Diagnosis and management of infectious disease in primary care during the COVID-19 lockdown: changes in antibacterial and antiviral use

First published: 28/07/2020

Last updated: 14/03/2024

Study Ongoing

Administrative details

EU PAS number

EUPAS36508

Study ID

36509

DARWIN EU® study

No

Study countries

☐ United Kingdom

Study description

Public health measures introduced to reduce the spread of COVID-19 has led to rapid changes in the way general practices deliver care, with greater use of telephone and video consultations, and a significant change in how and when patients access services. Infectious diseases, including respiratory and urinary tract infections, are the most common reasons why patients see a GP. We think the COVID-19 lockdown may have changed the way patients seek healthcare for infectious diseases, and how GPs treat these infections.Using anonymised primary care medical records, we would like to find out 1. Whether more or less a) infectious diseases are being diagnosed, and b) drugs used to treat infections are being prescribed, during the UK COVID-19 lockdown, and if changes are related to practice characteristics such as poverty, previous infection consultation behaviour 2. If certain patients with an infection are more or less likely to be treated with antibacterial/antivirals3. Which medications are being prescribed to patients with COVID-194. Whether more or less patients registered to practices with fewer infectious disease diagnoses are going to hospital with an infectious disease.The information will help us understand whether patients are seeking help less for infectious diseases in general practice, and whether this leads to more hospital attendances, and if GPs are changing the way they prescribe medication for infectious disease. Understanding the impact of the COVID-19 lockdown on the general population’s health will inform the delivery of primary care during the potential second wave of COVID-19 expected in the Autumn.

Study status

Ongoing

Research institutions and networks

Institutions

University of Bristol

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Institution

Contact details

Study institution contact

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Study contact

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Primary lead investigator

Rachel Denholm

Primary lead investigator

Study timelines

Date when funding contract was signed

Planned: 21/07/2020

Actual: 21/07/2020

Study start date

Planned: 22/03/2014

Actual: 22/03/2014

Date of final study report
Planned: 01/10/2020

Sources of funding

- Non-for-profit organisation (e.g. charity)
- Other

More details on funding

Elizabeth Blackwell Research Institute, University of Bristol

Regulatory

Was the study required by a regulatory body?

No

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

Not applicable

Other study registration identification numbers and links

https://www.cprd.com/protocol/diagnosis-and-management-infectious-disease-primary-care-during-covid-19-lockdown-changesCPRD Protocol 20_101

Methodological aspects

Study type

Study type list

Study type:

Non-interventional study

Scope of the study:

Disease epidemiology

Drug utilisation

Main study objective:

The study objective is to investigate changes in infectious disease diagnoses and antibacterial and antiviral prescribing in primary care, and associated hospital admissions, during the COVID-19 UK lockdown.

Study Design

Non-interventional study design

Cohort

Study drug and medical condition

Medical condition to be studied

Lower respiratory tract infection

Upper respiratory tract infection

Urinary tract infection

Pyelonephritis

Gastroenteritis

Skin infection

COVID-19

Population studied

Age groups

Preterm newborn infants (0 – 27 days)

Term newborn infants (0 – 27 days)

Infants and toddlers (28 days – 23 months)

Children (2 to < 12 years)

Adolescents (12 to < 18 years)

Adults (18 to < 46 years)

Adults (46 to < 65 years)

Adults (65 to < 75 years)

Adults (75 to < 85 years)

Adults (85 years and over)

Estimated number of subjects

6000000

Study design details

Outcomes

• Changes in practice-level rates of specific infectious disease diagnoses, per 1,000 patients • Changes in practice-level rates of antibacterial and antiviral prescribing, per 1,000 patients • Change in practice-level rates of hospital attendance with specific infectious disease diagnoses, per 1,000 patients• Antibacterial or antiviral prescription (yes/no)

Data analysis plan

Descriptive analysis will be used to explore variations in practice rates of diagnosis and prescribing, per 1000 patient population pre and during COVID-19 lockdown, and over time. Multivariable linear regression models will be used to investigate practice characteristics associated with changes in rates of relevant

outcomes. Multivariable logistic regression will be used to calculate odds ratios (ORs) and 95% confidence intervals (CIs) to investigate whether antibacterial or antiviral medication were more or less likely to be prescribed during the COVID-19 lockdown compared to previously. Interaction terms will be used to investigate whether specific patient demographic and clinical factors moderate the relationshipMixed-effect models will be used to account for the structure of the data (i.e. patients clustered within practices, practices clusters within clinical commissioning groups).

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)

Clinical Practice Research Datalink

Data source(s), other

CPRD

Data sources (types)

Electronic healthcare records (EHR)

Use of a Common Data Model (CDM)

CDM mapping

No

Data quality specifications

Check conformance

Unknown

Check completeness

Unknown

Check stability

Unknown

Check logical consistency

Unknown

Data characterisation

Data characterisation conducted

No