Public Health England

COVID-19 Literature Digest – 12/10/2020

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, contains new data / insights or emerging trends. The Digest team generate a report three times per week (Mon, Wed, Fri), which includes both preliminary reports of work (preprints) that have NOT been peer-reviewed and research that has been subject to peer review and wider scrutiny.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Report for 12.10.2020 (please note that papers that have **NOT been peer-reviewed** are highlighted in red).

Sections:

Serology and immunology
Diagnostics
Epidemiology and clinical – children / pregnancy
Epidemiology and clinical – risk factors
Epidemiology and clinical – other
Infection control
Treatment
Vaccine development

Overviews, comments and editorials (no digest)

Serology and immunology

Publication Date	Title / URL	Journal / Article type	Digest
08.10.2020	SARS-CoV-2 exposure, symptoms and seroprevalence in healthcare workers in Sweden	Nat Commun / Article	• Report the seroprevalence of SARS-CoV-2 antibodies, self-reported symptoms and occupational exposure to SARS-CoV-2 among healthcare workers at a large acute care hospital in Sweden. • The seroprevalence of IgG antibodies against SARS-CoV-2 was 19.1% among the 2149 healthcare workers recruited between April 14th and May 8th 2020, which was higher than the reported regional seroprevalence during the same time period. • Symptoms associated with seroprevalence were anosmia (odds ratio (OR) 28.4, 95% CI 20.6–39.5) and ageusia (OR 19.2, 95% CI 14.3–26.1). • Seroprevalence was also associated with patient contact (OR 2.9, 95% CI 1.9–4.5) and COVID-19 patient contact (OR 3.3, 95% CI 2.2–5.3).
09.10.2020	A compromised specific humoral immune response against the SARS-CoV-2 receptor-binding domain is related to viral persistence and periodic shedding in the gastrointestinal tract	Cell Mol Immunol / Article	• Authors analysed viral data and clinical manifestations of 289 domestic Chinese COVID-19 patients: 21 individuals (7.3%) were readmitted for hospitalization after detection of SARS-CoV-2 after discharge. • Viral rebound was associated with significantly lower levels of and slower generation of viral receptor-binding domain (RBD)-specific IgA and IgG antibodies. • Positive retest patients failed to create a robust protective humoral immune response, which might result in SARS-CoV-2 persistence in the gastrointestinal tract and possibly in active viral shedding.
07.10.2020	Transplacental Transfer of SARS-CoV-2 Antibodies	medRxiv (non-peer reviewed) / Article	• Study measuring SARS-CoV-2 antibody levels in serum samples from 1,471 mother/newborn dyads. • Efficient transplacental transfer of SARS-CoV-2 IgG antibodies in 72 of 83 seropositive pregnant women were observed. • Transfer ratios >1.0 were observed among women with an asymptomatic SARS-CoV-2 infection as well as those with mild, moderate and severe COVID-19. • Findings suggest the potential for maternally-derived antibodies to provide neonatal protection from SARS-CoV-2 infection.
09.10.2020	REGN-COV2 antibodies prevent and treat SARS-CoV-2 infection in rhesus macaques and hamsters	Science / Report	• *This paper was previously included in the Digest as a preprint.* • Authors evaluated the in vivo efficacy of an antibody cocktail (REGN10987+REGN10933) in both rhesus macaques, which may model mild disease, and golden hamsters, which may model more severe disease.

			• Demonstrate that REGN-COV-2 can greatly reduce virus load in lower and upper airways and decrease virus induced pathological sequalae when administered prophylactically or therapeutically in rhesus macaques. Similarly, administration in hamsters limits weight loss and decreases lung titres and evidence of pneumonia in the lungs.

