FLUZONE QUADRIVALENT NORTHERN HEMISPHERE- influenza a virus a/victoria/4897/2022 ivr-238 (h1n1) antigen (formaldehyde inactivated), influenza a virus a/croatia/10136rv/2023 x-425a antigen (formaldehyde inactivated), influenza b virus b/phuket/3073/2013 antigen (formaldehyde inactivated), and influenza b virus b/michigan/01/2021 antigen (formaldehyde inactivated) injection, suspension

Sanofi Pasteur Inc.

HIGHLIGHTS OF PRESCRIBING INFORMATION

These highlights do not include all the information needed to use Fluzone® Quadrivalent safely and effectively. See full prescribing information for Fluzone Quadrivalent.

Fluzone Quadrivalent (Influenza Vaccine) injectable suspension, for intramuscular use
2025-2026 Formula
Initial U.S. Approval: 2013

INDICATIONS AND USAGE

Fluzone Quadrivalent is a vaccine indicated for active immunization for the prevention of disease caused by influenza A subtype viruses and type B viruses contained in the vaccine. (1)
Fluzone Quadrivalent is approved for use in persons 6 months of age and older. (1)

DOSAGE AND ADMINISTRATION

- **For intramuscular use** (2)

Age	Vaccination Status	Dose	Schedule
6 months through 35 months	Not previously vaccinated with influenza vaccine or unknown vaccination history	Two doses, either 0.25 mL or 0.5 mL*	Administer at least 4 weeks apart
	Previously vaccinated with influenza vaccine	One or two doses†, either 0.25 mL or 0.5 mL*	If two doses, administer at least 4 weeks apart
36 months through 8 years	Not previously vaccinated with influenza vaccine or unknown vaccination history	Two 0.5 mL doses	Administer at least 4 weeks apart
	Previously vaccinated with influenza vaccine	One or two 0.5 mL doses†	If two doses, administer at least 4 weeks apart
9 years and older	-	One 0.5 mL dose	-

"-" Indicates information is not applicable

* The schedule can be completed as two 0.25-mL doses ≥4 weeks apart, two 0.5-mL doses ≥4 weeks apart, or any combination of 2 doses (either 0.25 mL or 0.5 mL) administered ≥4 weeks apart.

† To determine if 1 or 2 doses are required, refer to Advisory Committee on Immunization Practices annual recommendations on prevention and control of influenza with vaccines.

DOSAGE FORMS AND STRENGTHS

Fluzone Quadrivalent is an injectable suspension.
For individuals 6 months through 35 months, a single-dose is 0.25 mL or 0.5 mL.
For individuals 36 months and older, a single-dose is 0.5 mL. (3)

CONTRAINDICATIONS

Do not administer Fluzone Quadrivalent to anyone with a history of severe allergic reaction (e.g., anaphylaxis) to any component of the vaccine, including egg protein, or after previous dose of any influenza vaccine. (4,11)

WARNINGS AND PRECAUTIONS

If Guillain-Barré syndrome (GBS) has occurred within 6 weeks following previous influenza vaccination, the decision to give Fluzone Quadrivalent should be based on careful consideration of the potential benefits and risks. (5.1)

ADVERSE REACTIONS

- In children 6 months through 35 months of age, the most common (≥10%) injection-site adverse reactions were pain (57%) or tenderness (47%–54%), erythema (23%–37%), and swelling (13%–22%); the most common solicited systemic adverse reactions were irritability (47%–54%), abnormal crying (33%–41%), malaise (38%), drowsiness (31%–38%), appetite loss (27%–32%), myalgia (27%), vomiting (10%–15%), and fever (11%–14%). (6.1)
- In children 3 years through 8 years of age, the most common (≥10%) injection-site adverse reactions were pain (67%), erythema (34%), and swelling (25%); the most common solicited systemic adverse reactions were myalgia (39%), malaise (32%), and headache (23%). (6.1)
- In adults 18 years and older, the most common (≥10%) injection-site adverse reaction was pain (47%); the most common solicited systemic adverse reactions were myalgia (24%), headache (16%), and malaise (11%). (6.1)
- In adults 65 years of age and older, the most common (≥10%) injection-site adverse reaction was pain (33%); the most common solicited systemic adverse reactions were myalgia (18%), headache (13%), and malaise (11%). (6.1)

To report SUSPECTED ADVERSE REACTIONS, contact Sanofi Pasteur Inc., at 1-800-822-2463 (1-800-VACCINE) or VAERS at 1-800-822-7967 or www.vaers.hhs.gov.

USE IN SPECIFIC POPULATIONS

- Antibody responses to Fluzone Quadrivalent are lower in persons ≥65 years of age than in younger adults. (8.5)

See 17 for PATIENT COUNSELING INFORMATION and FDA-approved patient labeling.

Revised: 7/2025

FULL PRESCRIBING INFORMATION: CONTENTS*

* Sections or subsections omitted from the full prescribing information are not listed.

FULL PRESCRIBING INFORMATION

1 INDICATIONS AND USAGE

Fluzone® Quadrivalent is a vaccine indicated for active immunization for the prevention of disease caused by influenza A subtype viruses and type B viruses contained in the vaccine.

Fluzone Quadrivalent is approved for use in persons 6 months of age and older.

2 DOSAGE AND ADMINISTRATION

For intramuscular use

2.1 Dose and Schedule

The dose and schedule for Fluzone Quadrivalent are presented in Table 1.

Table 1: Dose and Schedule for Fluzone Quadrivalent

Age	Vaccination Status	Dose	Schedule
6 months through 35 months	Not previously vaccinated with influenza vaccine or unknown vaccination history	Two doses, either 0.25 mL or 0.5 mL*	Administer at least 4 weeks apart
	Previously	One or two doses† either	If two doses, administer at

	vaccinated with influenza vaccine	doses†, either 0.25 mL or 0.5 mL*	administer at least 4 weeks apart
36 months through 8 years	Not previously vaccinated with influenza vaccine or unknown vaccination history	Two 0.5 mL doses	Administer at least 4 weeks apart
	Previously vaccinated with influenza vaccine	One or two 0.5 mL doses†	If two doses, administer at least 4 weeks apart
9 years and older	-	One 0.5 mL dose	-

"-" Indicates information is not applicable

* The schedule can be completed as two 0.25-mL doses ≥4 weeks apart, two 0.5-mL doses ≥4 weeks apart, or any combination of 2 doses (either 0.25 mL or 0.5 mL) administered ≥4 weeks apart

† To determine if 1 or 2 doses are required, refer to Advisory Committee on Immunization Practices annual recommendations on prevention and control of influenza with vaccines

2.2 Administration

Fluzone Quadrivalent is clear and slightly opalescent in color. Parenteral drug products should be inspected visually for particulate matter and/or discoloration prior to administration, whenever solution and container permit. If any of these defects or conditions exist, Fluzone Quadrivalent should not be administered.

Before administering a dose of vaccine, shake the prefilled syringe or multi-dose vial. A maximum of ten doses can be withdrawn from the multi-dose vial.

Administer each dose intramuscularly.

3 DOSAGE FORMS AND STRENGTHS

Fluzone Quadrivalent is an injectable suspension. For individuals 6 months through 35 months, a single dose is 0.25 mL or 0.5 mL.

For individuals 36 months and older, a single dose is 0.5 mL.

4 CONTRAINDICATIONS

Do not administer Fluzone Quadrivalent to anyone with a history of a severe allergic reaction (e.g., anaphylaxis) to any component of the vaccine [see *Description (11)*], including egg protein, or to a previous dose of any influenza vaccine.

5 WARNINGS AND PRECAUTIONS

5.1 Guillain Barré Syndrome

If Guillain Barré Syndrome (GBS) has occurred within 6 weeks following previous influenza vaccination, the decision to give Fluzone Quadrivalent should be based on careful consideration of the potential benefits and risks.

The 1976 swine influenza vaccine was associated with an elevated risk of GBS. Evidence for a causal relation of GBS with other influenza vaccines is inconclusive; if an excess risk exists, it is probably slightly more than 1 additional case per 1 million persons vaccinated. (1)

5.2 Preventing and Managing Allergic Reactions

Appropriate medical treatment must be immediately available to manage potential anaphylactic reactions following administration of Fluzone Quadrivalent.

5.3 Altered Immunocompetence

If Fluzone Quadrivalent is administered to immunocompromised persons, including those receiving immunosuppressive therapy, the expected immune response may not be obtained.

5.4 Limitations of Vaccine Effectiveness

Vaccination with Fluzone Quadrivalent may not protect all recipients.

5.5 Syncope

Syncope (fainting) has been reported following vaccination with Fluzone Quadrivalent. Procedures should be in place to avoid injury from fainting.

6 ADVERSE REACTIONS

In children 6 months through 35 months of age, the most common (≥10%) injection-site adverse reactions were pain (57%) or tenderness (47%– 54%), erythema (23%–37%), and swelling (13%–22%); the most common solicited systemic adverse reactions were irritability (47%– 54%), abnormal crying (33%–41%), malaise (38%), drowsiness (31%– 38%), appetite loss (27%–32%), myalgia (27%), vomiting (10%–15%), and fever (11%–14%).

In children 3 years through 8 years of age, the most common (≥10%) injection-site adverse reactions were pain (67%), erythema (34%), and swelling (25%); the most common solicited systemic adverse reactions were myalgia (39%), malaise (32%), and headache (23%).

In adults 18 years and older, the most common (≥10%) injection-site adverse reaction was pain (47%); the most common solicited systemic adverse reactions were myalgia (24%), headache (16%), and malaise (11%).

In adults 65 years of age and older, the most common (≥10%) injection-site adverse reaction was pain (33%); the most common solicited systemic adverse reactions were myalgia (18%), headache (13%), and malaise (11%).

6.1 Clinical Trials Experience

Because clinical trials are conducted under widely varying conditions, adverse event rates observed in the clinical trials of a vaccine cannot be directly compared to rates in the clinical trial(s) of another vaccine and may not reflect the rates observed in practice.

Children 6 Months Through 8 Years of Age

Study 1 (NCT01240746) was a single-blind, randomized, active-controlled multi-center safety and immunogenicity study conducted in the US. In this study, children 6 months through 35 months of age received one or two 0.25 mL doses of either Fluzone Quadrivalent or one of two formulations of a comparator trivalent influenza vaccine (TIV-1 or TIV-2), and children 3 years through 8 years of age received one or two 0.5 mL doses of either Fluzone Quadrivalent, TIV-1, or TIV-2. Each of the trivalent formulations contained an influenza type B virus that corresponded to one of the two type B viruses in Fluzone Quadrivalent (a type B virus of the Victoria lineage or a type B virus of the Yamagata lineage). For participants who received two doses, the doses were administered approximately 4 weeks apart. The safety analysis set included 1841 children 6 months through 35 months of age and 2506 children 3 years through 8 years of age. Among participants 6 months through 8 years of age in the three vaccine groups combined, 49.3% were female (Fluzone Quadrivalent, 49.2%; TIV-1, 49.8%; TIV-2, 49.4%), 58.4% Caucasian (Fluzone Quadrivalent, 58.4%; TIV-1, 58.9%; TIV-2, 57.8%), 20.2% Black (Fluzone Quadrivalent, 20.5%; TIV-1, 19.9%; TIV-2, 19.1%), 14.1% Hispanic (Fluzone Quadrivalent, 14.3%; TIV-1, 13.2%; TIV-2, 14.7%), and 7.3% were of other racial/ethnic groups (Fluzone Quadrivalent, 6.8%; TIV-1, 8.0%; TIV-2, 8.5%). Table 2 and Table 3 summarize solicited injection-site and systemic adverse reactions reported within 7 days post-vaccination via diary cards. Participants were monitored for unsolicited adverse events for 28 days after each dose and serious adverse events (SAEs) during the 6 months following the last dose.

