# COVID-19 briefing series Monday 11 May 2020



## Weekly update

Through our research, community outreach and expert commentary, the University of Birmingham is taking an active role in the fightback against COVID-19. You can read our latest statements and follow our research updates at <a href="https://www.birmingham.ac.uk/coronavirus">www.birmingham.ac.uk/coronavirus</a>.

Through Birmingham Health Partners, a strategic alliance between the University and two NHS Foundation Trusts, we are working to support frontline healthcare professionals. For the latest updates visit their website.

#### Research



Researchers across the Birmingham Health Partners network are working to analyse and summarise the latest COVID-19 literature. The latest update focuses on thirty interventional and observational clinical trials currently active and NIHR approved.

An infographic summary can be found in the Appendix of this briefing. You can also read the full evidence update by following this link: (More information)



## Project launched to develop sustainable COVID-19 vaccine delivery

Scientists are launching a major new research project in India that will help to engineer an efficient and sustainable delivery mechanism – ready to get an eventual COVID-19 vaccine to billions of people around the globe.

Researchers racing to develop, test and manufacture an effective coronavirus vaccine will also need to distribute the drug globally, but universal vaccine access is already a major challenge, particularly in low-income countries across the global South - partly due to the lack of robust cold-chains.

The Global Alliance for Vaccines and Immunization estimates that only 10% of health care facilities in the world's poorest countries have a reliable electricity supply while in some countries less than 5% of health centres have vaccine-qualified refrigerators. (More information)

### Birmingham medics investigate high BAME COVID-19 death rate

Medics in the Birmingham Health Partners network are carrying out an urgent investigaion into how and why COVID-19 is disproportionately affecting BAME people. (More information)

## Community

#### Mental health and wellbeing during COVID-19

Birmingham Health Partners have collated a number of resources, tips and guidance around mental health aimed at healthcare staff, families and the general public. (More information)

### University of Birmingham supporting mental health services

Clinical acdemics from the Institute for Mental Health have been supporting the mental health services across Birmingham by taking on additional clinical duties and being redeployed to cover colleagues who have been unwell, isolating or shielded. A number of clinical academics have been working with our NHS partners to provide a psychological support service for healthcare staff and we have staffed a crisis and triage service in University Hospitals Birmingham for clinicians experiencing acute mental health distress.

Research is also being undertaken around the immune-related, neuropsychiatric consequences of COVID-19 including cognitive impairment, seizures, depression, psychosis and fatigue. We also have work ongoing in collaboration with Birmingham Women's and Children's NHS Foundation Trust and with HSBC examining and intervening in bullying in schools. (More information)

#### Birmingham experts deliver remote training to make maternity triage safer during COVID-19

The training enables maternity units to adopt the Birmingham Symptom specific Obstetric Triage System (BSOTS) which uses symptom-specific prioritisation algorithms to define the level of clinical urgency on a four category scale.

The training had been on hold during the lockdown, but in response to recent requests from six maternity units who want to make their departments safer during the COVID-19 pandemic, it is now being delivered via a two hour video conference, supplemented by an hour's internal staff training delivered by those trained via video. (More information)

## Comment

#### How to pay for the (COVID-19) war

What will be the government's fiscal stance once the COVID-19 crisis is over? Is another, perhaps sharper, period of austerity to be expected, ahead of a push to achieve 'net-zero' carbon emissions by 2050 in order to avert a global warming induced calamity?

Professor Andy Mullineux, from the Lloyds Banking Group Centre for Responsible Business, writes that Modern Monetary Theory proposes that austerity will be unnecessary since HM Treasury need never repay the Bank of England's loan to the government. The Bank can simply hold onto the corporate and government assets it purchases until maturity. The government need only issue 'COVID-19 Bonds', or raise taxes, if significant inflation eventually results in a postcrisis period. (More information)

#### Rethinking global supply chains in the era of post COVID-19

Companies cannot only rely on just- enough and justin-time approaches anymore, writes Professor Xiaohui Liu from the Department of Strategy and International Business.

How to improve the global supply chain:

- 1. Companies should place more emphasis on resilience and flexibility
- 2. Diversify supply chains and reduce the overreliance on select suppliers
- 3. Restrict freedom to source and produce goods around the world

4. Create environmentally sustainable global supply chains

(More information)

#### COVID-19 and clinical negligence litigation, law reform

We need to resist calls to give legal immunity from clinical negligence claims to doctors and others during the COVID-19 pandemic, writes John Tingle from Birmingham Law School.