Diagnostics

Publication Date	Title / URL	Journal / Article type	Digest
07.10.2020	Targeted Rapid Testing for SARS-CoV-2 in the Emergency Department is Associated with Large Reductions in Uninfected Patient Exposure Time	J Hosp Infect / Report	• Retrospective cohort analysis of Emergency Dept visits to three hospitals in Maryland, U.S. Measure effect of targeted rapid molecular testing for SARS-CoV-2. • Compared to standard-platform testing, rapid testing associated with 65.6% reduction (12.6 hours) in median time to removal from isolation cohort for patients with negative diagnostic results. • Translates to increase in COVID-19 treatment capacity of 3,028 bed hours; 7,500 less patient interactions that required PPE, per week.
06.10.2020	Extended laboratory panel testing in the Emergency Department for risk-stratification of patients with COVID-19: a single centre retrospective service evaluation	medRxiv (non-peer reviewed) / Article	• A retrospective service evaluation to determine the utility of extended tests (D-dimer, ferritin, high-sensitivity troponin I, lactate dehydrogenase, procalcitonin) compared to the core panel (full blood count, urea & electrolytes, liver function tests, C-reactive protein) to guide triage and resource utilisation for emergency admissions. • From 13,500 emergency attendances, 391 COVID-19 adults were identified. Of these, 113 died (29%) and 151 (39%) reached the composite endpoint (28-day mortality). • Core test variables adjusted for age, gender and index of deprivation had a prognostic AUC of 0.79 (95% Confidence Interval, CI: 0.67 to 0.91) for mortality and 0.70 (95% CI: 0.56 to 0.84) for the composite endpoint. Addition of extended test components did not improve upon this.
08.10.2020	A cross-country database of COVID-19 testing	Sci Data / Article	• New database brings together official data on the extent of PCR testing over time for 94 countries. • Time series for daily number of tests performed, or people tested, together with metadata describing data quality and comparability issues needed for interpretation. • Live version of database downloadable from a public GitHub repository (https://github.com/owid/covid-19-data/tree/master/public/data/testing)

Epidemiology and clinical – children / pregnancy

Publication Date	Title / URL	Journal / Article type	Digest
09.10.2020	SARS-CoV-2 Cluster in Nursery, Poland	Emerg Infect Dis / Letter	• Report a cluster of surprisingly high spread of SARS-CoV-2 associated with a single nursery in Poland. • Findings contrast with the presumed negligible role of children in driving the SARS-CoV-2 pandemic. • Children 1–2 years of age might be effective SARS-CoV-2 spreaders.
10.10.2020	SARS-CoV-2 infections in Italian schools: preliminary findings after one month of school opening during the second wave of the pandemic	medRxiv (non-peer reviewed) / Article	• A total of 1350 cases of SARS-CoV-2 infection have been registered in Italian schools as of 5 Oct 2020 (involving 1059 students, 145 teachers and 146 other school members), for a total of 1212 out of 65104 (1.8%) schools involved. • National schools reported only 1 case of SARS-CoV-2 infection in more than 90% of cases, and only in one high school a cluster of more than 10 cases have been described (P 0.015). • The detection of one or more infections lead to the closure of 192 (14.2%) entire schools, most frequently nursery/kindergartens (P <0.0005). • Suggests low transmission of SARS-CoV-2 within schools, at least among younger students.

Epidemiology and clinical – risk factors

Publication Date	Title / URL	Journal / Article type	Digest
09.10.2020	COVID-19 in critical care: epidemiology of the first epidemic wave across England, Wales and Northern Ireland	Intensive Care Med / Article	• 10,834 COVID-19 patients (70.1% male, median age 60 years, 32.6% non-white ethnicity, 39.4% obese, 8.2% at least one serious comorbidity) admitted across 289 critical care units. Compared with historic cohort of patients with other viral pneumonias (non-COVID-19) and with international cohorts of COVID-19. • Critical care patients with COVID-19 were disproportionately non-white, from more deprived areas and more likely to be male and obese. • Conventional severity scoring appeared not to adequately reflect their acute severity, with the distribution across PaO2/FiO2 ratio categories indicating acutely severe respiratory disease. • Critical care patients with COVID-19 experience high mortality and place a great burden on critical care services.
08.10.2020	Clinical characteristics and outcomes of adult patients admitted with COVID-19 in East	medRxiv (non-peer reviewed) / Article	• Retrospective analysis of 1,946 COVID-19 patients admitted to two large District General Hospitals across a large East London NHS Trust during the first wave of the pandemic. • Increasing age, male sex and Asian ethnicity were associated with worse