Table 2: Percentage of Solicited Injection-site and Systemic Adverse Reactions Within 7 Days After Vaccination in Children 6 Months Through 35 Months of Age (Safety Analysis Set)* (Study 1†)

	Fluzone Quadrivalent‡, § (N¶=1223)			TIV-1§, # (B Victoria) (N¶=310)			TIV-2§, Þ (B Yamagata) (N¶=308)		
	Any (%)	Grade 2ß (%)	Grade 3à (%)	Any (%)	Grade 2ß (%)	Grade 3à (%)	Any (%)	Grade 2ß (%)	Grade 3à (%)
Injection-site adverse reactions									
Painè	57.0	10.2	1.0	52.3	11.5	0.8	50.3	5.4	2.7
Tendernessð	54.1	11.3	1.9	48.4	8.2	1.9	49.7	10.3	0.0
Erythema	37.3	1.5	0.2	32.9	1.0	0.0	33.3	1.0	0.0
Swelling	21.6	0.8	0.2	19.7	1.0	0.0	17.3	0.0	0.0
Systemic adverse reactions									
Fever (≥100.4°F)ø	14.3	5.5	2.1	16.0	6.6	1.7	13.0	4.1	2.0

Malaiseè	38.1	14.5	4.6	35.2	14.8	4.7	32.4	12.8	6.8
Myalgiaè	26.7	6.6	1.9	26.6	9.4	1.6	25.0	6.8	2.7
Headacheè	8.9	2.5	0.6	9.4	3.9	0.0	12.2	4.7	0.0
Irritabilityð	54.0	26.4	3.2	52.8	20.1	3.1	53.5	22.9	2.8
Crying abnormalð	41.2	12.3	3.3	36.5	8.2	1.9	29.9	10.4	2.1
Drowsinessð	37.7	8.4	1.3	32.1	3.8	0.6	31.9	5.6	0.7
Appetite lossð	32.3	9.1	1.8	33.3	5.7	1.9	25.0	8.3	0.7
Vomitingð	14.8	6.2	1.0	11.3	4.4	0.6	13.9	6.3	0.0

* The safety analysis set includes all persons who received at least one dose of study vaccine
† NCT01240746
‡ Fluzone Quadrivalent (0.25 mL) containing A/California/07/2009 (H1N1), A/Victoria/210/2009 (H3N2), B/Brisbane/60/2008 (Victoria lineage), and B/Florida/04/2006 (Yamagata lineage)
§ Participants received 1 or 2 doses according to ACIP recommendations
¶ N is the number of participants in the safety analysis set
# 2010-2011 Fluzone TIV (0.25 mL) containing A/California/07/2009 (H1N1), A/Victoria/210/2009 (H3N2), and B/Brisbane/60/2008 (Victoria lineage), licensed
Þ Investigational TIV (0.25 mL) containing A/California/07/2009 (H1N1), A/Victoria/210/2009 (H3N2), and B/Florida/04/2006 (Yamagata lineage), non-licensed
ß Grade 2 - Injection-site pain: sufficiently discomforting to interfere with normal behavior or activities; Injection-site tenderness: cries and protests when injection-site is touched; Injection-site erythema, Injection-site swelling: ≥2.5 cm to <5 cm; Fever: >101.3°F to ≤103.1°F (6 months through 23 months); ≥101.2°F to ≤102.0°F (24 months through 35 months); Malaise, Myalgia, and Headache: some interference with activity; Irritability: requiring increased attention; Crying abnormal: 1 to 3 hours; Drowsiness: not interested in surroundings or did not wake up for a feed/meal; Appetite loss: missed 1 or 2 feeds/meals completely; Vomiting: 2 to 5 episodes per 24 hours
à Grade 3 - Injection-site pain: incapacitating, unable to perform usual activities; Injection-site tenderness: cries when injected limb is moved, or the movement of the injected limb is reduced; Injection-site erythema, Injection-site swelling: ≥5 cm; Fever: >103.1°F (6 months through 23 months); ≥102.1°F (24 months through 35 months); Malaise, Myalgia, and Headache: Significant; prevents daily activity; Irritability: inconsolable; Crying abnormal: >3 hours; Drowsiness: sleeping most of the time or difficult to wake up; Appetite loss: refuses ≥3 feeds/meals or refuses most feeds/meals; Vomiting: ≥6 episodes per 24 hours or requiring parenteral hydration
è Assessed in children 24 months through 35 months of age
ð Assessed in children 6 months through 23 months of age
ø Fever measured by any route

Table 3: Percentage of Solicited Injection-site and Systemic Adverse Reactions Within 7 Days After Vaccination in Children 3 Years Through 8 Years of Age (Safety Analysis Set)* (Study 1†)

	Fluzone Quadrivalent‡ (N§=1669)			**TIV-1¶ (B Victoria) (N§=424)**			**TIV-2# (B Yamagata) (N§=413)**		
	Any (%)	**Grade 2Þ (%)**	**Grade 3ß (%)**	**Any (%)**	**Grade 2Þ (%)**	**Grade 3ß (%)**	**Any (%)**	**Grade 2Þ (%)**	**Grade 3ß (%)**
Injection-site adverse reactions									
Pain	66.6	15.8	2.1	64.6	9.5	2.0	63.8	11.6	2.8
Erythema	34.1	2.9	1.8	36.8	3.4	1.2	35.2	2.5	1.8

Swelling	24.8	2.8	1.4	25.4	1.5	1.2	25.9	2.5	1.8
Systemic adverse reactions									
Fever (≥100.4°F)à	7.0	2.1	2.1	7.1	2.2	1.2	7.6	2.8	0.8
Headache	23.1	6.8	2.2	21.2	5.1	2.7	24.4	7.5	2.0
Malaise	31.9	11.2	5.5	32.8	11.4	5.6	33.4	10.8	5.0
Myalgia	38.6	12.2	3.3	34.1	9.0	2.7	38.4	11.1	2.8

* The safety analysis set includes all persons who received at least one dose of study vaccine
† NCT01240746
‡ Fluzone Quadrivalent containing A/California/07/2009 (H1N1), A/Victoria/210/2009 (H3N2), B/Brisbane/60/2008 (Victoria lineage), and B/Florida/04/2006 (Yamagata lineage)
§ N is the number of participants in the safety analysis set
¶ 2010-2011 Fluzone TIV containing A/California/07/2009 (H1N1), A/Victoria/210/2009 (H3N2), and B/Brisbane/60/2008 (Victoria lineage), licensed
# Investigational TIV containing A/California/07/2009 (H1N1), A/Victoria/210/2009 (H3N2), and B/Florida/04/2006 (Yamagata lineage), non-licensed
Þ Grade 2 - Injection-site pain: sufficiently discomforting to interfere with normal behavior or activities; Injection-site erythema, Injection-site swelling: ≥2.5 cm to <5 cm; Fever: ≥101.2°F to ≤102.0°F; Headache, Malaise, and Myalgia: some interference with activity
ß Grade 3 - Injection-site pain: incapacitating, unable to perform usual activities; Injection-site erythema, Injection-site swelling: ≥5 cm; Fever: ≥102.1°F; Headache, Malaise, and Myalgia: Significant; prevents daily activity
à Fever measured by any route

Among children 6 months through 8 years of age, unsolicited non-serious adverse events were reported in 1360 (47.0%) recipients in the Fluzone Quadrivalent group, 352 (48.0%) recipients in the TIV-1 group, and 346 (48.0%) recipients in the TIV-2 group. The most commonly reported unsolicited non-serious adverse events were cough, vomiting, and pyrexia. During the 28 days following vaccination, a total of 16 (0.6%) recipients in the Fluzone Quadrivalent group, 4 (0.5%) recipients in the TIV-1 group, and 4 (0.6%) recipients in the TIV-2 group, experienced at least one SAE. Throughout the study period, a total of 41 (1.4%) recipients in the Fluzone Quadrivalent group, 7 (1.0%) recipients in the TIV-1 group, and 14 (1.9%) recipients in the TIV-2 group, experienced at least one SAE. Three SAEs were considered to be possibly related to vaccination: croup in a Fluzone Quadrivalent recipient and 2 episodes of febrile seizure, 1 each in a TIV-1 recipient and a TIV-2 recipient.

0.5-mL Dose of Fluzone Quadrivalent in Children 6 Months through 35 Months of Age

Study 2 (NCT02915302) was a randomized, observer-blinded, 2-arm, multi-center safety and immunogenicity study conducted in the US. In this study, 1950 children 6 months through 35 months of age were randomly assigned to receive Fluzone Quadrivalent administered in either a volume of 0.25 mL (Group 1) or 0.5 mL (Group 2). For participants recommended to receive two doses of influenza vaccine as per Advisory Committee on Immunization Practices guidance, the same dose was administered 4 weeks after the first. The safety analysis set included 1941 participants who received at least 1 dose of study vaccine. Of these participants, 49.7% were female, 74.3% were Caucasian, 19.2% were Black, 6.5% were of other racial groups, and 22.0% were Hispanic/Latino.

Table 4 summarizes solicited injection-site and systemic adverse reactions reported

within 7 days post-vaccination via diary cards for the 0.25 mL and 0.5 mL volumes of Fluzone Quadrivalent in children 6 months through 35 months of age.

Table 4: Percentage of Solicited Injection-site and Systemic Adverse Reactions Within 7 Days After Vaccination in Children 6 Months Through 35 Months of Age (Safety Analysis Set)* (Study 2†)

	Fluzone Quadrivalent 0.25 mL‡ (N§=949)		Fluzone Quadrivalent 0.5 mL‡ (N§=992)	
	Any (%)	Grade 3¶ (%)	Any (%)	Grade 3¶ (%)
Injection-site adverse reactions				
Tenderness	47.3	1.7	50.4	1.2
Redness	23.1	0.0	24.3	0.2
Swelling	12.9	0.1	14.7	0.0
Systemic adverse reactions				
Irritability	47.4	3.6	48.6	4.0
Abnormal Crying	33.3	3.1	34.1	2.6
Drowsiness	31.9	2.1	31.3	1.6
Loss of Appetite	27.3	1.4	28.3	2.2
Fever (≥100.4°F)#	11.3	0.6	12.2	1.2
Vomiting	10.0	0.4	10.2	0.5

* The safety analysis set includes all persons who received at least one dose of study vaccine
† NCT02915302
‡ Participants received 1 or 2 doses according to ACIP recommendations
§ N is the number of participants in the safety analysis set
¶ Grade 3 - Injection-site tenderness: Cries when injected limb is moved, or the movement of the injected limb is reduced; Injection-site redness, Injection-site swelling: ≥50 mm; Irritability: inconsolable; Abnormal Crying: >3 hours; Drowsiness: sleeping most of the time or difficult to wake up; Loss of Appetite: refuses ≥3 feeds/meals or refuses most feeds/meals; Fever: >103.1°F; Vomiting: ≥6 episodes per 24 hours or requiring parenteral hydration
# Fever measured by any route

The difference in fever rate (Group 2 minus Group 1) was 0.84% (95% CI: -2.13%; 3.80%), meeting the prespecified non-inferiority criterion (upper limit of the 2-sided 95% CI of the difference in fever rates <5%). Participants were monitored for unsolicited adverse events and SAEs during the 28 days following vaccination. Unsolicited non-serious adverse events were reported in 417 (44%) participants in Group 1 and 394 (40%) participants in Group 2. The most commonly reported unsolicited non-serious adverse events in both groups were cough and rhinorrhea. Ten SAEs were reported during the 28-day follow-up period: 5 (0.5%) in Group 1 and 5 (0.5%) in Group 2.

