

# Combining influenza and COVID-19 vaccination (ComFluCOV) study

<b>Submission date</b> 17/03/2021	<b>Recruitment status</b> No longer recruiting	<input type="checkbox"/> Prospectively registered
		<input type="checkbox"/> Protocol
<b>Registration date</b> 30/03/2021	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan
		<input checked="" type="checkbox"/> Results
<b>Last Edited</b> 30/06/2025	<b>Condition category</b> Infections and Infestations	<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

### Background and study aims

COVID-19 is a condition caused by the coronavirus (called SARS-CoV-2) that was first identified in late 2019. This virus can infect the respiratory (breathing) system. Some people do not have symptoms but can carry the virus and pass it on to others. People who have developed the condition may develop a fever and/or a continuous cough among other symptoms. This can develop into pneumonia. Pneumonia is a chest infection where the small air pockets of the lungs, called alveoli, fill with liquid and make it more difficult to breathe.

Mass vaccination against COVID-19 started in the UK in early December 2020 and is likely to continue until mid-2021. Whilst rates of COVID-19 infection have decreased, the emergence of variants of interest and planned easing of lockdown measures has led to predictions of potential resurgence of infection from autumn 2021. The duration of protection of the current COVID-19 vaccines is unknown but it may be that further booster doses will be required in 9 to 12 months' time with current or potentially strain-modified vaccines to afford continued protection into the autumn. The timing of the booster doses is likely to coincide with seasonal influenza vaccination, which is usually September to February. Delivering COVID-19 and influenza vaccines at separate appointments will cause significant logistical challenges therefore it would be desirable to immunise with both vaccines at the same appointment, in different arms.

The ComFluCOV trial will determine the safety, as well as the immune responses, to administration of the currently approved COVID-19 vaccines at the same time as the recommended influenza vaccines from the 2020/21 season.

Participants who are having their second COVID-19 vaccine will be randomised into two groups; one group will receive the influenza vaccine and the other group will receive saline (placebo) at the same time as the COVID-19 vaccine. Participants will not know whether they receive the influenza vaccine or the placebo. After 3 weeks participants who received the influenza vaccine will receive the saline injection and participants who received the saline injection will receive the influenza vaccine. Participants will be followed up for a further 3 weeks after the second injection. We hope to recruit 504 participants into the trial. The trial will be conducted in at least 5 UK NHS centres. The trial is expected to take about 6 months to complete.

### Who can participate?

Adult health volunteers who have received one dose of either the ChadOx1-nCoV-19 (AstraZeneca/Oxford) vaccine (56 to 90 days prior to trial enrolment) or the BNT162b2 (Pfizer BioNTech) vaccine (28 and 90 days prior to trial enrolment)

### What does the study involve?

Participants will be allocated, with an equal chance of receiving either treatment (like tossing a coin), to receive one of the following at the same time as their second COVID-19 vaccine dose:

1. Influenza vaccine (Flucelvax QIV if the participant is less than 65 years old, or FluAd (MF59) if the participant is aged 65 years or older)
2. An inactive, similar in appearance, injection of Sodium chloride 0.9%

Participants will not know which treatment they have received during the study. Participants who do not receive the Influenza vaccine at the same time as their second COVID-19 vaccine dose will receive this vaccine 3 weeks later.

### What are the possible benefits and risks of participating?

There are no immediate benefits for participants taking part in this trial. The influenza vaccine may provide protection against influenza infection at a later point in the year, for those who do not routinely receive an influenza vaccine in the autumn.

Side effects and allergic reactions may occur in response to the vaccines. Participants will be encouraged to report any reaction to the study team. These will be reviewed regularly and participants will be contacted if there is any cause for concern. There is a risk of localised bruising and discomfort when having a blood sample taken. Infrequently fainting may occur.

Participants might feel they can modify their COVID-19 risk behaviours on the assumption that they are protected once vaccinated. Participants will be extensively counselled that they should continue to follow all up to date government advice in relation to COVID-19 precautions during the trial. Trial participants can be subjected to unwanted attention from the media. They will therefore be provided with access to a document outlining some suggested media guidance.

