A Rapid Surveillance and Cohort Post-Marketing Safety Study to Evaluate the Safety of Respiratory Syncytial Virus Vaccine (ABRYSVO™) Exposure During Pregnancy in the United States (C3671027)

First published: 02/05/2024

Last updated: 26/01/2026

Study Ongoing

Administrative details

EU PAS number

EUPAS1000000115

Study ID

1000000115

DARWIN EU® study

No

Study countries

☐ United States

Study description

The study will estimate the risk of adverse pregnancy, maternal, and neonatal/infant outcomes among individuals who are exposed to ABRYSVO (RSVpreF) between 32 0/7 through 36 6/7 weeks gestation during pregnancy.

Study status

Ongoing

Research institutions and networks

Institutions

Pfizer

First published: 01/02/2024

Last updated: 01/02/2024

Institution

Harvard Pilgrim Health Care Institute

First published: 01/02/2024

Last updated: 01/02/2024

Institution

Contact details

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Primary lead investigator

Sarah MacDonald

Primary lead investigator

Study timelines

Date when funding contract was signed

Planned: 15/09/2023

Actual: 15/09/2023

Study start date

Planned: 26/04/2024

Actual: 24/04/2024

Data analysis start date

Planned: 01/09/2028

Date of interim report, if expected

Planned: 31/08/2025

Date of final study report

Planned: 28/02/2029

Sources of funding

- Pharmaceutical company and other private sector

More details on funding

Pfizer

Study protocol

C3671027_RSV VACCINE FINAL PROTOCOL V1.0_15MAR2024.pdf (1.79 MB)

C3671027_PROTOCOL AMENDMENT 5 V6.0_05JAN2026.pdf (2.26 MB)
C3671027_RSV VACCINE PROTOCOL V5.0 AMENDMENT 4_31MAR2025.pdf (1.14 MB)
C3671027_RSV VACCINE PROTOCOL V4.0 AMENDMENT 3_28OCT2024.pdf (1.11 MB)
C3671027_RSV VACCINE PROTOCOL V3.0 AMENDMENT 2_14JUN2024.pdf (1.12 MB)
C3671027_RSV VACCINE PROTOCOL V2.0 AMENDMENT 1_21MAY2024.pdf (2.19 MB)

Regulatory

Was the study required by a regulatory body?

Yes

Is the study required by a Risk Management Plan (RMP)?

Not applicable

Other study registration identification numbers and links

C3671027

Methodological aspects

Study type

Study type list

Study topic:

Disease /health condition

Human medicinal product

Study type:

Non-interventional study

Scope of the study:

Safety study (incl. comparative)

Data collection methods:

Secondary use of data

Study design:

Electronic healthcare data in the US will be used to:

1) conduct near-real time monitoring of potential safety signals (rapid cycle analyses), and

2) conduct a non-interventional retrospective cohort study to estimate risks for safety outcomes.

Main study objective:

The primary objective is to estimate the risk of:

1) preterm birth and

2) pregnancy-associated hypertensive disorders following exposure to ABRYSVO during pregnancy, overall and among pregnant individuals who are immunocompromised.

Study Design

Non-interventional study design

Cohort

Study drug and medical condition

Medicinal product name

ABRYSVO

Medicinal product name, other

Bivalent respiratory syncytial virus (RSV) stabilized prefusion F subunit vaccine (RSVpreF); Respiratory syncytial virus vaccine (bivalent, recombinant)

Anatomical Therapeutic Chemical (ATC) code

(J07BX05) respiratory syncytial virus vaccines

respiratory syncytial virus vaccines

Medical condition to be studied

Respiratory syncytial virus infection

Gestational hypertension

Stillbirth

Premature labour

Premature rupture of membranes

Preterm premature rupture of membranes

Premature separation of placenta

Caesarean section

Thrombocytopenia

Guillain-Barre syndrome

Autoimmune demyelinating disease

Polyneuropathy

Atrial fibrillation

Additional medical condition(s)

Prevention of respiratory syncytial virus

Population studied

Short description of the study population

The source population for this study will be health plan enrollees from select data Research Partners (RPs) that contribute data from claims and/or electronic health records (EHRs) to the FDA Sentinel System and additional health plans (eg, Medicaid) with the capability to transform the data into the Sentinel Common Data Model.

RCA: The RCA study will include pregnancies vaccinated in the 2023-2024 season (ie, with pregnancy end dates occurring during the period from 22 September 2023 potentially up to July 2024), and, for some smaller RPs with shorter data lags, the 2024-2025 season.