Adults

In Study 3 (NCT00988143), a multi-centered randomized, open-label trial conducted in the US, adults 18 years of age and older received one dose of either Fluzone Quadrivalent or one of two formulations of comparator trivalent influenza vaccine (TIV-1 or TIV-2). Each of the trivalent formulations contained an influenza type B virus that corresponded to one of the two type B viruses in Fluzone Quadrivalent (a type B virus of the Victoria lineage or a type B virus of the Yamagata lineage). The safety analysis set included 570 recipients, half aged 18-60 years and half aged 61 years or older. Among participants in the three vaccine groups combined, 67.2% were female (Fluzone Quadrivalent, 68.4%; TIV-1, 67.9%; TIV-2, 65.3%), 88.4% Caucasian (Fluzone Quadrivalent, 91.1%; TIV-1, 86.8%; TIV-2, 87.4%), 9.6% Black (Fluzone Quadrivalent, 6.8%; TIV-1, 12.1%; TIV-2, 10.0%), 0.4% Hispanic (Fluzone Quadrivalent, 0.0%; TIV-1, 0.5%; TIV-2, 0.5%), and 1.7% were of other racial/ethnic groups (Fluzone Quadrivalent, 2.1%; TIV-1, 0.5%; TIV-2, 2.2%). Table 5 summarizes solicited injection-site and systemic adverse reactions reported within 3 days post-vaccination via diary cards. Participants were monitored for unsolicited adverse events and SAEs during the 21 days following vaccination.

Table 5: Percentage of Solicited Injection-site and Systemic Adverse Reactions Within 3 Days After Vaccination in Adults 18 Years of Age and Older (Safety Analysis Set)* (Study 3†)

	Fluzone Quadrivalent‡ (N§=190)			TIV-1¶ (B Victoria) (N§=190)			TIV-2# (B Yamagata) (N§=190)		
	Any (%)	Grade 2Þ (%)	Grade 3ß (%)	Any (%)	Grade 2Þ (%)	Grade 3ß (%)	Any (%)	Grade 2Þ (%)	Grade 3ß (%)
Injection-site adverse reactions									
Pain	47.4	6.8	0.5	52.1	7.9	0.5	43.2	6.3	0.0
Erythema	1.1	0.0	0.0	1.6	0.5	0.0	1.6	0.5	0.0
Swelling	0.5	0.0	0.0	3.2	0.5	0.0	1.1	0.0	0.0
Induration	0.5	0.0	0.0	1.6	0.5	0.0	0.5	0.0	0.0
Ecchymosis	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0
Systemic adverse reactions									
Myalgia	23.7	5.8	0.0	25.3	5.8	0.0	16.8	5.8	0.0
Headache	15.8	3.2	0.5	18.4	6.3	0.5	18.0	4.2	0.0
Malaise	10.5	1.6	1.1	14.7	3.2	1.1	12.1	4.7	0.5
Shivering	2.6	0.5	0.0	5.3	1.1	0.0	3.2	0.5	0.0
Fever (≥100.4°F)à	0.0	0.0	0.0	0.5	0.5	0.0	0.5	0.5	0.0

* The safety analysis set includes all persons who received study vaccine
† NCT00988143
‡ Fluzone Quadrivalent containing A/California/07/2009 (H1N1), A/Victoria/210/2009 (H3N2), B/Brisbane/60/2008 (Victoria lineage), and B/Florida/04/2006 (Yamagata lineage)
§ N is the number of participants in the safety analysis set
¶ 2009-2010 Fluzone TIV containing A/Brisbane/59/2007 (H1N1), A/Uruguay/716/2007 (H3N2),

and B/Brisbane/60/2008 (Victoria lineage), licensed

2008-2009 Fluzone TIV containing A/Brisbane/59/2007 (H1N1), A/Uruguay/716/2007 (H3N2), and B/Florida/04/2006 (Yamagata lineage), licensed

Þ Grade 2 - Injection-site pain: Some interference with activity; Injection-site erythema, Injection-site swelling, Injection-site induration, and Injection-site ecchymosis: ≥5.1 to ≤10 cm; Fever: ≥101.2°F to ≤102.0°F; Myalgia, Headache, Malaise, and Shivering: some interference with activity

ß Grade 3 - Injection-site pain: Significant; prevents daily activity; Injection-site erythema, Injection-site swelling, Injection-site induration, and Injection-site ecchymosis: >10 cm; Fever: ≥102.1°F; Myalgia, Headache, Malaise, and Shivering: Significant; prevents daily activity

à Fever measured by any route

Unsolicited non-serious adverse events were reported in 33 (17.4%) recipients in the Fluzone Quadrivalent group, 45 (23.7%) recipients in the TIV-1 group, and 45 (23.7%) recipients in the TIV-2 group. The most commonly reported unsolicited non-serious adverse events were headache, cough, and oropharyngeal pain. In the follow-up period, there were two SAEs, 1 (0.5%) in the Fluzone Quadrivalent group and 1 (0.5%) in the TIV-2 group.

Geriatric Adults

In Study 4 (NCT01218646), a multi-center, randomized, double-blind trial conducted in the US, adults 65 years of age and older received one dose of either Fluzone Quadrivalent, or one of two formulations of comparator trivalent influenza vaccine (TIV-1 or TIV-2). Each of the trivalent formulations contained an influenza type B virus that corresponded to one of the two type B viruses in Fluzone Quadrivalent (a type B virus of the Victoria lineage or a type B virus of the Yamagata lineage). The safety analysis set included 675 recipients. Among participants in the three vaccine groups combined, 55.7% were female (Fluzone Quadrivalent, 57.3%; TIV-1, 56.0%; TIV-2, 53.8%), 89.5% Caucasian (Fluzone Quadrivalent, 87.6%; TIV-1, 89.8%; TIV-2, 91.1%), 2.2% Black (Fluzone Quadrivalent, 4.0%; TIV-1, 1.8%; TIV-2, 0.9%), 7.4% Hispanic (Fluzone Quadrivalent, 8.4%; TIV-1, 7.6%; TIV-2, 6.2%) and 0.9% were of other racial/ethnic groups (Fluzone Quadrivalent, 0.0%; TIV-1, 0.9%; TIV-2, 1.8%).

Table 6 summarizes solicited injection-site and systemic adverse reactions reported within 7 days post-vaccination via diary cards. Participants were monitored for unsolicited adverse events and SAEs during the 21 days following vaccination.

Table 6: Percentage of Solicited Injection-site and Systemic Adverse Reactions Within 7 Days After Vaccination in Adults 65 Years of Age and Older (Safety Analysis Set)* (Study 4†)

	Fluzone Quadrivalent‡ (N§=225)			TIV-1¶ (B Victoria) (N§=225)			TIV-2# (B Yamagata) (N§=225)		
	Any (%)	Grade 2Þ (%)	Grade 3ß (%)	Any (%)	Grade 2Þ (%)	Grade 3ß (%)	Any (%)	Grade 2Þ (%)	Grade 3ß (%)
Injection-site adverse reactions									
Pain	32.6	1.3	0.9	28.6	2.7	0.0	23.1	0.9	0.0

Erythema	2.7	0.9	0.0	1.3	0.0	0.0	1.3	0.4	0.0
Swelling	1.8	0.4	0.0	1.3	0.0	0.0	0.0	0.0	0.0
Systemic adverse reactions									
Myalgia	18.3	4.0	0.4	18.3	4.0	0.0	14.2	2.7	0.4
Headache	13.4	1.3	0.4	11.6	1.3	0.0	11.6	1.8	0.4
Malaise	10.7	4.5	0.4	6.3	0.4	0.0	11.6	2.7	0.9
Fever (≥100.4°F)à	1.3	0.0	0.4	0.0	0.0	0.0	0.9	0.4	0.4

* The safety analysis set includes all persons who received study vaccine
† NCT01218646
‡ Fluzone Quadrivalent containing A/California/07/2009 (H1N1), A/Victoria/210/2009 (H3N2), B/Brisbane/60/2008 (Victoria lineage), and B/Florida/04/2006 (Yamagata lineage)
§ N is the number of participants in the safety analysis set
¶ 2010-2011 Fluzone TIV containing A/California/07/2009 (H1N1), A/Victoria/210/2009 (H3N2), and B/Brisbane/60/2008 (Victoria lineage), licensed
# Investigational TIV containing A/California/07/2009 (H1N1), A/Victoria/210/2009 (H3N2), and B/Florida/04/2006 (Yamagata lineage), non-licensed
Þ Grade 2 - Injection-site pain: some interference with activity; Injection-site erythema and Injection-site swelling: ≥5.1 to ≤10 cm; Fever: ≥101.2°F to ≤102.0°F; Myalgia, Headache, and Malaise: some interference with activity
ß Grade 3 - Injection-site pain: Significant; prevents daily activity; Injection-site erythema and Injection-site swelling: >10 cm; Fever: ≥102.1°F; Myalgia, Headache, and Malaise: Significant; prevents daily activity
à Fever measured by any route

Unsolicited non-serious adverse events were reported in 28 (12.4%) recipients in the Fluzone Quadrivalent group, 22 (9.8%) recipients in the TIV-1 group, and 22 (9.8%) recipients in the TIV-2 group. The most commonly reported adverse events were oropharyngeal pain, rhinorrhea, injection-site induration, and headache. Three SAEs were reported during the follow-up period, 2 (0.9%) in the TIV-1 group and 1 (0.4%) in the TIV-2 group.

6.2 Post-Marketing Experience

The following events have been spontaneously reported during the post-approval use of Fluzone or Fluzone Quadrivalent. Because these events are reported voluntarily from a population of uncertain size, it is not always possible to reliably estimate their frequency or establish a causal relationship to vaccine exposure. Adverse events were included based on one or more of the following factors: severity, frequency of reporting, or strength of evidence for a causal relationship to Fluzone or Fluzone Quadrivalent.

- *Blood and Lymphatic System Disorders*: Thrombocytopenia, lymphadenopathy
- *Immune System Disorders*: Anaphylaxis, other allergic/hypersensitivity reactions (including urticaria, angioedema)
- *Eye Disorders*: Ocular hyperemia
- *Nervous System Disorders*: Guillain Barré syndrome (GBS), convulsions, febrile convulsions, myelitis (including encephalomyelitis and transverse myelitis), facial palsy (Bell's palsy), optic neuritis/neuropathy, brachial neuritis, syncope (shortly after vaccination), dizziness, paresthesia
- *Vascular Disorders*: Vasculitis, vasodilatation/flushing
- *Respiratory, Thoracic and Mediastinal Disorder*s: Dyspnea, cough, wheezing, throat

tightness, oropharyngeal pain, rhinorrhea
- *Skin and Subcutaneous Tissue Disorders*: Rash, pruritus, and Stevens-Johnson syndrome
- *General Disorders and Administration Site Conditions*: Asthenia/fatigue, pain in extremities, chest pain
- *Gastrointestinal Disorders*: Vomiting

8 USE IN SPECIFIC POPULATIONS

8.1 Pregnancy

Risk Summary

All pregnancies have a risk of birth defect, loss, or other adverse outcomes. In the U.S. general population, the estimated background risk of major birth defects and miscarriage in clinically recognized pregnancies is 2% to 4% and 15% to 20%, respectively.