	London: a retrospective cohort analysis		outcomes. • Increasing severity of chest X-ray abnormalities trended with mortality. • Radiological changes persisted in over 50% of cases at early follow up (6 weeks). • Ongoing symptoms including hair loss, memory impairment, breathlessness, cough and fatigue were reported in 67% of survivors, with 42% of patients unable to return to work due to ongoing symptoms.
09.10.2020	A population-based cohort study of socio-demographic risk factors for COVID-19 deaths in Sweden	Nat Commun / Article	• Data on all recorded COVID-19 deaths in Sweden until 7 May linked to high-quality and accurate individual-level background data. • Individual-level survival analysis: being male, having less individual income, lower education, not being married all independently predict a higher risk of death from COVID-19 and from all other causes of death. • Being an immigrant from a low- or middle-income country predicts higher risk of death from COVID-19 but not for all other causes of death. • Interaction of the virus causing COVID-19 and its social environment exerts an unequal burden on the most disadvantaged members of society.
01.10.2020	COVID-19 in patients undergoing chronic kidney replacement therapy and kidney transplant recipients in Scotland: findings and experience from the Scottish renal registry	BMC Nephrol / Article	• 110 Scottish patients receiving kidney replacement therapy (KRT) tested positive for SARS-CoV-2; 2% of prevalent KRT population. Older and more likely to reside in more deprived postcodes. • Mortality high at 26.7% in dialysis patients and 29.2% in transplant patients. • Rate of detected SARS-CoV-2 relatively low; but high mortality. • Measures within dialysis units plus national shielding policy appear effective in protecting this population from infection.
09.10.2020	Risk of death during the 2020 UK COVID-19 epidemic among people with rare autoimmune diseases compared to the general population. Preliminary results from the RECORDER project	medRxiv (non-peer reviewed) / Article	• A cohort study to quantify risk of death among people with rare autoimmune rheumatic diseases (RAIRD) (n=168,691) compared to the general population in England. • A total of 1,815 (1.1%) participants died during March and April 2020. • Age-standardised mortality rate (ASMR) among people with RAIRD was 1.44 (95% CI 1.42-1.45) times higher than the average ASMR during the same months of the previous 5 years, compared to 1.38 times higher in the general population. • Age-specific mortality rates in people with RAIRD compared to pre-COVID rates were higher from age 35 upwards, compared to age 55 upwards in the general population. • Rates were similar in males and females with RAIRD, whereas in the general population females had a lower rate than males.
02.10.2020	Outcome of Hospitalization for COVID-19 in Patients with	Am J Respir Crit Care Med / Article	• Assessed outcomes in Interstitial Lung Disease (ILD) patients hospitalized for COVID-19 versus those without ILD in a contemporaneous population.

	Interstitial Lung Disease: An International Multicenter Study		• Data from 161 hospitalised COVID-19 patients across Europe: overall mortality 49% (79/161). Higher mortality (HR 1.60, Confidence Intervals 1.17-2.18 p=0.003) compared with age, sex and co-morbidity matched controls without ILD. • Patients with a Forced Vital Capacity (FVC) of <80% had increased risk of death versus patients with FVC ≥80% (HR 1.72, 1.05-2.83). Obese ILD patients had elevated risk of death (HR 2.27, 1.39−3.71). • Patients with ILD are at increased risk of death from COVID-19, particularly those with poor lung function and obesity.
07.10.2020	Epidemiological investigation of the first 5685 cases of SARS-CoV-2 infection in Qatar, 28 February-18 April 2020	BMJ Open / Original research	• 28 Feb - 18 April, 5685 cases of COVID-19 identified. Median age 34 (IQR 28–43) years, 88.9% male, 8.7% were Qatari nationals. Overall, 83.6% had no concomitant comorbidity; 3.0% had three or more comorbidities. • Majority (90.9%) were asymptomatic or with minimal symptoms; 2.0% having severe or critical illness. Seven deaths during the time interval studied. • Presence of hypertension or diabetes associated with higher risk of severe or critical illness, but age was not. • Epidemiological curve indicated two distinct patterns of infection, larger cluster among expatriate craft and manual workers / smaller one among Qatari nationals returning from abroad during epidemic.
09.10.2020	StopCOVID cohort: An observational study of 3,480 patients admitted to the Sechenov University hospital network in Moscow city for suspected COVID-19 infection	Clin Infect Dis / Article	• Epidemiology, clinical course, outcomes of COVID-19 patients in Russia: outcomes available for 3480 patients hospitalised for suspected COVID-19. • Most common comorbidities: hypertension, obesity, chronic cardiac disease, diabetes. • Half the patients (n=1728) had a positive RT-PCR; 1748 were negative on RT-PCR but had clinical symptoms and characteristic CT signs suggestive of COVID-19. • Age, male sex, and chronic comorbidities were risk factors for in-hospital mortality.
06.10.2020	Gender differences in predictors of intensive care units admission among COVID-19 patients: The results of the SARS-RAS study of the Italian Society of Hypertension	PLoS One / Article	• Authors analysed information from 2378 charts of Italian COVID-19 patients admitted in 26 hospitals. • 395 COVID-19 patients (16.6%) required ICU admission, more frequently men (74%), with a higher prevalence of comorbidities (1,78±0,06 vs 1,54±0,03 p<0.05). • Higher rate of ICU admission: men - obesity, chronic kidney disease and hypertension / women - obesity (OR: 2,564; 95% CI 1,336–4.920 p<0.0001), heart failure (OR: 1,775 95% CI: 1,030–3,057). • Study demonstrates gender is primary determinant of COVID-19 disease's