Cohort study: The cohort study will include singleton pregnancies among

individuals aged 15 to 54 years with pregnancy start dates (estimated dates of last menstrual period [LMP]) occurring during the period 07 January 2023 to 29 September 2024. This period allows for the earliest included pregnancies to have reached 36 6/7 weeks prior to 22 September 2023 (date the Advisory Committee on Immunization Practices [ACIP] recommended ABRYSVO for seasonal administration to pregnant individuals between 32 0/7 to 36 6/7 weeks' gestation) and the latest included pregnancies to have the opportunity to reach 42 0/7 weeks' gestation plus 6 weeks (42 days) follow-up after the date of delivery within the data cut-off period (31 August 2025).
Additional eligibility criteria for the cohort study will include: 1) at least 183 days of continuous enrollment in the medical and pharmacy claims prior to the start of pregnancy through the delivery date, with gaps of up to 45 days in coverage being permitted; and 2) receipt of ≥ 1 vaccine recommended for adults any time prior to the date of estimated last menstrual period (LMP) (to serve as a proxy for health care/vaccine-seeking behavior).

Age groups

- Adolescents (12 to < 18 years)
- Adults (18 to < 65 years)
    - Adults (18 to < 46 years)
    - Adults (46 to < 65 years)

Special population of interest

Pregnant women

Study design details

Setting

The source population will be health plan enrollees from data research partners that contribute data from claims and electronic health records to the FDA Sentinel System.
Potential additional data sources outside of the FDA Sentinel system may include Medicaid and regional health plan data sources; these data sources are expected to include similar electronic healthcare data.

Comparators

For the cohort study comparison (unexposed) group, pregnancies among individuals not administered ABRYSVO will be selected as a comparator with a 1:1 matching ratio to the pregnancies among individuals who were exposed to ABRYSVO.
For unexposed pregnancies, the individual must be pregnant/reached the week of gestational age of the exposed pregnancy (ie, index date) when ABRYSVO was administered (without a non-live birth event [eg, induced abortion, or stillbirth] occurring beforehand).
The index date for the ABRYSVO-unexposed group will be the equivalent of the gestational age at vaccination administration (in days) in the exposed match.
Further details (including information on the rapid cycle analysis comparison [unexposed] groups) are included in the protocol.

Outcomes

Outcomes to be evaluated in the cohort study include:
- preterm birth and pregnancy-associated hypertensive disorders;
- other adverse pregnancy outcomes (stillbirth, premature labor without delivery, premature rupture of membranes (PROM), preterm PROM, cesarean delivery, prolonged maternal length of stay);
- maternal outcomes (thrombocytopenia, Guillain-Barre syndrome (GBS), other immune-mediated demyelinating conditions, polyneuropathies, atrial

fibrillation);
- and neonatal/infant outcomes (small for gestational age [SGA], large for gestational age [LGA], low birth weight [LBW], admission to neonatal intensive care unit, mechanical ventilation in neonatal period, neonatal death).
The subset of priority outcomes to be evaluated in rapid cycle analysis include:
- preterm birth,
- pregnancy-associated hypertensive disorders,
- stillbirth,
- premature labor without premature delivery,
- PROM, PPROM, SGA, LGA, LBW, and GBS.

Data analysis plan

When appropriate, publicly available Sentinel analytic tools will be used for analyses; these are the same tools used by the United States Food & Drug Administration for similar analyses of distributed databases.
Analyses will initially be conducted separately using data from each research partner (RP).
RP-specific aggregated results will be sent to the study coordinating center, which will combine aggregated results across the RPs for reporting.
The study coordinating center will follow each RP's policy with respect to masking low cell counts. Pooled analysis of effect estimates from all RPs will be conducted using privacy-preserving summary level data sets or another appropriate method.
In the rapid cycle analysis study, descriptive analysis of baseline characteristics of ABRYSVO-exposed pregnancies will be performed. Counts of pre-specified outcomes of interest will be reported.
For outcomes utilizing a historical comparator, ABRYSVO-exposed pregnancies will be compared against expected outcome counts based on the total pregnancies contributed in the ABRYSVO-exposed group and historical referent rates of outcome occurrence.

Observed and expected number of outcomes will be compared using sequential hypothesis testing.
If a concurrent comparator is used for select outcomes, ABRYSVO-exposed outcomes will be compared among matched or stratified comparator pregnancies. Based on projected sample size calculations, criteria will be set to detect or rule out a specific effect size at a specific power by the projected end of sequential analysis.
Propensity score methods will be used to control for confounding when using a concurrent comparator, provided sample size is large enough for models to converge.
In the cohort study, propensity score development and matching (1:1 matching ratio) will occur within each RP. For all analyses, the unit of analysis will be a pregnancy episode.

Data management

ENCePP Seal

The use of the ENCePP Seal has been discontinued since February 2025. The ENCePP Seal fields are retained in the display mode for transparency but are no longer maintained.

Data sources

Data source(s), other

United States Food & Drug Administration (FDA) Sentinel System

Data sources (types)

Administrative healthcare records (e.g., claims)

Electronic healthcare records (EHR)

Use of a Common Data Model (CDM)

CDM mapping

Yes

CDM Mappings

CDM name

Sentinel

CDM website

https://www.sentinelinitiative.org/methods-Data-tools/sentinel-common-Data-model

Data quality specifications

Check conformance

Unknown

Check completeness

Unknown

Check stability

Unknown

Check logical consistency

Unknown

Data characterisation

Data characterisation conducted

Not applicable