Available data with Fluzone Quadrivalent use in pregnant women are insufficient to inform vaccine-associated risk of adverse developmental outcomes.

A developmental toxicity study was performed in female rabbits administered Fluzone Quadrivalent prior to mating and during gestation. The dose was 0.5 mL on each of five occasions (a single human dose is 0.5 mL). This study revealed no adverse effects to the fetus or pre-weaning development and no evidence of impaired female fertility due to Fluzone Quadrivalent (see Data).

Data

Animal Data: A developmental toxicity study was performed in female rabbits administered a Fluzone Quadrivalent by intramuscular injection on 24 and 10 days before insemination, and on Days 6, 12, and 27 of gestation. The dose was 0.5 mL on each occasion (a single human dose is 0.5 mL). This study revealed no vaccine related fetal malformations and no adverse effects on pre-weaning development or female fertility.

Clinical Considerations

Disease-associated Maternal and/or Embryo/Fetal Risk

Pregnant women are at increased risk of complications associated with influenza infection compared to non-pregnant women. Pregnant women who contract influenza may be at increased risk for adverse pregnancy outcomes, including preterm labor and delivery.

8.2 Lactation

Risk Summary

It is not known whether Fluzone Quadrivalent is excreted in human milk. Data are not available to assess the effects of Fluzone Quadrivalent on the breastfed infant or on milk production/excretion.

The developmental and health benefits of breastfeeding should be considered along with the mother's clinical need for Fluzone Quadrivalent and any potential adverse effects on

the breastfed child from Fluzone Quadrivalent or from the underlying maternal condition. For preventive vaccines, the underlying maternal condition is susceptibility to the disease prevented by the vaccine.

8.4 Pediatric Use

Safety and effectiveness of Fluzone Quadrivalent in children below the age of 6 months have not been established. Safety and effectiveness of Fluzone Quadrivalent in children 9 through 17 years of age is based on safety and effectiveness in children 6 months through 8 years of age and adults 18 years of age and older.

8.5 Geriatric Use

Safety and immunogenicity of Fluzone Quadrivalent were evaluated in adults 65 years of age and older. [See *Clinical Studies (14.6)*.] Antibody responses to Fluzone Quadrivalent are lower in persons ≥65 years of age than in younger adults.

11 DESCRIPTION

Fluzone Quadrivalent (Influenza Vaccine) for intramuscular use is an inactivated influenza vaccine, prepared from influenza viruses propagated in embryonated chicken eggs. The virus-containing allantoic fluid is harvested and inactivated with formaldehyde. Influenza virus is concentrated and purified in a linear sucrose density gradient solution using a continuous flow centrifuge. The virus is then chemically disrupted using a non-ionic surfactant, octylphenol ethoxylate (Triton® X-100), producing a "split virus". The split virus containing hemagglutinin (HA) antigen is further purified and then suspended in sodium phosphate-buffered isotonic sodium chloride solution. The Fluzone Quadrivalent process uses an additional concentration factor after the ultrafiltration step in order to obtain a higher hemagglutinin (HA) antigen concentration. The purified split virus from the four strains included in the vaccine are produced separately and then combined to make the quadrivalent formulation.

Fluzone Quadrivalent is an injectable suspension and is clear and slightly opalescent in color.

Antibiotics are not used in the manufacture of Fluzone Quadrivalent.

The Fluzone Quadrivalent prefilled syringe and multi-dose vial presentations are not made with natural rubber latex.

Fluzone Quadrivalent is standardized according to United States Public Health Service requirements and is formulated to contain HA of each of the following four influenza strains recommended for the 2025–2026 influenza season: A/Victoria/4897/2022 IVR-238 (H1N1), A/Croatia/10136RV/2023 X-425A (H3N2), B/Phuket/3073/2013 (B Yamagata lineage), and B/Michigan/01/2021 (a B/Austria/1359417/2021-like virus, B Victoria lineage).

The amounts of HA and other ingredients per dose of vaccine are listed in Table 7. The 0.5 mL single-dose, pre-filled syringe presentation is manufactured and formulated without thimerosal or any other preservative. The 5 mL multi-dose vial presentation contains thimerosal, a mercury derivative, added as a preservative. Each 0.5 mL dose from the multi-dose vial contains 25 mcg mercury. Each 0.25 mL dose from the multi-dose vial contains 12.5 mcg mercury.

Table 7: Fluzone Quadrivalent Ingredients

Ingredient	Quantity (per dose)	
	Fluzone Quadrivalent 0.25 mL Dose	**Fluzone Quadrivalent 0.5 mL Dose**
Active Substance: Split influenza virus, inactivated strains*:	30 mcg HA total	60 mcg HA total
A (H1N1)	7.5 mcg HA	15 mcg HA
A (H3N2)	7.5 mcg HA	15 mcg HA
B/(Victoria lineage)	7.5 mcg HA	15 mcg HA
B/(Yamagata lineage)	7.5 mcg HA	15 mcg HA
Other:		
Sodium phosphate-buffered isotonic sodium chloride solution	QS† to appropriate volume	QS† to appropriate volume
Formaldehyde	≤50 mcg	≤100 mcg
Octylphenol ethoxylate	≤125 mcg	≤250 mcg
Preservative		
Single-dose presentation	-	-
Multi-dose presentation (thimerosal)	12.5 mcg mercury	25 mcg mercury

"-" Indicates information is not applicable

* per United States Public Health Service (USPHS) requirement

† Quantity Sufficient

12 CLINICAL PHARMACOLOGY

12.1 Mechanism of Action

Specific levels of hemagglutination inhibition (HI) antibody titer post-vaccination with inactivated influenza virus vaccines have not been correlated with protection from influenza virus infection. In some human studies, antibody titers ≥1:40 have been associated with protection from influenza illness in up to 50% of participants. (2) (3)

Antibodies against one influenza virus type or subtype confer limited or no protection against another. Furthermore, antibodies to one antigenic variant of influenza virus might not protect against a new antigenic variant of the same type or subtype. Frequent development of antigenic variants through antigenic drift is the virologic basis for seasonal epidemics and the reason for the usual change of one or more new strains in each year's influenza vaccine.

13 NONCLINICAL TOXICOLOGY

13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility

Fluzone Quadrivalent has not been evaluated for carcinogenic or mutagenic potential, or

for impairment of fertility in males.

14 CLINICAL STUDIES

The effectiveness of Fluzone Quadrivalent was demonstrated based on clinical endpoint efficacy data for Fluzone (trivalent influenza vaccine) and on an evaluation of serum HI antibody responses to Fluzone Quadrivalent. Fluzone Quadrivalent, an inactivated influenza vaccine that contains the hemagglutinins of two influenza A subtype viruses and two influenza type B viruses, is manufactured according to the same process as Fluzone.

14.1 Efficacy of Fluzone (Trivalent Influenza Vaccine) in Children 6 through 24 Months of Age

Study 5 (NCT not available), a randomized, double-blind, placebo-controlled study was conducted at a single US center during the 1999-2000 (Year 1) and 2000-2001 (Year 2) influenza seasons. The intent-to-treat analysis set included a total of 786 children 6 through 24 months of age. Participants received two 0.25 mL doses of either Fluzone (N = 525) or a placebo (N = 261). Among all randomized participants in both years, the mean age was 13.8 months; 52.5% were male, 50.8% were Caucasian, 42.0% were Black, and 7.2% were of other racial groups. Cases of influenza were identified through active and passive surveillance for influenza-like illness or acute otitis media and confirmed by culture. Influenza-like illness was defined as fever with signs or symptoms of an upper respiratory infection. Vaccine efficacy against all influenza viral types and subtypes was a secondary endpoint and is presented in Table 8.

Table 8: Estimated Efficacy of Fluzone (Trivalent Influenza Vaccine) Against Culture-Confirmed Influenza in Children Aged 6 through 24 Months during the 1999-2000 and 2000-2001 Influenza Seasons – Intent-to-Treat Analysis Set* (Study 5)

	Fluzone†				Placebo‡				Fluzone vs. Placebo	
Year	n§	N¶	Rate (n/N)#	(95% CI)	n§	N¶	Rate (n/N)#	(95% CI)	Relative Risk (95% CI)	Percent Relative Reductionᵇ (95% CI)
Year 1ß (1999-2000)	15	273	5.5	(3.1; 8.9)	22	138	15.9	(10.3; 23.1)	0.34 (0.18; 0.64)	66 (36; 82)
Year 2à (2000-2001)	9	252	3.6	(1.6; 6.7)	4	123	3.3	(0.9; 8.1)	1.10 (0.34; 3.50)	-10 (-250; 66)

* The intent-to-treat analysis set includes all enrolled participants who were randomly assigned to receive Fluzone or placebo and vaccinated

† Fluzone (0.25 mL): 1999-2000 formulation containing A/Beijing/262/95 (H1N1), A/Sydney/15/97 (H3N2), and B/Yamanashi/166/98 (Yamagata lineage) and 2000-2001 formulation containing A/New Caledonia/20/99 (H1N1), A/Panama/2007/99 (H3N2), and B/Yamanashi/166/98 (Yamagata lineage)

‡ Placebo: 0.4% NaCl

§ n is the number of participants with culture-confirmed influenza for the given year of study as listed in the first column

¶ N is the number of participants randomly assigned to receive Fluzone or placebo for the given year of study as listed in the column headers (intent-to-treat analysis set)
# Rate (%) = (n/N) * 100
Þ Relative reduction in vaccine efficacy was defined as (1-relative risk) × 100
ß Includes all culture confirmed influenza cases throughout the study duration for Year 1 (12 months of follow-up)
à Includes all culture-confirmed influenza cases throughout the study duration for Year 2 (6 months of follow-up)

14.2 Efficacy of Fluzone (Trivalent Influenza Vaccine) in Adults

Study 6 (NCT00538512), a randomized, double-blind, placebo-controlled study was conducted in a single US center during the 2007-2008 influenza season. Participants received one dose of either Fluzone vaccine (N = 813), an active comparator (N = 814), or placebo (N = 325). The intent-to-treat analysis set included 1138 healthy adults who received Fluzone or placebo. Participants were 18 through 49 years of age (mean age was 23.3 years); 63.3% were female, 83.1% were Caucasian, and 16.9% were of other racial/ethnic groups. Cases of influenza were identified through active and passive surveillance and confirmed by cell culture and/or real-time polymerase chain reaction (PCR). Influenza-like illness was defined as an illness with at least 1 respiratory symptom (cough or nasal congestion) and at least 1 constitutional symptom (fever or feverishness, chills, or body aches). Vaccine efficacy of Fluzone against all influenza viral types and subtypes is presented in Table 9.