### Where is the study run from?

University Hospitals Bristol NHS Foundation Trust (UK)

### When is the study starting and how long is it expected to run for?

March 2022 to February 2023

### Who is funding the study?

The Vaccine Taskforce (UK) and the National Institute for Health Research (UK)

### Who is the main contact?

Dr Rajeka Lazarus, rajeka.lazarus@uhbw.nhs.uk

## Contact information

### Type(s)

Public

### Contact name

Dr Rajeka Lazarus

**ORCID ID**

<https://orcid.org/0000-0002-4683-1331>

**Contact details**

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rajeka.lazarus@uhbw.nhs.uk

**Additional identifiers****Clinical Trials Information System (CTIS)**

2021-001124-18

**Integrated Research Application System (IRAS)**

297151

**Protocol serial number**

IRAS 297151

**Study information****Scientific Title**

A single-blind, phase IV UK multi-centre randomised controlled trial to determine reactogenicity and immunogenicity of COVID-19 vaccines administered concomitantly with seasonal influenza vaccines

**Acronym**

ComFluCOV

**Study objectives**

The reactogenicity of concomitant administration of COVID-19 and influenza vaccine is no worse than COVID-19 vaccine alone

**Ethics approval required**

Old ethics approval format

**Ethics approval(s)**

Approved 17/03/2021, South Central - Berkshire Research Ethics Committee (Bristol REC centre, Whitefriars, Level 3, Block B, Lewins Mead, Bristol BS1 2NT; +44 (0)207 104 8224, +44 (0)207 104 8270; berkshire.rec@hra.nhs.uk), ref: 21/SC/0100

**Study design**

Multicentre triple-blind parallel-group randomized placebo-controlled trial

**Primary study design**

Interventional

## **Study type(s)**

Prevention

## **Health condition(s) or problem(s) studied**

Adults receiving the influenza (flu) vaccine who may also need COVID-19 booster vaccines

## **Interventions**

Study participants will be randomly allocated to receive one of the following at visit 1 at the same time as their second COVID-19 vaccine (either ChadOx1-nCoV-19 (AstraZeneca/Oxford) vaccine or BNT162b2 (Pfizer BioNTech) vaccine):

1. Investigational Medicinal Product (IMP): Influenza vaccine (Flucelvax QIV if the participant is aged <65 years or FluAd (MF59) if the participant is aged ≥65 years)
2. Placebo: Sodium chloride 0.9% injection

Participants, laboratory staff, and clinicians assessing causality will be blinded to the treatment allocation. Randomisation will be performed using a secure internet-based randomisation system ensuring allocation concealment by a member of the local research team. Participants will be allocated in a 1:1 ratio to COVID-19 vaccine plus influenza vaccine or COVID-19 vaccine plus placebo vaccine. The allocation will be computer-generated and will be stratified by age (under 65 years, 65 years or over), type of vaccine (ChAdOx1 or BNT162b2), and centre by an independent BTC CTEU statistician, not involved in the trial, before recruitment begins.

Approximately 3 weeks later participants will receive the other intervention (participants receiving the influenza vaccine at visit 1 will receive the placebo at visit 2, and participants receiving the placebo at visit 1 will receive the influenza vaccine at visit 2)

## **Intervention Type**

Drug

## **Phase**

Phase IV

## **Drug/device/biological/vaccine name(s)**

Influenza vaccines (Flucelvax (QIV), FluAd (MF59) & Flublok (QIVr)) COVID-19 vaccines (ChadOx1-nCoV-19 (AstraZeneca/Oxford) vaccine & 6.1.2 BNT162b2 (Pfizer BioNTech) vaccine)

## **Primary outcome(s)**

1. Incidence of ≥1 solicited systemic reaction measured using an electronic diary completed by participants in the 7 days following visit 1. Solicited systemic adverse events include fever, feverishness, chills, joint pains, muscle pains, fatigue, headache, malaise, nausea, vomiting, and diarrhoea.

## **Key secondary outcome(s)**

1. Type and severity of solicited adverse reactions (systemic or local reaction) measured using an electronic diary completed by participants in the 7 days following visit 1
2. Unsolicited adverse reactions measured using an electronic diary completed by participants during trial participation
3. Medically attended events or serious adverse events (SAEs) measured using an electronic diary completed by participants during trial participation
4. Response to the second dose of COVID-19 vaccine measured using anti-spike protein immunoglobulins in blood samples taken at visit 1 and 2

5. Response to the second dose of COVID-19 vaccine measured using neutralising antibodies against SARS-CoV-2 in blood samples taken at visit 1 and 2
6. Response to influenza vaccine measured using haemagglutination inhibition assay in blood samples taken at visits 1, 2, and 3
7. Mucosal immune responses to COVID-19 vaccines in saliva measured using an assay of saliva samples collected at visits 1, 2, and 3
8. Success of participant blinding measured using the participant completed Bang Blinding Index at visit 3
9. Participant willingness to receive concomitant influenza and COVID-19 vaccinations in the future as reported by participants at visit 3
10. Days off work for participants in employment as reported by participants at visit 3