The courts and judges should be trusted to deal with such claims fairly and patients' rights to claim for negligence respected. Faith in our civil justice compensation system should be maintained during COVID-19. English common law in the area of clinical negligence can accommodate the fact that NHS staff are practicing, in effect, in a warzone. There are cases, judicial precedents, which can be applied to determine the standard of care expected of trainee doctors and nurses, paramedics, volunteers and those operating outside their practice areas. (More information)

#### Are leaders immune from coronavirus failure?

As very different trajectories emerge between countries in terms of infections, deaths, and policy responses especially around PPE and testing, but also lockdowns - observers are beginning to assess success and failure in leadership. But what will success or failure matter for leaders around the world? Professor David Hudson, Director of the Developmental Leadership Program, says the research suggests that effective performance is often trumped by other considerations. (More information)

#### How can parents help autistic children to reduce anxiety during isolation?

Professor Karen Guldberg, Director of the Autism Centre for Education and Research, writes about the importance of finding new ways to support autistic children to reduce their anxiety. Without this, learning will be comprosmised and mental health will suffer. (More information)

#### Contact us

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### Appendix

Further updates to this clinical briefing can be viewed here. A summary of the clinical trials research update can be found here.



Current approved, nationally prioritised, NIHR clinical trials for SARS-CoV-2





Issue#: TRI V1.05 Date: 28APR2020

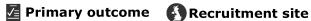
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KEY:





II/III





III

N/A

III

#### Study type - Interventional (drug)

- 8 Antivirals Lopinavir (400mg) + Ritonavir (100mg) Corticosteroid Dexamethasone (6mg) Anti-malarial Hydroxychloroquine (800mg then 400mg)
- Azithromycin (500mg) Hospitalised >18 y/o with confirmed/ suspected SARS-CoV-2
- Death/discharge after 28 days

Antibiotic

## REMAP-CAP

- Antivirals Lopinavir (400mg), Ritonavir (100mg) and Hydroxychloroquine (400mg then 200mg) **Immunotherapies** INF- $\beta$ 1a (10 $\mu$ g in 1ml saline), IL-1R antagonist (Anakinra, 300mg)
- ≥18 y/o in ICU (or similar where ICU is full) with CAP and requiring organ support (e.g. ventilation)
- All cause mortality at day 90
- Over 60 globally

#### ACCT

- Antiviral Remdesivir (200mg then 100mg)
- Hospitalised ≥18 y/o with confirmed SARS-CoV-2
- Clinical status on 8-point scale at day 15
- 54 locations globally

5773 Safety and Antiviral Activity of Remdesivir for severe COVID-19

- Antiviral Remdesivir (200mg then 100mg)
- Hospitalised >18 y/o (or 12-18 y/o >40kg) with confirmed SARS-CoV-2 and  $SpO_2^2 \le 94\%$  at screening
- Odds ratio of improvement on 7-point scale at day 14
- (4)126 locations globally

**2** Peripheral capillary oxygen saturation

5774 Safety and Antiviral Activity of Remdesivir for moderate COVID-19

- Antiviral Remdesivir (200mg then 100mg)
- Hospitalised >18 y/o (or 12-18 y/o parental consent) with confirmed SARS-CoV-2 and  $SpO_2^2 > 94\%$  at screen
- Odds ratio of improvement on 7-point scale at day 11
- 126 locations globally

<sup>2</sup>Peripheral capillary oxygen saturation

#### **PRINCIPLE**

- Anti-malarial Hydroxychloroquine (200mg)
- COVID-19 symptoms in community and 50-64 y/o with listed comorbidity or ≥65 y/o
- Hospital admission or mortality at day 28

#### **COPCOV**

- 8 Anti-malarials Chloroquine (Asia, 10mg/kg + 250mg)Hydroxychloroquine (Europe,10mg/kg + 200mg)
- Adult frontline healthcare workers
- Number of symptomatic SARS-CoV-2 infections and severity
- (4) 100 locations globally

#### CANCOVID

- Canakinumab (Immunotherapy anti-IL1β)
- No info: investigating effect on COVID-19 and cytokine release syndrome
- No info
- No info

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Current approved, nationally prioritised, NIHR clinical trials for SARS-CoV-2





Issue#: TRI\_V1.05 Date: 28APR2020

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KEY:





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III

I/II

#### Study type - Interventional (drug), continued

#### **COVACTA**

- **Immunotherapy** Tocilizumab (anti-IL6R)
- Hospitalised with confirmed SARS-CoV-2 inc. CXR/CT, SpO<sub>2</sub> < 93 or PaO<sub>2</sub>/FiO<sub>2</sub> < 300mmHg
- Clinical status on 7-point scale at day 28
- 52 locations globally
- 1 chest x-ray 2 Peripheral capillary oxygen saturation ratio of arterial oxygen partial pressure to fractional inspired oxygen

#### STOP-COVID19

- Brensocatib (protease inhibitor)
- Unknown
- Unknown
- UK

#### Efficacy and Safety of Inhaled SNG001

- Interferon beta 1a (SNG001)
- ≥18 y/o with confirmed SARS-CoV-2 either hospitalised or in the community if >65 y/o or one or more of hypertension, cardiovascular disease, diabetes or a chronic lung condition
- Clinical improvement based on Ordinal Scale during the dosing period
- UK

## **RUXCOVID**

- Ruxolitinib (protein kinase inhibitor), initially 10mg twice daily
- >12 y/o with COVID-19 infection and need for supplemental oxygen to maintain SpO<sub>2</sub>\*>93%
- Proportion of patients who become critically ill (mechanical ventilation and/or FiO<sub>2</sub> $^4 \ge 60\%$ )
- Multi-site

2Peripheral capillary oxygen saturation **4**Fractional inspired oxygen

#### I/II COV001 Vaccine

- Various doses of ChAdOx1 or MenACWY
  - Healthy adults aged 18-55 y/o
- Number of confirmed SARS-CoV-2 cases and occurance of SAEs at 6 months
- UK Serious adverse events

#### **REALIST**

- Human umbilical cord mesenchymal stem cell infusion
- ARDS on mechanical ventilation with suspected or confirmed SARS-CoV-2
- Oxygen index and incidence of SAEs
- UK

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Phase

III

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Ø Drugs Patient group Primary outcome Recruitment site **KEY:** 

#### Study type - Interventional (procedure)

N/A

#### DeVENT

- P Decision support system to advise on ventilation settings
- Invasive ventilation within 1 week of known insult, evidence of pulmonary oedema and hypoxaemia
- Average driving pressure of mechanical ventilator
- UK, France, Austria

#### RECOVERY-RS

- Continuous Positive Airway Pressure (CPAP)
  - High flow nasal oxygen
- Hospitalised >18 y/o with confirmed/ suspected SARS-CoV-2
- Intubation rate and mortality at day 30
- UK

KEY: Aim

Observation Patient group Recruitment site

Study type - Observational (all ages)

#### **ISARIC**

- Clinical characterisation of infection
- Clinical data reporting Biological samples for COVID-19 detection
- All COVID-19 positive patients
- UK

#### DIAMOND SEARCH v1

- RNA molecular signature diagnosis
- Clinical data reporting Biological samples for COVID-19 detection
- All COVID-19 positive patients
- (EU funded)

#### **FLU-CATS**

- Community assessment tool
- Prospective analysis to link GP assessment of patients to management decisions and patient outcomes
- Patients with flu-like symptoms
- UK

#### GenOMICC

- Genetics of mortality in critical care
- Blood samples for DNA analysis
- All patients with confirmed SARS-CoV-2 in critical care
- UK

#### PRIEST

- Pandemic respiratory infection emergency triage system
- Analyse patient data and evaluate triage methods based on how well they predict outcomes. Use this to improve triage
- All patients with confirmed SARS-CoV-2 in critical care
- UK

#### Virus Watch

- Community spread of COVID-19
- Unknown
- Unknown
- UK

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KEY: Aim









#### Study type - Observational (children, teenages and pregnancy)

Coronavirus infection in primary or secondary immunosuppressed children

- Clinical characterisation of infection
- Self reporting of experiences and illness during COVID-19 pandemic
- 16-17 y/o immunocompromised children (and their parents)

#### What's the STORY

- Serum testing of representative young people
- Serology testing to determine immunity and model circulation of SARS-CoV-2
- 0-24 y/o

#### Neonatal complications of coronavirus disease

- Record complications of COVID-19
- Neonatal outcomes
- Neonates <29 days old with COVID-19 or born to mothers with COVID-19 and needing neonatal care

#### **UKOSS: Pandemic** Influenza in Pregnancy

- (inform pregnancy advice)
- Use UK Obstetric surveillance system recording previous cases of pregnancy and COVID-19
- Pregnant 16-45 y/o with COVID-19

#### **PAN-COVID**

- Pregnancy and neonatal outcomes of COVID-19
- Outcomes of both mother and baby to form a global database
- Pregnant with confirmed or suspected COVID-19
- 🐧 Global

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