Table 9: Estimated Efficacy of Fluzone (Trivalent Influenza Vaccine) Against Influenza in Adults Aged 18 through 49 Years during the 2007-2008 Influenza Season – Intent-to-Treat Analysis Set* (Study 6†)

Laboratory-Confirmed Symptomatic Influenza	Fluzone‡ (N=813)§			Placebo¶ (N=325)§			Fluzone vs. Placebo	
	n#	Rate (%)Þ	(95% CI)	n#	Rate (%)Þ	(95% CI)	Relative Risk (95% CI)	Percent Relative Reductionß (95% CI)
Positive culture	21	2.6	(1.6; 3.9)	31	9.5	(6.6; 13.3)	0.27 (0.16; 0.46)	73 (54; 84)
Positive PCR	28	3.4	(2.3; 4.9)	35	10.8	(7.6; 14.7)	0.32 (0.20; 0.52)	68 (48; 80)
Positive culture, positive PCR, or both	28	3.4	(2.3; 4.9)	35	10.8	(7.6; 14.7)	0.32 (0.20; 0.52)	68 (48; 80)

* The intent-to-treat analysis set includes all enrolled participants who were randomly assigned to receive Fluzone or placebo and vaccinated
† NCT00538512
‡ Fluzone: 2007-2008 formulation containing A/Solomon Islands/3/2006 (H1N1), A/Wisconsin/67/2005 (H3N2), and B/Malaysia/2506/2004 (Victoria lineage)
§ N is the number of participants randomly assigned to receive Fluzone or placebo

¶ Placebo: 0.9% NaCl
# n is the number of participants satisfying the criteria listed in the first column
Þ Rate (%) = (n/N) * 100
ß Relative reduction in vaccine efficacy was defined as (1 - relative risk) × 100

14.3 Immunogenicity of Fluzone Quadrivalent in Children 6 Months through 8 Years of Age

In Study 1 (NCT01240746) [*see Adverse Reactions (6.1)*], 1419 children 6 months through 35 months of age and 2101 children 3 years through 8 years of age were included in the per-protocol immunogenicity analysis. Participants 6 months through 35 months of age received one or two 0.25 mL doses and participants 3 years through 8 years of age received one or two 0.5 mL doses of Fluzone Quadrivalent, TIV-1, or TIV-2. For participants who received two doses, the doses were administered approximately 4 weeks apart. The distribution of demographic characteristics was similar to that of the safety analysis set [see *Adverse Reactions (6.1)*].

HI antibody geometric mean titers (GMTs) and seroconversion rates 28 days following vaccination with Fluzone Quadrivalent were non-inferior to those following each TIV for all four strains, based on pre-specified criteria (see Table 10 and Table 11).

Table 10: Non-inferiority of Fluzone Quadrivalent Relative to TIV for Each Strain by HI Antibody GMTs at 28 Days Post-Vaccination, Persons 6 Months Through 8 Years of Age* (Per-protocol Analysis Set)† (Study 1‡)

Antigen Strain	Fluzone Quadrivalent§ N¶=2339	Pooled TIV# N¶=1181		GMT Ratio (95% CI)Þ
	GMT	GMT		
A (H1N1)	1124	1096		1.03 (0.93; 1.14)
A (H3N2)	822	828		0.99 (0.91; 1.08)
	Fluzone Quadrivalent§ N¶=2339	TIV-1ß (B Victoria) N¶=582	TIV-2à (B Yamagata) N¶=599	GMT Ratio (95% CI)Þ
	GMT	GMT	GMT	
B/Brisbane/60/2008 (B Victoria)	86.1	64.3	(19.5)è	1.34 (1.20; 1.50)
B/Florida/04/2006 (B Yamagata)	61.5	(16.3)ð	58.3	1.06 (0.94; 1.18)

* Participants 6-35 months old received 1 or 2 doses (0.25 mL) and participants 3-8 years old received 1 or 2 doses (0.5 mL) as per ACIP recommendation

† Per-protocol analysis set included all persons who had no study protocol deviations
‡ NCT01240746
§ Fluzone Quadrivalent containing A/California/07/2009 (H1N1), A/Victoria/210/2009 (H3N2), B/Brisbane/60/2008 (Victoria lineage), and B/Florida/04/2006 (Yamagata lineage)
¶ N is the number of participants in the per-protocol analysis set
# Pooled TIV group includes participants vaccinated with either TIV-1 or TIV-2
Þ Non-inferiority was demonstrated if the lower limit of the 2-sided 95% CI of the ratio of GMTs (Fluzone Quadrivalent divided by pooled TIV for the A strains, or the TIV containing the corresponding B strain) was >0.66
ß 2010-2011 Fluzone TIV containing A/California/07/2009 (H1N1), A/Victoria/210/2009 (H3N2), and B/Brisbane/60/2008 (Victoria lineage), licensed
à Investigational TIV containing A/California/07/2009 (H1N1), A/Victoria/210/2009 (H3N2), and B/Florida/04/2006 (Yamagata lineage), non-licensed
è TIV-2 did not contain B/Brisbane/60/2008
ð TIV-1 did not contain B/Florida/60/2006

Table 11: Non-inferiority of Fluzone Quadrivalent Relative to TIV for Each Strain by Seroconversion Rates at 28 Days Post-Vaccination, Persons 6 Months Through 8 Years of Age*(Per-protocol Analysis Set)† (Study 1‡)

Antigen Strain	Fluzone Quadrivalent§ N¶=2339	Pooled TIV# N¶=1181		Difference of Seroconversion Rates (95% CI)Þ
	Seroconversionß (%)			
A (H1N1)	92.4	91.4		0.9 (-0.9; 3.0)
A (H3N2)	88.0	84.2		3.8 (1.4; 6.3)
	Fluzone Quadrivalent§ N¶=2339	TIV-1à (B Victoria) N¶=582	TIV-2è (B Yamagata) N¶=599	Difference of Seroconversion Rates (95% CI)Þ
	Seroconversionß (%)			
B/Brisbane/60/2008 (B Victoria)	71.8	61.1	(20.0)ð	10.7 (6.4; 15.1)
B/Florida/04/2006 (B Yamagata)	66.1	(17.9)ø	64.0	2.0 (-2.2; 6.4)

* Participants 6-35 months old received 1 or 2 doses (0.25 mL) and participants 3-8 years old received 1 or 2 doses (0.5 mL) as per ACIP recommendations
† Per-protocol analysis set included all persons who had no study protocol deviations
‡ NCT01240746
§ Fluzone Quadrivalent containing A/California/07/2009 (H1N1), A/Victoria/210/2009 (H3N2), B/Brisbane/60/2008 (Victoria lineage), and B/Florida/04/2006 (Yamagata lineage)
¶ N is the number of participants in the per-protocol analysis set
# Pooled TIV group includes participants vaccinated with either TIV-1 or TIV-2
Þ Non-inferiority was demonstrated if the lower limit of the 2-sided 95% CI of the difference in seroconversion rates (Fluzone Quadrivalent minus pooled TIV for the A strains, or the TIV containing the corresponding B strain) was >-10%
ß Seroconversion: Paired samples with pre-vaccination HI titer <1:10 and post-vaccination titer ≥1:40 or a minimum 4-fold increase for participants with pre-vaccination titer ≥1:10

à 2010-2011 Fluzone TIV containing A/California/07/2009 (H1N1), A/Victoria/210/2009 (H3N2), and B/Brisbane/60/2008 (Victoria lineage), licensed
è Investigational TIV containing A/California/07/2009 (H1N1), A/Victoria/210/2009 (H3N2), and B/Florida/04/2006 (Yamagata lineage), non-licensed
ð TIV-2 did not contain B/Brisbane/60/2008
ø TIV-1 did not contain B/Florida/04/2006

Non-inferiority immunogenicity criteria based on HI antibody GMTs and seroconversion rates were also met when age subgroups (6 months to <36 months and 3 years to <9 years) were examined. In addition, HI antibody GMTs and seroconversion rates following Fluzone Quadrivalent were higher than those following TIV for the B strain not contained in each respective TIV based on pre-specified criteria (the lower limit of the 2-sided 95% CI of the ratio of the GMTs [Fluzone Quadrivalent divided by TIV] >1.5 for each B strain in Fluzone Quadrivalent compared with the corresponding B strain not contained in each TIV and the lower limit of the two 2-sided 95% CI of the difference of the seroconversion rates [Fluzone Quadrivalent minus TIV] >10% for each B strain in Fluzone Quadrivalent compared with the corresponding B strain not contained in each TIV).

14.4 Immunogenicity of the 0.5 mL Dose of Fluzone Quadrivalent in Children 6 Months through 35 Months of Age

In Study 2 (NCT02915302) [see *Adverse Reactions (6.1)*], 1027 children, 6 months through 35 months of age, were included in the per-protocol immunogenicity analysis. The distribution of demographic characteristics was similar to that of the safety analysis set [see *Adverse Reactions (6.1)*].

In this study, children 6 months through 35 months of age received one or two doses of either 0.25 mL or 0.5 mL of Fluzone Quadrivalent. Non-inferiority of the 0.5 mL dose(s) relative to the 0.25 mL dose(s) of Fluzone Quadrivalent was demonstrated for all four strains based on pre-specified criteria (lower limit of the 2-sided 95% CI of the ratio of GMTs between groups >0.667; lower limit of the 2-sided 95% CI of the difference in seroconversion rates >-10%). GMT ratios ($GMT_{0.5\text{-mL dose}}$ divided by $GMT_{0.25\text{-mL dose}}$) for the A/H1N1, A/H3N2, B Victoria lineage, and B Yamagata lineage strains were 1.42 (95% CI: 1.16; 1.74), 1.48 (95% CI: 1.21; 1.82), 1.33 (95% CI: 1.09; 1.62), and 1.41 (95% CI: 1.17; 1.70), respectively. Seroconversion rate (SCR) differences ($SCR_{0.5\text{-mL dose}}$ minus $SCR_{0.25\text{-mL dose}}$) for the A/H1N1, A/H3N2, B Victoria lineage, and B Yamagata lineage strains were 4.6% (95% CI: -0.4%; 9.6%), 5.1% (95% CI: 0.4%; 9.8%), 1.3% (95% CI: -2.9%; 5.6%), and 2.6% (95% CI: -1.4%; 6.5%).

14.5 Immunogenicity of Fluzone Quadrivalent in Adults ≥18 Years of Age

In Study 3 (NCT00988143) [see *Adverse Reactions (6.1)*], 565 adults 18 years of age and older who had received one dose of Fluzone Quadrivalent, TIV-1, or TIV-2 were included in the per-protocol immunogenicity analysis. The distribution of demographic characteristics was similar to that of the safety analysis set [see *Adverse Reactions (6.1)*].

HI antibody GMTs 21 days following vaccination with Fluzone Quadrivalent were non-inferior to those following each TIV for all four strains, based on pre-specified criteria (see Table 12).

Table 12: Non-inferiority of Fluzone Quadrivalent Relative

to TIV for Each Strain by HI Antibody GMTs at 21 Days Post-Vaccination, Adults 18 Years of Age and Older (Per-protocol Analysis Set)* (Study 3†)

Antigen Strain	Fluzone Quadrivalent‡ N§=190	Pooled TIV¶ N§=375		GMT Ratio (95% CI)#
	GMT	GMT		
A (H1N1)	161	151		1.06 (0.87; 1.31)
A (H3N2)	304	339		0.90 (0.70; 1.15)
	Fluzone Quadrivalent‡ N§=190	TIV-1Þ (B Victoria) N§=187	TIV-2ß (B Yamagata) N§=188	GMT Ratio (95% CI)#
	GMT	GMT	GMT	
B/Brisbane/60/2008 (B Victoria)	101	114	(44.0)à	0.89 (0.70; 1.12)
B/Florida/04/2006 (B Yamagata)	155	(78.1)è	135	1.15 (0.93; 1.42)

* Per-protocol analysis set included all persons who had no study protocol deviations
† NCT00988143
‡ Fluzone Quadrivalent containing A/Brisbane/59/2007 (H1N1), A/Uruguay/716/2007 (H3N2), B/Brisbane/60/2008 (Victoria lineage), and B/Florida/04/2006 (Yamagata lineage)
§ N is the number of participants in the per-protocol analysis set
¶ Pooled TIV group includes participants vaccinated with either TIV-1 or TIV-2
# Non-inferiority was demonstrated if the lower limit of the 2-sided 95% CI of the ratio of GMTs (Fluzone Quadrivalent divided by pooled TIV for the A strains, or the TIV containing the corresponding B strain) was >2/3
Þ 2009-2010 Fluzone TIV containing A/Brisbane/59/2007 (H1N1), A/Uruguay/716/2007 (H3N2), and B/Brisbane/60/2008 (Victoria lineage), licensed
ß 2008-2009 Fluzone TIV containing A/Brisbane/59/2007 (H1N1), A/Uruguay/716/2007 (H3N2), and B/Florida/04/2006 (Yamagata lineage), licensed
à TIV-2 did not contain B/Brisbane/60/2008
è TIV-1 did not contain B/Florida/04/2006

14.6 Immunogenicity of Fluzone Quadrivalent in Geriatric Adults ≥65 Years of Age

In Study 4 (NCT01218646) [see *Adverse Reactions (6.1)*], 660 adults 65 years of age and older were included in the per-protocol immunogenicity analysis. The distribution of demographic characteristics was similar to that of the safety analysis set [see *Adverse Reactions (6.1)*].