			severity. Obesity most often observed condition for ICU admissions of both genders.

Epidemiology and clinical – other

Publication Date	Title / URL	Journal / Article type	Digest
09.10.2020	Transmission Dynamics by Age Group in COVID-19 Hotspot Counties — United States, April–September 2020	MMWR Morb Mortal Wkly Rep / Report	• CDC analysed temporal trends in percent positivity by age group in COVID-19 hotspot counties before and after their identification as hotspots. • The 767 hotspot counties detected during June 1–July 31 represented 24% of all U.S. counties and 63% of the U.S. population. • Percent positivity among persons aged 0–17 and 18–24 years began increasing 31 days before hotspot identification. Increases in percent positivity among older age groups began after the increases in younger age groups: among adults aged 25–44 years, 45–64 years, and ≥65 years, increases began 28 days, 23 days, and 20 days, respectively, before hotspot identification.
08.10.2020	Epidemiological analysis of 67 local COVID-19 clusters in Sichuan Province, China	BMC Public Health / Article	• Epidemiological characteristics of 67 local clusters of COVID-19 cases in Sichuan Province as of Mar 17 described and analysed; total of 226 confirmed cases. • Clusters were temporally and regionally concentrated: clusters caused by imported cases from other provinces accounted for 73.13%; familial clusters 68.66%. • Average attack rate 8.54%; average secondary attack rate 6.11%. Median incubation period 8.5 d; from 28 cases, incubation period was > 14 d in 21.43% (6/28).
07.10.2020	Different pattern of the second outbreak of COVID-19 in Marseille, France	Int J Infect Dis / Article	• Describes the characteristics of COVID-19 patients seen in March-April and June-August, 2020 in Marseille, France with the aim to investigate possible changes in the disease between these two time periods. • Compared to those seen in March-April, COVID-19 patients seen in June-August were significantly younger (39.2 vs. 45.3 years), more likely to be male (52.9% vs. 45.6%), less likely to be hospitalized (10.7 vs. 18.0%), to be transferred to ICU (0.9% vs. 1.8%) and to die (0.1% vs. 1.1%). • Their mean fibrinogen and D-dimer blood levels were lower (1.0 vs. 1.5 g/L and 0.6 vs. 1.1 µg/mL, respectively). By contrast, their viral load was higher (cycle threshold ≤16 = 5.1% vs. 3.7%).
08.10.2020	Two distinct immunopathological profiles in autopsy lungs of COVID-19	Nat Commun / Article	• Here the authors show transcriptomic, histologic and cellular profiles of post mortem COVID-19 (n = 34 tissues from 16 patients) and normal lung tissues (n = 9 tissues from 6 patients).

