

## COMET (COVID-19 MEDicaTion) Study

The COMET (COVID-19 MEDicaTion) Study was an **international, multicentre observational study** examining the relationship between routinely prescribed medicines, frailty and outcomes in patients hospitalised with COVID-19.

The study aimed to contribute to the evidence base on the safety and impact of commonly used medicines during the COVID-19 pandemic and to support understanding of longer-term outcomes.

The study was **led by researchers based in The Netherlands** and delivered internationally, with the **Northern Health and Social Care Trust (NHSCT)** and the **Medicines Optimisation Innovation Centre (MOIC)** contributing to local study delivery and follow-up activity within Northern Ireland.

### Project Overview

The COMET study used **pseudonymised, routinely collected clinical data** to investigate medication use, frailty and outcomes in patients admitted to hospital with COVID-19.

Data were collected during the acute phase of the pandemic, with extended follow-up to examine longer-term outcomes, including mortality up to 24 months following hospitalisation.

Within Northern Ireland, NHSCT and MOIC supported data extraction, contribution to the international dataset and follow-up activity, including provision of 24-month outcome data.

### Key Outcomes

#### Medicines use and COVID-19 outcomes

Findings from the study identified **no association between the use of angiotensin-converting enzyme (ACE) inhibitors or angiotensin receptor blockers (ARBs)** prior to hospital admission and clinical outcomes in patients with COVID-19.

These findings contributed to the wider evidence base supporting the continued use of these medicines where clinically indicated.

#### Frailty and long-term outcomes

Analysis of COMET data identified an **association between Clinical Frailty Scale (CFS) score and mortality** following COVID-19 hospitalisation.

Further analysis of follow-up data, including outcomes at **24 months**, supported understanding of the longer-term impact of COVID-19 in hospitalised patients and the role of frailty as a risk factor.

## **Clinical Research and Governance**

The COMET study was conducted in line with established research governance and data protection requirements. The use of real-world clinical data enabled large-scale analysis while maintaining patient confidentiality through pseudonymisation.

## **Achievement of Project Objectives**

The study contributed to understanding of the relationship between medicines use, frailty and outcomes following COVID-19. Findings informed the wider evidence base and supported ongoing research into the longer-term impacts of COVID-19.

## **Partners Involved**

The COMET study was delivered in collaboration with:

- **International research partners**, led from The Netherlands
- **Northern Health and Social Care Trust (NHST)**
- **Medicines Optimisation Innovation Centre (MOIC)**

## **Project Duration**

The COMET study recruited patients during the COVID-19 pandemic, with follow-up extending to **24 months**. The study has concluded, with findings published in peer-reviewed journals.