**Completion date**

21/02/2023

## Eligibility

**Key inclusion criteria**

1. Aged  $\geq 18$  years
2. Received one dose of either:
  - 2.1. ChAdOx1 vaccine, 56 to 90 days prior to trial enrolment
  - 2.2. BNT162b2 vaccine, 28 and 90 days prior to trial enrolment
3. Agree to refrain from blood donation in the 7 days following vaccination (at both visits 1 and 2)
4. Willing to allow their General Practitioner (GP) and consultant, if appropriate, to be notified of participation in the trial
5. Willing to allow investigators to discuss their medical history and confirm vaccination status with their GP, and access all medical records when relevant to trial procedures
6. Willing and able to give written informed consent for participation in the trial
7. Able to use and has access to an electronic device (such as a laptop, tablet, or smartphone) to complete trial procedures (such as the e-diary)
8. Able and willing to comply with all trial requirements, in the Investigator's opinion

**Participant type(s)**

Healthy volunteer

**Healthy volunteers allowed**

No

**Age group**

Adult

**Lower age limit**

18 years

**Sex**

All

**Total final enrolment**

679

## Key exclusion criteria

Current exclusion criteria as of 07/05/2021:

1. Receipt of any vaccine (licensed or investigational) other than ChAdOx1 or BNT162b2 within 30 days before visit 1
2. Administration of immunoglobulins and/or any blood products within three months before visit 1
3. History of allergic disease or reactions likely to be exacerbated by any component of trial vaccines (for example hypersensitivity to the active substance or any of the SmPC-listed ingredients)
4. Bleeding disorder (e.g., factor deficiency, coagulopathy or platelet disorder), or prior history of significant bleeding or bruising following intramuscular injections or venepuncture and any history of cerebral venous sinus thrombosis, acquired or hereditary thrombophilia, heparin-induced thrombocytopenia or antiphospholipid syndrome. Those who have experienced major venous and arterial thrombosis occurring with thrombocytopenia following vaccination with any COVID-19 vaccine should not receive a second dose of COVID-19 Vaccine AstraZeneca.
5. Continuous use of anticoagulants, such as coumarins and related anticoagulants (such as warfarin) or novel oral anticoagulants (such as apixaban, rivaroxaban, dabigatran, and edoxaban)
6. Suspected or known current alcohol or drug dependency
7. Any other significant disease, disorder, or finding which may significantly increase the risk to the participant, affect their ability to participate in the trial, or impair interpretation of the trial data
8. Current, active, and progressive neurological disorders (such as multiple sclerosis, Guillain-Barre syndrome, transverse myelitis). Bell's palsy will not be an exclusion criterion
9. Scheduled elective surgery during trial participation if this interferes with the study protocol
10. Participated in another research trial involving an investigational product in the 12 weeks prior to visit 1, or if receipt of any IMP is planned during the trial period
11. Acute, ongoing respiratory illness (moderate or severe illness, with or without fever) at visit 1
12. Fever (oral temperature  $>37.8^{\circ}\text{C}$ ) at visit 1

Previous exclusion criteria:

1. Receipt of any vaccine (licensed or investigational) other than ChAdOx1 or BNT162b2 within 30 days before visit 1
2. Administration of immunoglobulins and/or any blood products within three months before visit 1
3. History of allergic disease or reactions likely to be exacerbated by any component of trial vaccines (for example hypersensitivity to the active substance or any of the SmPC-listed ingredients)
4. Bleeding disorder (for example factor deficiency, coagulopathy, or platelet disorder), or prior history of significant bleeding or bruising following intramuscular injections or venepuncture
5. Continuous use of anticoagulants, such as coumarins and related anticoagulants (such as warfarin) or novel oral anticoagulants (such as apixaban, rivaroxaban, dabigatran, and edoxaban)
6. Suspected or known current alcohol or drug dependency
7. Any other significant disease, disorder, or finding which may significantly increase the risk to the participant, affect their ability to participate in the trial, or impair interpretation of the trial data
8. Current, active, and progressive neurological disorders (such as multiple sclerosis, Guillain-Barre syndrome, transverse myelitis). Bell's palsy will not be an exclusion criterion.
9. Scheduled elective surgery during trial participation if this interferes with the study protocol
10. Participated in another research trial involving an investigational product in the 12 weeks

