



COVID-19 Literature Digest – 25/01/2021

Dear all,

Please find [today's report](#) below.

PHE's COVID-19 Literature Digest has been produced since February 2020. A selection of our previous Digests [can be found here](#). This resource aims to highlight a small selection of recent COVID-19 papers that are relevant to UK settings, contain new data, insights or emerging trends. The Digest Team generate a report three times per week (Mon, Wed, Fri). The reports include both preprints, which should be treated with caution as they are NOT peer-reviewed and may be subject to change, and also research that has been subject to peer review and wider scrutiny. The Digest is very rapidly produced and does not claim to be a perfect product; the inclusion or omission of a publication should not be viewed as an endorsement or rejection by PHE. We do not accept responsibility for the availability, reliability or content of the items included in this resource.

To join our email distribution list please send a request to COVID.LitDigest@phe.gov.uk. If you are interested in papers relating to behaviour and social science please contact COVID19.behaviouralscience@phe.gov.uk to sign up to receive the PHE Behavioural Sciences Weekly Report.

Best wishes,

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On behalf of the PHE COVID-19 Literature Digest Team

Report for 25.01.2021 (please note that papers that have **NOT been peer-reviewed** are highlighted in red).

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Serology and immunology

Publication Date	Title / URL	Journal / Article type	Digest
22.01.2021	Prevalence of SARS-CoV-2 Infection in Children and Their Parents in Southwest Germany	JAMA Pediatr / Original investigation	<ul style="list-style-type: none">• Study rate of SARS-CoV-2 infections and seroprevalence of antibodies in children aged 1 to 10 years, compared with a corresponding parent, in a population-based sample with 4964 participants.• The estimated SARS-CoV-2 seroprevalence was low in parents (1.8%) and 3-fold lower in children (0.6%).

Vaccines

Publication Date	Title / URL	Journal / Article type	Digest
21.01.2021	Reporting to the enhanced surveillance of COVID-19 cases in vaccinated individuals	Gov.uk / Guidance	<ul style="list-style-type: none">• Updated 21.01.2021.• PHE are conducting enhanced surveillance of cases of confirmed cases of COVID-19 in individuals who have received a COVID-19 vaccine.• Clinicians are requested to report any confirmed cases in partially or fully vaccinated individuals.
22.01.2021	Allergic Reactions Including Anaphylaxis After Receipt of the First Dose of Moderna COVID-19 Vaccine — United States, December 21, 2020–January 10, 2021	MMWR / Report	<ul style="list-style-type: none">• During Dec 21, 2020–Jan 10, 2021, monitoring by the Vaccine Adverse Event Reporting System in the US detected 10 cases of anaphylaxis after administration of a reported 4,041,396 first doses of Moderna COVID-19 vaccine (2.5 cases per million doses administered).• In nine cases, onset occurred within 15 minutes of vaccination. No anaphylaxis-related deaths were reported.

Epidemiology and clinical – risk factors

Publication Date	Title / URL	Journal / Article type	Digest
25.01.2021	Coronavirus (COVID-19) related deaths by occupation, England and Wales: deaths registered between 9 March and 28 December 2020	Office for National Statistics / Statistical bulletin	<ul style="list-style-type: none">• Analysis of deaths involving COVID-19 in different occupational groups among those aged 20 to 64 years in England and Wales.• Highest rates of death involving COVID-19- men: elementary occupations (699 deaths), caring, leisure and other service occupations (258 deaths) with 66.3 and

			<p>64.1 deaths per 100,000 males, respectively; women: process, plant and machine operatives (57 deaths), caring, leisure and other service occupations (460 deaths) with 33.7 and 27.3 deaths per 100,000 females, respectively.</p> <ul style="list-style-type: none"> • Rates of COVID-19 related death in men and women who worked as teaching and educational professionals, such as secondary school teachers, were not statistically significantly raised.
21.01.2021	Excess mortality associated with the COVID-19 pandemic among Californians 18-65 years of age, by occupational sector and occupation: March through October 2020	medRxiv (non-peer reviewed) / Article	<ul style="list-style-type: none"> • During the COVID-19 pandemic in California, working age adults experienced a 22% increase in mortality compared to historical periods. • Relative excess mortality was highest in food/agriculture workers (39% increase), transportation/logistics workers (28% increase), facilities (27%) and manufacturing workers (23% increase). • Excess mortality for Latino, Black, Asian and White Californians was 36%, 28%, 18% and 6%, respectively.
19.01.2021	Clinical characteristics and outcomes of COVID-19 in haematopoietic stem-cell transplantation recipients: an observational cohort study	Lancet Haematol / Article	<ul style="list-style-type: none"> • Haematopoietic stem-cell transplantation (HSCT) recipients are considered high risk for COVID-19 on basis of their immunosuppressed status; data from large studies in HSCT recipients are lacking. • Disease severity mild in 155 (49%) of 318 patients; severe disease requiring mechanical ventilation occurred in 45 (14%) of 318 patients—ie, 28 (15%) of 184 allogeneic HSCT recipients and 17 (13%) of 134 autologous HSCT recipients. • At 30 days after COVID-19 diagnosis, overall survival was 68% (95% CI 58–77) for recipients of allogeneic HSCT and 67% (55–78) for recipients of autologous HSCT. • HSCT recipients who develop COVID-19 have poor overall survival.