HI antibody GMTs 21 days following vaccination with Fluzone Quadrivalent were non-inferior to those following TIV for all four strains, based on pre-specified criteria (see Table 13).

Seroconversion rates 21 days following Fluzone Quadrivalent were non-inferior to those following TIV for H3N2, B/Brisbane, and B/Florida, but not for H1N1 (see Table 14). The HI antibody GMT following Fluzone Quadrivalent was higher than that following TIV-1 for B/Florida but not higher than that following TIV-2 for B/Brisbane, based on pre-specified criteria (the lower limit of the 2-sided 95% CI of the ratio of the GMTs [Fluzone Quadrivalent divided by TIV] >1.5 for each B strain in Fluzone Quadrivalent compared with the corresponding B strain not contained in each TIV). Seroconversion rates following Fluzone Quadrivalent were higher than those following TIV for the B strain not contained in each respective TIV, based on pre-specified criteria (the lower limit of the two 2-sided 95% CI of the difference of the seroconversion rates [Fluzone Quadrivalent minus TIV] >10% for each B strain in Fluzone Quadrivalent compared with the corresponding B strain not contained in each TIV).

Table 13: Non-inferiority of Fluzone Quadrivalent Relative to TIV for Each Strain by HI Antibody GMTs at 21 Days Post-Vaccination, Adults 65 Years of Age and Older (Per-protocol Analysis Set)* (Study 4†)

Antigen Strain	Fluzone Quadrivalent‡ N§=220	Pooled TIV¶ N§=440		GMT Ratio (95% CI)#
	GMT	GMT		
A (H1N1)	231	270		0.85 (0.67; 1.09)
A (H3N2)	501	324		1.55 (1.25; 1.92)
	Fluzone Quadrivalent‡ N§=220	TIV-1Þ (B Victoria) N§=219	TIV-2ß (B Yamagata) N§=221	GMT Ratio (95% CI)#
	GMT	GMT	GMT	
B/Brisbane/60/2008 (B Victoria)	73.8	57.9	(42.2)à	1.27 (1.05; 1.55)
B/Florida/04/2006 (B Yamagata)	61.1	(28.5)è	54.8	1.11 (0.90; 1.37)

* Per-protocol analysis set included all persons who had no study protocol deviations
† NCT01218646
‡ Fluzone Quadrivalent containing A/California/07/2009 (H1N1), A/Victoria/210/2009 (H3N2), B/Brisbane/60/2008 (Victoria lineage), and B/Florida/04/2006 (Yamagata lineage)
§ N is the number of participants in the per-protocol analysis set
¶ Pooled TIV group includes participants vaccinated with either TIV-1 or

TIV-2
Non-inferiority was demonstrated if the lower limit of the 2-sided 95% CI of the ratio of GMTs (Fluzone Quadrivalent divided by pooled TIV for the A strains, or the TIV containing the corresponding B strain) was >0.66
Þ 2010-2011 Fluzone TIV containing A/California/07/2009 (H1N1), A/Victoria/210/2009 (H3N2), and B/Brisbane/60/2008 (Victoria lineage), licensed
ß Investigational TIV containing A/California/07/2009 (H1N1), A/Victoria/210/2009 (H3N2), and B/Florida/04/2006 (Yamagata lineage), non-licensed
à TIV-2 did not contain B/Brisbane/60/2008
è TIV-1 did not contain B/Florida/04/2006

Table 14: Non-inferiority of Fluzone Quadrivalent Relative to TIV for Each Strain by Seroconversion Rates at 21 Days Post-Vaccination, Adults 65 Years of Age and Older (Per-protocol Analysis Set)* (Study 4†)

Antigen Strain	Fluzone Quadrivalent‡ N§=220	Pooled TIV¶ N§=440		Difference of Seroconversion Rates (95% CI)#
	Seroconversion Þ (%)			
A (H1N1)	65.91	69.77		-3.86 (-11.50; 3.56)
A (H3N2)	69.09	59.32		9.77 (1.96; 17.20)
	Fluzone Quadrivalent‡ N§=220	TIV-1ß (B Victoria) N§=219	TIV-2à (B Yamagata) N§=221	Difference of Seroconversion Rates (95% CI)#
	Seroconversion Þ (%)			
B/Brisbane/60/2008 (B Victoria)	28.64	18.72	(8.60)è	9.91 (1.96; 17.70)
B/Florida/04/2006 (B Yamagata)	33.18	(9.13)ð	31.22	1.96 (-6.73; 10.60)

* Per-protocol analysis set included all persons who had no study protocol deviations
† NCT01218646
‡ Fluzone Quadrivalent containing A/California/07/2009 (H1N1), A/Victoria/210/2009 (H3N2), B/Brisbane/60/2008 (Victoria lineage), and B/Florida/04/2006 (Yamagata lineage)
§ N is the number of participants in the per-protocol analysis set
¶ Pooled TIV group includes participants vaccinated with either TIV-1 or TIV-2
# Non-inferiority was demonstrated if the lower limit of the 2-sided 95% CI of the difference in seroconversion rates (Fluzone Quadrivalent minus pooled TIV for the A strains, or the TIV containing the corresponding B strain) was >-10%
Þ Seroconversion: Paired samples with pre-vaccination HI titer <1:10 and post-vaccination titer ≥1:40 or a minimum 4-fold increase for participants with pre-vaccination titer ≥1:10
ß 2010-2011 Fluzone TIV containing A/California/07/2009 (H1N1), A/Victoria/210/2009 (H3N2), and B/Brisbane/60/2008 (Victoria lineage), licensed
à Investigational TIV containing A/California/07/2009 (H1N1), A/Victoria/210/2009 (H3N2), and B/Florida/04/2006 (Yamagata lineage), non-licensed
è TIV-2 did not contain B/Brisbane/60/2008
ð TIV-1 did not contain B/Florida/04/2006

15 REFERENCES

1 Lasky T, Terracciano GJ, Magder L, et al. The Guillain-Barré syndrome and the 1992-1993 and 1993-1994 influenza vaccines. N Engl J Med 1998;339:1797-802.
2 Hannoun C, Megas F, Piercy J. Immunogenicity and protective efficacy of influenza vaccination. Virus Res 2004;103:133-138.
3 Hobson D, Curry RL, Beare AS, Ward-Gardner A. The role of serum haemagglutination-inhibiting antibody in protection against challenge infection with influenza A2 and B viruses. J Hyg Camb 1972;70:767-777.

16 HOW SUPPLIED/STORAGE AND HANDLING

16.1 How Supplied

Single-dose, prefilled syringe (clear plunger rod), without needle, 0.5 mL (NDC 49281-926-88) (not made with natural rubber latex). Supplied as package of 10 (NDC 49281-926-50).

Multi-dose vial, 5 mL (NDC 49281-541-78) (not made with natural rubber latex). Supplied as package of one (NDC 49281-541-15). A maximum of ten doses can be withdrawn from the multi-dose vial.

16.2 Storage and Handling

Store all Fluzone Quadrivalent presentations refrigerated at 2° to 8°C (35° to 46°F). DO NOT FREEZE. Discard if vaccine has been frozen.

Between uses, return the multi-dose vial to the recommended storage conditions at 2° to 8°C (35° to 46°F).

Do not use after the expiration date shown on the label.

17 PATIENT COUNSELING INFORMATION

See FDA-approved patient labeling (Patient Information). Inform the vaccine recipient or guardian:

- Fluzone Quadrivalent contains killed viruses and cannot cause influenza.
- Fluzone Quadrivalent stimulates the immune system to produce antibodies that help protect against influenza, but does not prevent other respiratory infections.
- Annual influenza vaccination is recommended.
- Report adverse reactions to their healthcare provider and/or to the Vaccine Adverse Event Reporting System (VAERS) at 1-800-822-7967.

Vaccine Information Statements must be provided to vaccine recipients or their guardians, as required by the National Childhood Vaccine Injury Act of 1986 prior to immunization. These materials are available free of charge at the Centers for Disease Control and Prevention (CDC) website (www.cdc.gov/vaccines).

Manufactured by:
Sanofi Pasteur Inc.
Swiftwater, PA 18370 USA

This product's labeling may have been updated. For the most recent prescribing information, please visit https://dailymed.nlm.nih.gov/dailymed/.

Patient Information Sheet

Fluzone® Quadrivalent
Influenza Vaccine

Please read this information sheet before getting Fluzone Quadrivalent. This summary is not intended to take the place of talking with your healthcare provider. If you have questions or would like more information, please talk with your healthcare provider.

What is Fluzone Quadrivalent?

Fluzone Quadrivalent is a vaccine that helps protect against influenza illness (flu).

Fluzone Quadrivalent is for people who are 6 months of age and older.

Vaccination with Fluzone Quadrivalent may not protect all people who receive the vaccine.

Who should not get Fluzone Quadrivalent?

You should not get Fluzone Quadrivalent if you:
- ever had a severe allergic reaction to eggs or egg products.
- ever had a severe allergic reaction after getting any influenza vaccine.
- are younger than 6 months of age.

Tell your healthcare provider if you or your child have or have had:
- Guillain-Barré syndrome (severe muscle weakness) after getting an influenza vaccine.
- problems with your immune system as the immune response may be diminished.

How is the Fluzone Quadrivalent given?

Fluzone Quadrivalent is given as an injection into the muscle.

What are the possible side effects of Fluzone Quadrivalent?

The most common side effects of Fluzone Quadrivalent are:
- pain, redness, and swelling where you got the injection
- muscle aches
- tiredness
- headache
- fever

These are not all of the possible side effects of Fluzone Quadrivalent. You can ask your healthcare provider about other side effects.

Call your healthcare provider for advice about any side effects that concern you. You may report side effects to the Vaccine Adverse Event Reporting System (VAERS) at 1-800-822-7967 or *http://vaers.hhs.gov.*

What are the ingredients in Fluzone Quadrivalent?

Fluzone Quadrivalent contains 4 killed influenza virus strains.

Other ingredients include formaldehyde and octylphenol ethoxylate. The preservative thimerosal is only in the multi-dose vial of Fluzone Quadrivalent.