prior to visit 1, or if receipt of any IMP is planned during the trial period

11. Acute, ongoing respiratory illness (moderate or severe illness, with or without fever) at visit 1

12. Fever (oral temperature  $>37.8^{\circ}\text{C}$ ) at visit 1

**Date of first enrolment**

29/03/2021

**Date of final enrolment**

30/05/2021

## **Locations**

**Countries of recruitment**

United Kingdom

England

Wales

**Study participating centre**

**Gloucestershire Hospitals NHS Foundation Trust**

Victoria Warehouse

The Docks

Gloucester

United Kingdom

GL1 2EL

**Study participating centre**

**Great Western Hospitals**

Marlborough Road

Swindon

United Kingdom

SN3 6BB

**Study participating centre**

**North Bristol NHS Trust**

Southmead Road

Bristol

United Kingdom

BS10 5NB

**Study participating centre**

**Royal Cornwall Hospitals NHS Foundation Trust**  
Treliske  
Truro  
United Kingdom  
TR1 3LJ

**Study participating centre**  
**Royal United Hospitals Bath**  
Combe Park  
Bath, Avon  
United Kingdom  
BA1 3NG

**Study participating centre**  
**University Hospitals Bristol and Weston NHS Foundation Trust**  
Trust Headquarters  
Marlborough Street  
Bristol  
United Kingdom  
BS1 3NU

**Study participating centre**  
**Cardiff Bayside Mass Vaccination Centre**  
Olympian Drive  
Cardiff  
United Kingdom  
CF11 0JS

**Study participating centre**  
**Rotherham Doncaster and South Humber NHS Foundation Trust**  
Tickhill Road Hospital  
Balby  
Doncaster  
United Kingdom  
DN4 8QN

**Study participating centre**  
**University College London Hospitals**  
12 Queen Square

London  
United Kingdom  
WC1N 3BG

**Study participating centre**

**Newquay Health Centre**

St Thomas' Road  
Newquay  
United Kingdom  
TR7 1RU

**Study participating centre**

**The Alverton Practice**

St Clare Medical Centre  
St Clare Street  
Penzance  
United Kingdom  
TR18 3DX

**Study participating centre**

**Knowle House Surgery**

4 Meavy Way  
Crownhill  
Plymouth  
United Kingdom  
PL5 3JB

## **Sponsor information**

**Organisation**

University Hospitals Bristol NHS Foundation Trust

**ROR**

<https://ror.org/04nm1cv11>

## **Funder(s)**

**Funder type**

Government

## Funder Name

Vaccine Taskforce (VTF)

## Funder Name

National Institute for Health Research

## Alternative Name(s)

National Institute for Health Research, NIHR Research, NIHRresearch, NIHR - National Institute for Health Research, NIHR (The National Institute for Health and Care Research), NIHR

## Funding Body Type

Government organisation

## Funding Body Subtype

National government

## Location

United Kingdom

# Results and Publications

## Individual participant data (IPD) sharing plan

The datasets generated during and/or analysed during the current study are/will be available upon request from Rajeka Lazarus (comFluCOV-trial@bristol.ac.uk). Anonymised trial data will only be made available for sharing outside the ComCOV studies group after publication of the main results of the trial. Thereafter, individual participant data will be made available for secondary research, conditional on assurance from the secondary researcher that the proposed use of the data is compliant with the MRC Policy on Data Sharing regarding scientific quality, ethical requirements, and value for money. A minimum requirement with respect to scientific quality will be a publicly available pre-specified protocol describing the purpose, methods, and analysis of the secondary research, e.g., a protocol for a Cochrane systematic review.

## IPD sharing plan summary

Available on request

## Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Results article</a>		11/11/2021	15/11/2021	Yes	No
<a href="#">Results article</a>		23/09/2024	25/09/2024	Yes	No
<a href="#">Results article</a>	Secondary outcome investigating SARS-CoV-2-specific mucosal antibody responses	30/04/2024	30/06/2025	Yes	No

<a href="#">HRA research summary</a>			28/06/2023	No	No
<a href="#">Other publications</a>	Summary of results for participants version 1.0		17/03/2023	No	Yes
<a href="#">Other publications</a>	implementation	11/01/2024	12/01/2024	Yes	No
<a href="#">Other publications</a>	statistical methodologies implementation	23/01/2024	24/01/2024	Yes	No
<a href="#">Participant information sheet</a>	Participant information sheet	11/11/2025	11/11/2025	No	Yes
<a href="#">Study website</a>	Study website	11/11/2025	11/11/2025	No	Yes