			• Two distinct immunopathological reaction patterns of lethal COVID-19 are identified. One pattern shows high local expression of interferon stimulated genes (ISGhigh) and cytokines, high viral loads and limited pulmonary damage, the other pattern shows severely damaged lungs, low ISGs (ISGlow), low viral loads and abundant infiltrating activated CD8+ T cells and macrophages. ISGhigh patients die significantly earlier after hospitalization than ISGlow patients. • Findings may point to distinct stages of progression of COVID-19 lung disease and highlights the need for peripheral blood biomarkers that inform about patient lung status and guide treatment.
06.10.2020	Impact of COVID-19 on stroke admissions, treatments, and outcomes at a comprehensive stroke centre in the United Kingdom	Neurol Sci / Article	• Retrospective observational study: all patients admitted to UK hospital with a stroke or transient ischaemic attack March 15 - April 14, compared to previous year. • Number of stroke admissions fell: 39.5% (n = 101 vs n = 167) reduction in admissions in the COVID cohort compared with 2019. • Stroke severity increased (median National Institutes of Health Stroke Scale (NIHSS) 7 vs 4, p = 0.02). • Fewer strokes with no visible acute pathology (21.8 vs 37.1%, p = 0.01) on computed tomography. • No statistically significant change in the delivery of thrombolysis and mechanical thrombectomy and no increase in mortality.
09.10.2020	Experimental Infection of Cattle with SARS-CoV-2	Emerg Infect Dis / Dispatch	• Inoculated 6 cattle with SARS CoV-2 and kept them together with 3 in-contact, virus-naive cattle. • Observed viral replication and specific seroreactivity in 2 inoculated animals, despite high levels of pre-existing antibody titres against a bovine betacoronavirus. The in-contact animals did not become infected.

Infection control

Publication Date	Title / URL	Journal / Article type	Digest
07.10.2020	The effect of temperature on persistence of SARS-CoV-2 on common surfaces	Virol J / Article	• Survival rates of SARS-CoV-2 were determined at different temperatures and D-values, Z-values and half-life were calculated. • Obtained half-lives of between 1.7 and 2.7 days at 20 °C, reducing to a few hours when temperature was elevated to 40 °C. • Viable virus was isolated for up to 28 days at 20 °C from common surfaces such as glass, stainless steel and both paper and polymer banknotes.

			• These findings demonstrate SARS-CoV-2 can remain infectious for significantly longer time periods than generally considered possible.
09.10.2020	Factors Influencing Risk for COVID-19 Exposure Among Young Adults Aged 18–23 Years — Winnebago County, Wisconsin, March–July 2020	MMWR Morb Mortal Wkly Rep / Report	• In Winnebago County, Wisconsin, perceived low severity of disease outcome; perceived responsibility to others; peer pressure; and exposure to misinformation, conflicting messages, or opposing views regarding masks were identified as drivers of behaviours that might influence risk for COVID-19 exposure among young adults.
09.10.2020	Response to COVID-19 in South Korea and implications for lifting stringent interventions	BMC Med / Article	• After initial rapid growth, Rt dropped below one in early April before increasing to max of 1.94 (95%CrI, 1.64–2.27) in May. By mid-June, Rt back below one. • Early adoption of testing and contact tracing important for South Korea's successful outbreak control, other factors including regional implementation of strong social distancing measures also contributed. • Caution needed in attempting to replicate this response in populations with larger more geographically widespread epidemics where finding, testing, and isolating cases that are linked to clusters may be more difficult.
07.10.2020	Spatial variability in reproduction number and doubling time across two waves of the COVID-19 pandemic in South Korea, February to July 2020	Int J Infect Dis / Article	• To examine the spatiotemporal changes in the transmission potential, the authors present regional estimates of the doubling time and reproduction number (R(t)) of COVID-19 in the country. • Findings support the effectiveness of control measures against COVID-19 in Korea. However, the easing of the restrictions imposed by the government in May 2020 facilitated a second wave in the greater Seoul area.
03.10.2020	COVID-19 transmission in the U.S. before vs. after relaxation of statewide social distancing measures	Clin Infect Dis / Article	• Authors detected an immediate and significant reversal in SARS-CoV-2 epidemic suppression after relaxation of social distancing measures across the U.S. • In 8 weeks prior to relaxation, mean Rt declined by 0.012 units per day (95% CI, -0.013 to -0.012), and 46/51 jurisdictions achieved Rt < 1.0 by the date of relaxation. • After relaxation, Rt reversed course and began increasing by 0.007 units per day (95% CI, 0.006-0.007), reaching a mean Rt of 1.16 eight weeks later, with only 9/51 jurisdictions maintaining Rt <1.0. • Premature relaxation of social distancing measures undermined the country's ability to control the disease burden associated with COVID-19.
06.10.2020	Contact tracing with digital assistance in Taiwan's COVID-19 outbreak response	Int J Infect Dis / Article	• Traditional contact tracing measures supplemented with symptom tracking and contact management system to assist public health workers with high efficiency. • Robust contact tracing with an integrated system effectively intervene early transmission of COVID-19 in Taiwan.