Manufactured by:
Sanofi Pasteur Inc.
Swiftwater, PA 18370 USA

PRINCIPAL DISPLAY PANEL - 5 mL Vial Label

NDC 49281-541-78

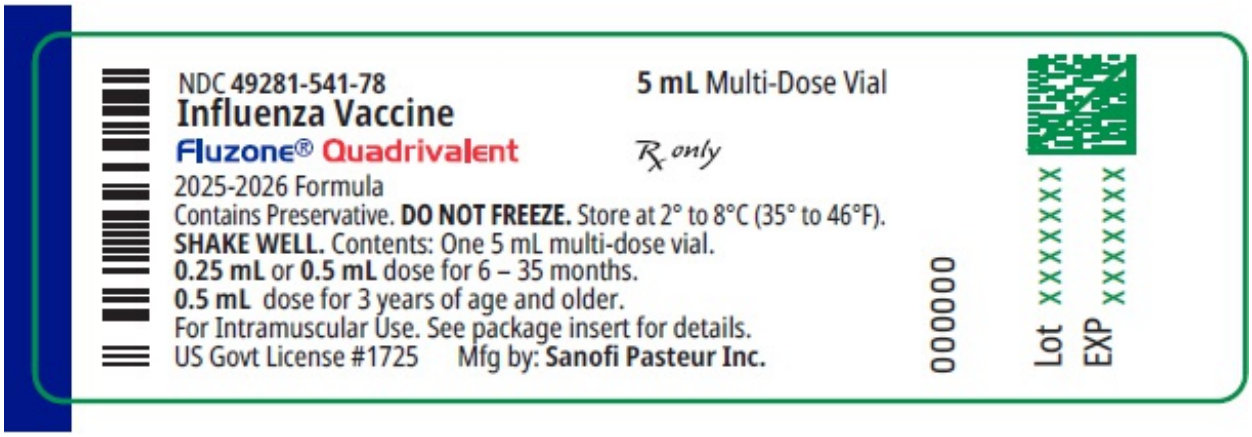
5 mL Multi-Dose Vial

Influenza Vaccine
Fluzone® Quadrivalent

Rx only

2025-2026 Formula
Contains Preservative. DO NOT FREEZE. Store at 2° to 8°C (35° to 46°F).
SHAKE WELL. Contents: One 5 mL multi-dose vial.
0.25 mL or 0.5 mL dose for 6 – 35 months.
0.5 mL dose for 3 years of age and older.
For Intramuscular Use. See package insert for details.
US Govt License #1725

Mfg by: Sanofi Pasteur Inc.



PRINCIPAL DISPLAY PANEL - 5 mL Vial Carton

NDC 49281-541-15

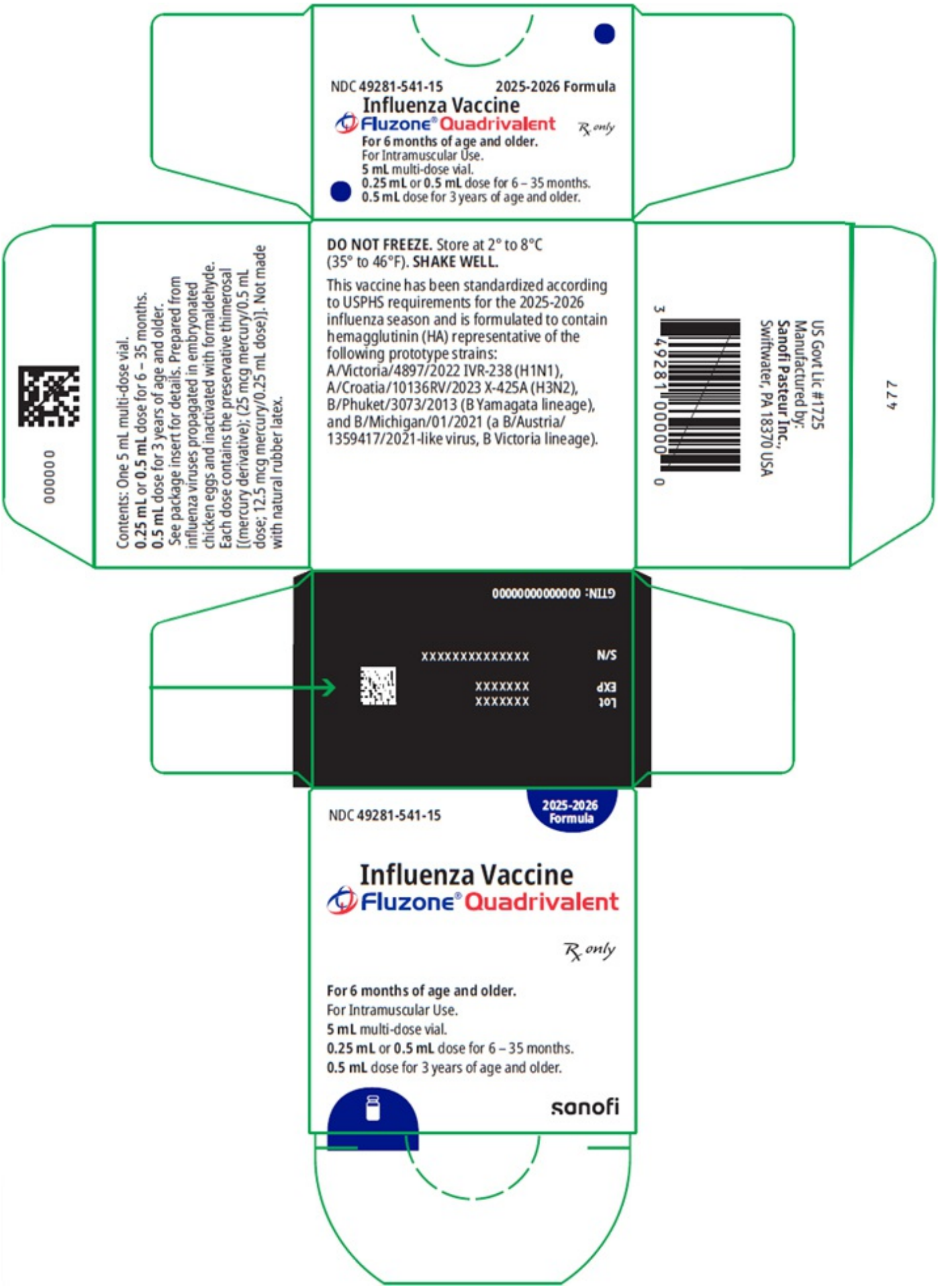
2025-2026
Formula

Influenza Vaccine
Fluzone® Quadrivalent

Rx only

For 6 months of age and older.
For Intramuscular Use.
5 mL multi-dose vial.
0.25 mL or 0.5 mL dose for 6 – 35 months.
0.5 mL dose for 3 years of age and older.

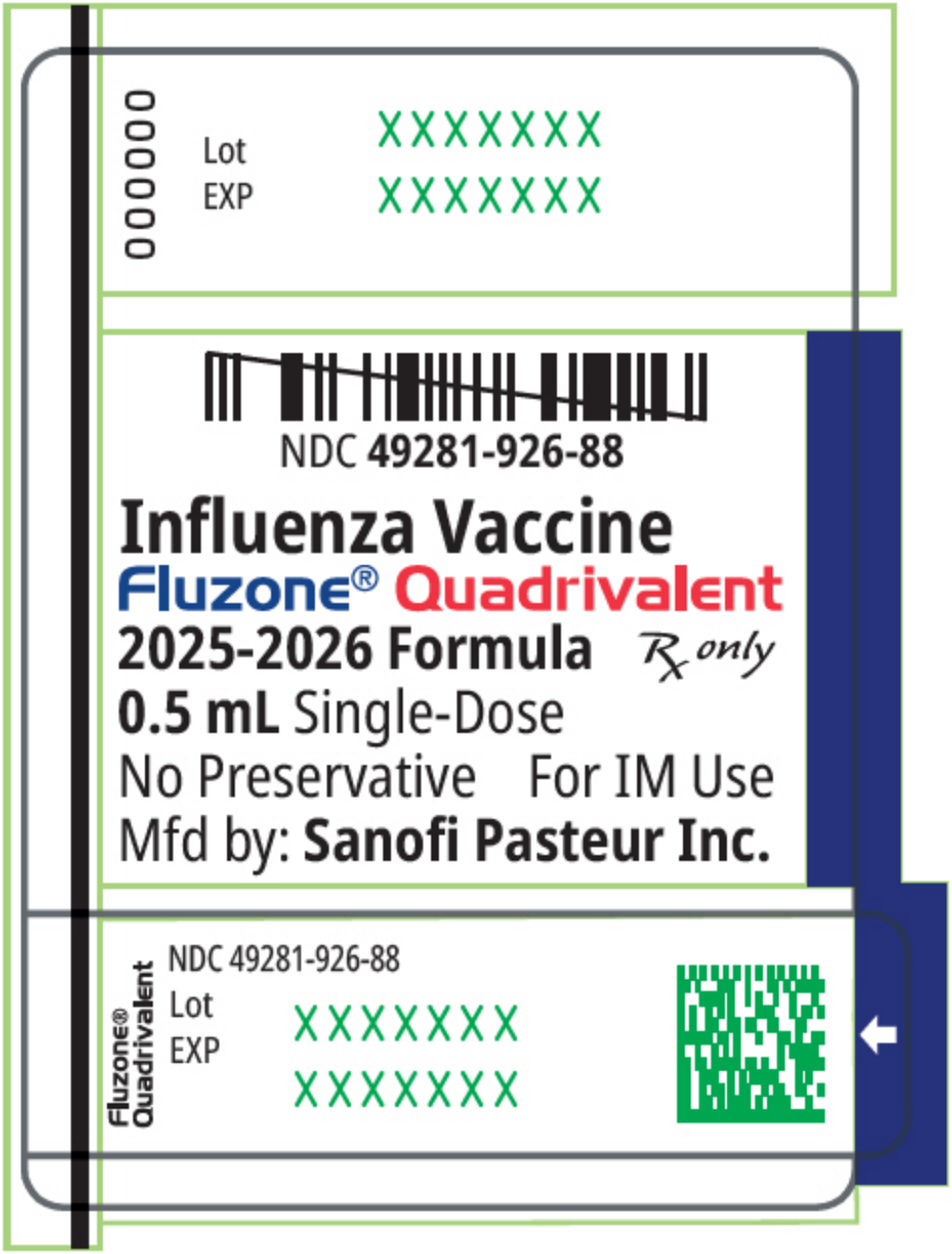
sanofi


NDC 49281-541-15 2025-2026 Formula
Influenza Vaccine
Fluzone® Quadrivalent
℞ only
For 6 months of age and older.
For Intramuscular Use.
5 mL multi-dose vial.
0.25 mL or 0.5 mL dose for 6 – 35 months.
0.5 mL dose for 3 years of age and older.
DO NOT FREEZE. Store at 2° to 8°C (35° to 46°F). SHAKE WELL.
This vaccine has been standardized according to USPHS requirements for the 2025-2026 influenza season and is formulated to contain hemagglutinin (HA) representative of the following prototype strains: A/Victoria/4897/2022 IVR-238 (H1N1), A/Croatia/10136RV/2023 X-425A (H3N2), B/Phuket/3073/2013 (B Yamagata lineage), and B/Michigan/01/2021 (a B/Austria/1359417/2021-like virus, B Victoria lineage).
US Govt Lic #1725
Manufactured by:
Sanofi Pasteur Inc.,
Swiftwater, PA 18370 USA
3 49281 00000 0
Contents: One 5 mL multi-dose vial.
0.25 mL or 0.5 mL dose for 6 – 35 months.
0.5 mL dose for 3 years of age and older.
See package insert for details. Prepared from influenza viruses propagated in embryonated chicken eggs and inactivated with formaldehyde.
Each dose contains the preservative thimerosal [(mercury derivative); (25 mcg mercury/0.5 mL dose; 12.5 mcg mercury/0.25 mL dose)]. Not made with natural rubber latex.
000000
GTIN: 00000000000000
S/N xxxxxxxxxxxxx
EXP xxxxxxx
Lot xxxxxxx
NDC 49281-541-15
2025-2026 Formula
Influenza Vaccine
Fluzone® Quadrivalent
℞ only
For 6 months of age and older.
For Intramuscular Use.
5 mL multi-dose vial.
0.25 mL or 0.5 mL dose for 6 – 35 months.
0.5 mL dose for 3 years of age and older.
sanofi

PRINCIPAL DISPLAY PANEL - 0.5 mL Syringe Label

NDC 49281-926-88

Influenza Vaccine
Fluzone® Quadrivalent
2025-2026 Formula
Rx only
0.5 mL Single-Dose
No Preservative
For IM Use
Mfd by: Sanofi Pasteur Inc.



