing medical problems across many vaccine groups in many studies, doctors try to understand what effects a study vaccine might have on a participant.

How many participants had redness, swelling, or pain at the injection site within 10 days after vaccination with 20vPnC?

444 out of 876 (51%) participants in Group 1 (20vPnC and SIIV given together) had redness, swelling, or pain at the injection site within 10 days after vaccination with 20vPnC. 453 out of 855 (53%) participants in Group 2 (20vPnC and SIIV given separately) had redness, swelling, or pain at the injection site within 10 days after vaccination with 20vPnC. Pain at the injection site was the most frequent of these reactions.

How many participants had fever, headache, tiredness, muscle pain, or joint pain within 7 days after vaccination with 20vPnC?

418 out of 877 (48%) participants in Group 1 (20vPnC and SIIV given together) had fever, headache, tiredness, muscle pain, or joint pain within 7 days after vaccination with 20vPnC. 300 out of 855 (35%) participants in Group 2 (20vPnC and SIIV given separately) had fever, headache, tiredness, muscle pain, or joint pain within 7 days after vaccination with 20vPnC. Tiredness was the most frequent of these symptoms.

How many participants had medical problems within 1 month after each vaccination?

81 out of 895 (9%) participants in Group 1 had at least 1 medical problem within 1 month after vaccination. Out of those who received 20vPnC and SIIV separately, 72 out of 896 (8%) participants had at least 1 medical problem within 1 month after vaccination with SIIV and 76 out of 878 (9%) participants had at least 1 medical problem within 1 month after vaccination with 20vPnC.

A total of 3 (less than 1%) participants left the study because of medical problems, including 2 participants in Group 1 and 1 participant in Group 2.

The most common medical problems – those reported by at least 1% of participants in any group – are described below.

Below are instructions for understanding Tables 1 and 2.

Instructions for Understanding Tables 1 and 2.

- The **1st** column of Table 1 lists medical problems that were commonly reported during the study. All medical problems reported by at least 1% of participants in any group are listed.
- The **2nd** column tells how many of the 895 participants receiving 20vPnC and SIIV together reported each medical problem. Next to this number is the percentage of the 895 participants receiving 20vPnC and SIIV together who reported the medical problem.
- The **3rd** column tells how many of the 878 participants receiving 20vPnC and 896 participants receiving SIIV separately reported each medical problem. Next to this number is the percentage of the 878 participants receiving 20vPnC separately and 896 participants receiving SIIV separately who reported the medical problem.
- Using these instructions, you can see that 9 out of the 895 (1%) participants receiving 20vPnC and SIIV together reported a positive COVID-19 test. A total of 14 out of the 878 (2%) participants receiving 20vPnC separately reported a positive COVID-19 test. A total of 6 out of the 896 (1%) participants receiving SIIV separately reported a positive COVID-19 test.

Table 1. Commonly reported medical problems by study participants within 1 month after vaccination with 20vPnC		
Medical Problem	**Group 1 20vPnC and SIIV Together (895 Vaccinated)**	**Group 2 20vPnC Separately (878 Vaccinated)**
Positive COVID-19 test	9 out of 895 vaccinated (1%)	14 out of 878 vaccinated (2%)
COVID-19 infection	7 out of 895 vaccinated (1%)	13 out of 878 vaccinated (1%)

Table 2. Commonly reported medical problems by study participants within 1 month after vaccination with SIIV		
Medical Problem	**Group 1 20vPnC and SIIV Together (895 Vaccinated)**	**Group 2 SIIV Separately (896 Vaccinated)**
Positive COVID-19 test	9 out of 895 vaccinated (1%)	6 out of 896 vaccinated (1%)

Did study participants have any serious medical problems?

A medical problem is considered "serious" when it is life-threatening, needs hospital care, or causes lasting problems.

How many participants had serious medical problems within 6 months after the last vaccination?

33 out of 895 (4%) participants in Group 1 (20vPnC and SIIV given together) had a serious medical problem within 6 months after their last vaccination. 33 out of 896 (4%) participants in Group 2 (20vPnC and SIIV given separately) had a serious medical problem within 6 months after their last vaccination. No single serious medical problem happened in at least 1% of participants in either group. No serious medical problems were considered to be related to study vaccination by the study doctor.

A total of 5 participants (less than 1%) died during this study, including 2 participants in Group 1 and 3 participants in Group 2. The causes of death were medical problems that may occur in this age population (heart problems, cancer, pneumonia, etc.). No death was considered by the study doctors to be related to study vaccination.

How many participants had newly diagnosed chronic medical conditions within 6 months after the last vaccination?

34 out of 895 (4%) participants in Group 1 (20vPnC and SIIV given together) had a newly diagnosed chronic medical condition within 6 months after their last vaccination. 28 out of 896 (3%) participants in Group 2 (20vPnC and SIIV given separately) had a newly diagnosed chronic medical condition within 6 months after their last vaccination.

Where can I learn more about this study?

If you have questions about the results of your study, please speak with the doctor or staff at your study site.

For more details on your study protocol, please visit:

www.clinicaltrials.gov Use the study identifier **NCT04526574**

Please remember that researchers look at the results of many studies to find out which vaccines can work and are safe for study participants.

Again, if you participated in this study, **thank you** for volunteering. We do research to try to find the best ways to help study participants, and you helped us to do that!