Epidemiology and clinical – long-term complications / sequelae

Publication Date	Title / URL	Journal / Article type	Digest
22.01.2021	Managing the long term effects of covid-19: summary of NICE, SIGN, and RCGP rapid guideline	Bmj / Practice	<ul style="list-style-type: none"> • Article summarises the guideline recommendations as published on 18 Dec 2020, with particular emphasis on primary care. • The likelihood of developing long term effects of covid-19 is not thought to be related to the severity of the acute infection. • Most common symptoms of long term covid-19 are fatigue and breathlessness. Symptoms may be singular, multiple, constant, transient, or fluctuating, and can change in nature over time. • Recommends offering a chest radiograph by 12 weeks after acute covid-19 if the person has not had one already and has continuing respiratory symptoms.

16.01.2021	Six-month Neurological and Psychiatric Outcomes in 236,379 Survivors of COVID-19	medRxiv (non-peer reviewed) / Article	<ul style="list-style-type: none"> • Among a cohort of COVID-19 survivors (n=236,379), estimated incidence of neurological or psychiatric sequelae at 6 months was 33.6%, with 12.8% receiving their first such diagnosis. • Most diagnostic categories were more common after COVID-19 than after influenza or other respiratory infections (hazard ratios from 1.21 to 5.28), including stroke, intracranial haemorrhage, dementia, and psychotic disorders. • Incidences and hazard ratios for most disorders were higher in COVID-19 patients who had been hospitalised, and markedly so in those who had experienced encephalopathy.
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Epidemiology and clinical – other

Publication Date	Title / URL	Journal / Article type	Digest
22.01.2021	The Proportion of SARS-CoV-2 Infections That Are Asymptomatic : A Systematic Review	Ann Intern Med / Reviews	<ul style="list-style-type: none"> • Review to estimate the proportion of persons infected with SARS-CoV-2 who never develop symptoms; 61 eligible studies and reports were identified. • Available data suggest that at least one third of SARS-CoV-2 infections are asymptomatic. • Longitudinal studies suggest that nearly three quarters of persons who receive a positive PCR test result but have no symptoms at the time of testing will remain asymptomatic.
20.01.2021	Defining the role of asymptomatic and pre-symptomatic SARS-CoV-2 transmission - a living systematic review	Clin Microbiol Infect / Systematic review	<ul style="list-style-type: none"> • <i>This paper was previously included as a preprint; new data added to this living systematic review.</i> • 80 studies included: summary secondary attack rate estimates were 1% (95% CI: 0%-2%) with a prediction interval of 0-10% for asymptomatic index cases in 10 studies, 7% (95% CI: 3%-11%) with a prediction interval of 1- 40% for pre-symptomatic cases in 11 studies and 6% (95% CI: 5%-8%) with a prediction interval of 5- 38% for symptomatic index cases in 40 studies.

Infection control / non-pharmaceutical interventions

Publication Date	Title / URL	Journal / Article type	Digest
22.01.2021	Change in Reported Adherence to Nonpharmaceutical Interventions During the COVID-19 Pandemic, April-November 2020	Jama / Research letter	<ul style="list-style-type: none"> • Authors used national surveillance data to analyse reporting of adherence to protective behaviours identified as nonpharmaceutical interventions (NPIs); analysis involved 7705 U.S participants. • This study found a decrease in reported adherence to NPIs overall and to most individual NPIs during the pandemic, irrespective of geography. The increase in

			reported mask wearing aligns with other national surveys of self-reported mask use, and may reflect improved public health messaging.
20.01.2021	Epidemic waves of COVID-19 in Scotland: a genomic perspective on the impact of the introduction and relaxation of lockdown on SARS-CoV-2	medRxiv (non-peer reviewed) / Article	<ul style="list-style-type: none"> • A large-scale genome epidemiology effort as part of the COG-UK consortium sequenced about a quarter of the estimated number of Scottish COVID-19 cases up to 18 Aug 2020. • Data suggests that while lockdown in Scotland is directly linked with the first wave case numbers being brought under control, travel-associated imports (mostly from Europe or other parts of the UK) following the easing of lockdown are responsible for seeding the current epidemic population.

Transmission

Publication Date	Title / URL	Journal / Article type	Digest
08.01.2021	Incidence and Secondary Transmission of SARS-CoV-2 Infections in Schools	Pediatrics / Article	<ul style="list-style-type: none"> • Authors examined 11 school districts with nearly 100,000 students/staff open for 9 weeks of in-person instruction, tracking secondary transmission of SARS-CoV-2; each case was independently adjudicated for community or within-school acquisition by local health departments. • 773 community-acquired SARS-CoV-2 infections documented by molecular testing. Contact tracing determined an additional 32 infections acquired within schools. No instances of child-to-adult transmission were reported within schools. • In first 9 weeks of in-person instruction in North Carolina schools, authors found extremely limited within-school secondary transmission of SARS-CoV-2, determined by contact tracing.

Treatment

Publication Date	Title / URL	Journal / Article type	Digest
22.01.2021	Effect of anakinra versus usual care in adults in hospital with COVID-19 and mild-to-moderate pneumonia (CORIMUNO-ANA-1): a randomised controlled trial	Lancet Respiratory Medicine / Article	<ul style="list-style-type: none"> • Aimed to determine whether anakinra, a recombinant human IL-1 receptor antagonist, could improve outcomes in patients in hospital with mild-to-moderate COVID-19 pneumonia. • The study was stopped early following the recommendation of the data and safety monitoring board, after the recruitment of 116 patients. • Anakinra did not improve outcomes in patients with mild-to-moderate COVID-19 pneumonia.

Overviews, comments and editorials

Publication Date	Title / URL	Journal / Article type
12.01.2021	Immunological characteristics govern the transition of COVID-19 to endemicity	Science / Report
22.01.2021	The right place for IL-1 inhibition in COVID-19	Lancet Respiratory Medicine / Comment

Produced by the PHE COVID-19 Literature Digest Team

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