PRINCIPAL DISPLAY PANEL - 0.5 mL Syringe Carton

NDC 49281-926-50

2025-2026
Formula

Influenza Vaccine
Fluzone® Quadrivalent

Rx only

For Intramuscular Use
For 6 months of age and older
10 single-dose prefilled syringes 0.5 mL each

sanofi

NDC 49281-926-50

2025-2026 Formula

Influenza Vaccine

Fluzone® Quadrivalent

℞ only

For Intramuscular Use

For 6 months of age and older

10 single-dose prefilled syringes **0.5 mL** each

DO NOT FREEZE. Store at 2° to 8°C (35° to 46°F).

SHAKE WELL.

FOR INTRAMUSCULAR USE.

See full prescribing information for additional details.

Prepared from influenza viruses propagated in embryonated chicken eggs and inactivated with formaldehyde. A nonionic surfactant (Triton® X-100*) is added during manufacture. This vaccine has been standardized according to USPHS requirements for the 2025-2026 influenza season and is formulated to contain 60 micrograms (mcg) hemagglutinin (HA) per 0.5 mL dose, in the recommended ratio of 15 mcg HA each, representative of the following prototype strains: A/Victoria/4897/2022 IVR-238 (H1N1), A/Croatia/10136RV/2023 X-425A (H3N2), B/Phuket/3073/2013 (B Yamagata lineage), and B/Michigan/01/2021 (a B/Austria/1359417/2021-like virus, B Victoria lineage).

Contains no preservative.

Not made with natural rubber latex.

*Triton® X-100 – Registered trademark of Union Carbide, Co., USA.

US Govt License #1725
Manufactured by:
Sanofi Pasteur Inc.
Swiftwater, PA 18370 USA

000000

3 49281 000000 0

450

GTIN: 00000000000000

S/N

xxxxxxxxxxxxxx

Lot
EXP
xxxxxxx
xxxxxxx

NDC 49281-926-50

2025-2026 Formula

Influenza Vaccine

Fluzone® Quadrivalent

℞ only

For Intramuscular Use

For 6 months of age and older

10 single-dose prefilled syringes **0.5 mL** each

sanofi

FLUZONE QUADRIVALENT NORTHERN HEMISPHERE

influenza a virus a/victoria/4897/2022 ivr-238 (h1n1) antigen (formaldehyde inactivated), influenza a virus a/croatia/10136rv/2023 x-425a antigen (formaldehyde inactivated), influenza b virus b/phuket/3073/2013 antigen (formaldehyde inactivated), and influenza b virus b/michigan/01/2021 antigen (formaldehyde inactivated) injection, suspension

Product Information

Product Type	VACCINE	**Item Code (Source)**	NDC:49281-541
Route of Administration	INTRAMUSCULAR		

Active Ingredient/Active Moiety

Ingredient Name	Basis of Strength	Strength
INFLUENZA A VIRUS A/VICTORIA/4897/2022 IVR-238 (H1N1) ANTIGEN (FORMALDEHYDE INACTIVATED) (UNII: AU5C98U4BB) (INFLUENZA A VIRUS A/VICTORIA/4897/2022 IVR-238 (H1N1) HEMAGGLUTININ ANTIGEN (FORMALDEHYDE INACTIVATED) - UNII:C46XJT9FQ9)	INFLUENZA A VIRUS A/VICTORIA/4897/2022 IVR-238 (H1N1) HEMAGGLUTININ ANTIGEN (FORMALDEHYDE INACTIVATED)	15 ug in 0.5 mL
INFLUENZA A VIRUS A/CROATIA/10136RV/2023 X-425A (H3N2) ANTIGEN (FORMALDEHYDE INACTIVATED) (UNII: HQW9FZS4YK) (INFLUENZA A VIRUS A/CROATIA/10136RV/2023 X-425A (H3N2) HEMAGGLUTININ ANTIGEN (FORMALDEHYDE INACTIVATED) - UNII:SD82XNG5M6)	INFLUENZA A VIRUS A/CROATIA/10136RV/2023 X-425A (H3N2) HEMAGGLUTININ ANTIGEN (FORMALDEHYDE INACTIVATED)	15 ug in 0.5 mL
INFLUENZA B VIRUS B/PHUKET/3073/2013 ANTIGEN (FORMALDEHYDE INACTIVATED) (UNII: B93BQX9789) (INFLUENZA B VIRUS B/PHUKET/3073/2013 HEMAGGLUTININ ANTIGEN (FORMALDEHYDE INACTIVATED) - UNII:9HB0XUS9TM)	INFLUENZA B VIRUS B/PHUKET/3073/2013 HEMAGGLUTININ ANTIGEN (FORMALDEHYDE INACTIVATED)	15 ug in 0.5 mL
INFLUENZA B VIRUS B/MICHIGAN/01/2021 ANTIGEN (FORMALDEHYDE INACTIVATED) (UNII: FF9YP4D23C) (INFLUENZA B VIRUS B/MICHIGAN/01/2021 HEMAGGLUTININ ANTIGEN (FORMALDEHYDE INACTIVATED) - UNII:CQV855H5FG)	INFLUENZA B VIRUS B/MICHIGAN/01/2021 HEMAGGLUTININ ANTIGEN (FORMALDEHYDE INACTIVATED)	15 ug in 0.5 mL

Inactive Ingredients

Ingredient Name	Strength
SODIUM PHOSPHATE, MONOBASIC, ANHYDROUS (UNII: KH7I04HPUU)	
SODIUM PHOSPHATE, DIBASIC, ANHYDROUS (UNII: 22ADO53M6F)	
FORMALDEHYDE (UNII: 1HG84L3525)	
THIMEROSAL (UNII: 2225PI3MOV)	
OCTOXYNOL-9 (UNII: 7JPC6Y25QS)	
WATER (UNII: 059QF0KO0R)	

Packaging

#	Item Code	Package Description	Marketing Start Date	Marketing End Date
1	NDC:49281-541-15	1 in 1 PACKAGE		
1	NDC:49281-541-78	5 mL in 1 VIAL, MULTI-DOSE; Type 0: Not a Combination Product		

Marketing Information

Marketing Category	Application Number or Monograph Citation	Marketing Start Date	Marketing End Date
BLA	BLA103914	07/01/2025	06/30/2026

FLUZONE QUADRIVALENT NORTHERN HEMISPHERE

influenza a virus a/victoria/4897/2022 ivr-238 (h1n1) antigen (formaldehyde inactivated), influenza a virus a/croatia/10136rv/2023 x-425a (h3n2) antigen (formaldehyde inactivated), influenza b virus b/phuket/3073/2013 antigen (formaldehyde inactivated), and influenza b virus b/michigan/01/2021 antigen (formaldehyde inactivated) injection, suspension

Product Information

Product Type	VACCINE	**Item Code (Source)**	NDC:49281-926
Route of Administration	INTRAMUSCULAR		

Active Ingredient/Active Moiety

Ingredient Name	Basis of Strength	Strength
INFLUENZA A VIRUS A/VICTORIA/4897/2022 IVR-238 (H1N1) ANTIGEN (FORMALDEHYDE INACTIVATED) (UNII: AU5C98U4BB) (INFLUENZA A VIRUS A/VICTORIA/4897/2022 IVR-238 (H1N1) HEMAGGLUTININ ANTIGEN (FORMALDEHYDE INACTIVATED) - UNII:C46XJT9FQ9)	INFLUENZA A VIRUS A/VICTORIA/4897/2022 IVR-238 (H1N1) HEMAGGLUTININ ANTIGEN (FORMALDEHYDE INACTIVATED)	15 ug in 0.5 mL
INFLUENZA A VIRUS A/CROATIA/10136RV/2023 X-425A (H3N2) ANTIGEN (FORMALDEHYDE INACTIVATED) (UNII: HQW9FZS4YK) (INFLUENZA A VIRUS A/CROATIA/10136RV/2023 X-425A (H3N2) HEMAGGLUTININ ANTIGEN (FORMALDEHYDE INACTIVATED) - UNII:SD82XNG5M6)	INFLUENZA A VIRUS A/CROATIA/10136RV/2023 X-425A (H3N2) HEMAGGLUTININ ANTIGEN (FORMALDEHYDE INACTIVATED)	15 ug in 0.5 mL
INFLUENZA B VIRUS B/PHUKET/3073/2013 ANTIGEN (FORMALDEHYDE INACTIVATED) (UNII: B93BQX9789) (INFLUENZA B VIRUS B/PHUKET/3073/2013 HEMAGGLUTININ ANTIGEN (FORMALDEHYDE INACTIVATED) - UNII:9HB0XUS9TM)	INFLUENZA B VIRUS B/PHUKET/3073/2013 HEMAGGLUTININ ANTIGEN (FORMALDEHYDE INACTIVATED)	15 ug in 0.5 mL
INFLUENZA B VIRUS B/MICHIGAN/01/2021 ANTIGEN (FORMALDEHYDE INACTIVATED) (UNII: FF9YP4D23C) (INFLUENZA B VIRUS B/MICHIGAN/01/2021 HEMAGGLUTININ ANTIGEN (FORMALDEHYDE INACTIVATED) - UNII:CQV855H5FG)	INFLUENZA B VIRUS B/MICHIGAN/01/2021 HEMAGGLUTININ ANTIGEN (FORMALDEHYDE INACTIVATED)	15 ug in 0.5 mL

Inactive Ingredients

Ingredient Name	Strength
OCTOXYNOL-9 (UNII: 7JPC6Y25QS)	
SODIUM PHOSPHATE, DIBASIC, ANHYDROUS (UNII: 22ADO53M6F)	
SODIUM PHOSPHATE, MONOBASIC, ANHYDROUS (UNII: KH7I04HPUU)	
WATER (UNII: 059QF0KO0R)	
FORMALDEHYDE (UNII: 1HG84L3525)	

Packaging

#	Item Code	Package Description	Marketing Start Date	Marketing End Date
	NDC:49281			

1	NDC:49281-926-50	10 in 1 PACKAGE		
1	NDC:49281-926-88	0.5 mL in 1 SYRINGE, GLASS; Type 3: Prefilled Biologic Delivery Device/System (syringe, patch, etc.)		

Marketing Information

Marketing Category	Application Number or Monograph Citation	Marketing Start Date	Marketing End Date
BLA	BLA103914	07/01/2025	06/30/2026

Labeler - Sanofi Pasteur Inc. (086723285)

Establishment

Name	Address	ID/FEI	Business Operations
Sanofi Pasteur Inc.		086723285	MANUFACTURE(49281-541, 49281-926) , PACK(49281-541, 49281-926) , LABEL(49281-541, 49281-926)

Revised: 7/2025 Sanofi Pasteur Inc.