			• Development of integrated management system to support traditional contact tracing is critical in response to control the spread of COVID-19. • Management tools augment the capacity and decreased workloads of contact tracers, which improve contact tracing effectiveness. • Self-reporting using automatic text-messages and web-app, increased health status updates from 22.5% to 61.5%. High proportion of secondary cases detected via contact tracing (88%).

Treatment

Publication Date	Title / URL	Journal / Article type	Digest
08.10.2020	Effect of convalescent plasma on mortality in patients with COVID-19 pneumonia	medRxiv (non-peer reviewed) / Article	• A multicentre cohort study in Argentina (3,529 COVID-19 patients with pneumonia) compared outcomes for patients who received convalescent plasma and those who did not. • 51.4% were admitted to the ward, 27.1% to the Intensive Care Unit (ICU), and 21.7% to the ICU with mechanical ventilation requirement (ICU-MV). • 28-day mortality was 34.9%; and was 26.3%, 30.1% and 61.4% for ward, ICU and ICU-MV patients. • Convalescent plasma was administered to 868 patients (24.6%); their 28-day mortality was significantly lower (25.5% vs. 38.0%, $p<0.001$). No major adverse effects occurred.
01.10.2020	Antiviral activity of digoxin and ouabain against SARS-CoV-2 infection and its implication for COVID-19	Sci Rep / Article	• Digoxin (DIG) and ouabain (OUA) are FDA drugs for heart diseases that have antiviral activity against several coronaviruses. • Progeny virus titres of single-dose treatment of DIG, OUA and remdesivir were approximately 103-, 104- and 103-fold lower (> 99% inhibition), respectively, than that of non-treated control or chloroquine at 48 h post-infection (hpi). • Therapeutic treatment with DIG and OUA inhibited over 99% of SARS-CoV-2 replication, leading to viral inhibition at post entry stage of viral life cycle. • Results suggest that DIG and OUA may be an alternative COVID-19 treatment, with potential additional therapeutic effects for patients with cardiovascular disease.

Vaccine development

Publication Date	Title / URL	Journal / Article type	Digest
10.10.2020	Single-dose intranasal administration of AdCOVID elicits systemic and mucosal immunity against SARS-CoV-2 in mice	bioRxiv (non-peer reviewed) / Article	• AdCOVID, an intranasal adenovirus type 5 (Ad5)-vectored vaccine encoding the receptor binding domain (RBD) of the SARS-CoV-2 spike protein, elicits a strong and focused immune response against RBD through the induction of mucosal IgA, serum neutralizing antibodies and CD4+ and CD8+ T cells with a Th1-like cytokine expression profile.
09.10.2020	Soluble Spike DNA vaccine provides long-term protective immunity against SAR-CoV-2 in mice and nonhuman primates	bioRxiv (non-peer reviewed) / Article	• The authors describe a synthetic soluble SARS-CoV-2 spike (S) DNA-based vaccine candidate, GX-19. • In mice, immunization with GX-19 elicited not only S-specific systemic and pulmonary antibody responses but also Th1-biased T cell responses in a dose-dependent manner. • GX-19 vaccinated non-human primate seroconverted rapidly and exhibited detectable neutralizing antibody response as well as multifunctional CD4+ and CD8+ T cell responses. • When immunized non-human primates were challenged at 10 weeks after the last vaccination, they did not develop fever and reduced viral loads in contrast to non-vaccinated primates as a control.

Overviews, comments and editorials

Publication Date	Title / URL	Journal / Article type
10.10.2020	An alliance with public health in pursuit of COVID-19 evidence	Occup Med (Lond) / Article
07.10.2020	Covid-19: Which rapid tests is the UK pinning its hopes on?	Bmj / Feature
09.10.2020	Covid-19: Experts advise cautious optimism for neutralising antibodies after early results	Bmj / News
09.10.2020	Steroids for sepsis and ARDS: this eternal controversy remains with COVID-19	Lancet / Correspondence
09.10.2020	Beyond COVID-19—a paradigm shift in infection management?	Lancet Infectious Diseases / Correspondence
06.10.2020	Insight on Sex-Based Immunity Differences, With COVID-19 Implications	Jama / Editorial

Produced by the PHE COVID-19 Literature Digest Team

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