Persons Diagnosed with COVID-19 in Clinical Practice Research Datalink (CPRD) Primary Care Dataset: A Cohort Description

<u>Kathleen M. Andersen</u>, ¹ Maya Reimbaeva, ¹ Leah J. McGrath, ¹ Jennifer L. Nguyen, ¹ Kiran Rai, ³ Theo Tritton, ³ Carmen Tsang, ² Jingyan Yang^{1,4}

¹ Pfizer Inc., New York, NY; ² Pfizer Ltd., Tadworth, UK; ³ Adelphi Real World, Bollington, UK; ⁴ Institute for Social and Economic Research and Policy, Columbia University, New York, NY.

INTRODUCTION

CPRD Aurum captures primary care electronic healthcare records for ~28% of the population in England.

From August 2020 – March 2022, all SARS-CoV-2 PCR tests were reported back to the patient's GP, making the CPRD a closed system for COVID research questions.

OBJECTIVE

To build code lists to define a cohort of persons age 1+ diagnosed with COVID in primary care data England from August 1, 2020 – January 31, 2022.

METHODS

We developed SNOMED code lists to define high risk of severe disease as each of:

- 1) UK Health Security Agency clinical risk groups
- 2) NHS McInness Advisory Group highest risk group
- 3) Eligibility for the PANORAMIC study

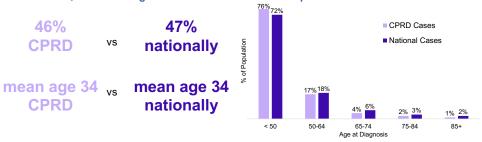
Vaccinations were defined, regardless of brand, using medical & product codes.

Code lists were developed using wildcard search terms with consensus from 3 independent reviewers. All lists were reviewed by a non-Pfizer UK general practitioner.

RESULTS

We identified **2,257,907** people diagnosed in primary care setting with COVID in CPRD Aurum, capturing **15% of nationally-reported COVID cases** for the study time period.

The sex distribution and mean age of COVID cases in CPRD closely resembled national COVID cases, but adults aged 65 and older were underrepresented.



The three definitions identified a range of persons of being at high risk of severe COVID:

10% 12% 31%
UKHSA clinical risk McInness definition PANORAMIC criteria

As of December 1, 2021, we identified very high capture of adult COVID vaccinations.

86.1% received at least 1 COVID vaccine dose

2% lower than official reports on UK Coronavirus Dashboard

cost oct

80.2% received at least 2 COVID vaccine doses

0.2% lower than official reports on UK Coronavirus Dashboard

STRENGTHS OF STUDY

Definitions were built using reproducible methods with local clinician review and can be leveraged for future work.

High vaccine capture, as well as representativeness of sex distribution of cases, support the use of CPRD data to examine clinical and societal benefits of COVID vaccination in England.

LIMITATIONS OF DATA

Older adults, a group at higher risk of severe disease and death, were partially captured in this primary care (outpatient) dataset. Generalizability may be limited for this group.

Acknowledgments

Bethany Backhouse, Poppy Payne, Elke Rottier and Robert Wood from Adelphi Real World, Tamuno Alfred, Darren Kailung Jeng, Deepa Malhotra, Tendai Mugwagwa, Qiao Mu and Chem Chuan Soo from Pfizer Inc., Agnieszka Gajewska, Tomasz Mikolajczyk and Ewa Śleszyńska-Dopiera from Quanticate, and Andy Surinach from Genesis Research.

Disclosures

This study was funded by Pfizer Inc. Dr Andersen, Ms Reimbaeva, Dr McGrath, Dr Mendes, Dr Mugwagwa, Dr Nguyen, Dr Tsang and Dr Yang are employees of Pfizer Inc or Pfizer Ltd and may hold Pfizer stock or stock options. Dr Rai and Mr Tritton are employees of Adelphi Real World which has received consulting fees from Pfizer Inc.

Contact and link to preprint

Kathleen M. Andersen, PhD MSc Vaccines Real World Evidence



Presented at ISPOR; May 10, 2023; Boston, Massachusetts