Public Health England

COVID-19 Literature Digest – 26/03/2021

This week's guest editor is Allison Streetly. Before March 2020 Allison worked in PHE's National Healthcare Public Health team, working with the NHS and other national organisations providing system leadership and co-ordinating public health advice into the NHS across a wide range of areas. Since last March Allison has volunteered to support the pandemic response first in the Clinical guidance cell and from June acting as a Senior Public Health Advisor.

If you only read three papers this week...

My choices reflect new evidence and what seems important at this stage in the pandemic. I hope these papers help you think ahead to where we might be in three, six or nine months.

First an observational cohort study on transmission of COVID-19 in unvaccinated household members of vaccinated (145,000) and unvaccinated healthcare workers. It found that vaccinated households are 30% less likely to be infected after 1 and 54% after 2 doses of vaccine. This pre-print from Public Health Scotland is the first robust evidence that COVID vaccines can reduce transmission between individuals. Vaccines ability to prevent transmission is crucial to understanding of the overall impact of vaccines on spread within communities. Initial estimates may underestimate impact, as individuals may acquire infection from elsewhere. This rapid study shows the power of data-linkage, highlighting the well-known Scottish datasets.

My second choice is a therapeutics study by Butler *et al* demonstrating that Azithromycin should not be used routinely to treat COVID-19 in the absence of other indications. These negative findings from the PRINCIPLE trial, using interesting Bayesian analysis, come from the UK's only primary care trials unit in Oxford. This trial shows the importance of practicing antimicrobial stewardship, a challenge that remains of great importance. It also emphasises the importance of primary care and upstream interventions. Most resources and trials have been concentrated on those who are ill in hospital with far less focus on primary care. There are two other trials run by the PRINCIPLE unit that may be of interest. Early therapeutic interventions, including anti-virals, may become important and would emphasise early presentation. These will support some rebalancing of research towards primary and community services given their important ability to impact directly on public health and health inequalities.

The second NIHR living review report of "Long COVID" is my final paper. Post-acute complications of COVID-19 are emerging as important health and economic impacts on our society. The UK Office for National Statistics estimate that about 10% of individuals with positive test results have symptoms 12 weeks after infection. Women appear to be affected more often than men; cases are reported amongst those who were mildly affected initially. We lack understanding of aetiology and consensus on the definition of this range of overlapping syndromes including significant organ damage, post intensive care syndrome and post viral syndrome, as well as evidence of effective treatment. Funded research will study these questions and PHE is establishing surveillance; key additional challenges in the NHS include the need for a consensus on supporting symptomatic cases and rehabilitation capacity.

Allison

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 once per week (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,

Emma Farrow, James Robinson
On behalf of the PHE COVID-19 Literature Digest Team

Report for 26.03.2021 (please note that papers that have **NOT been peer-reviewed** are highlighted in red).

Sections:

Serology and immunology

Publication Date	Title/URL	Journal / Article type	Digest
23.03.2021	Antibody Responses after a Single Dose of SARS-CoV-2 mRNA Vaccine	N Engl J Med / Correspondence	• Authors found that 3 weeks after first dose of BNT162b2 SARS-CoV-2 mRNA vaccine, 36 health care workers with recent SARS-CoV-2 infection or seropositive status had higher levels of antibody to four SARS-CoV-2 antigens and higher levels of antibodies with neutralizing characteristics than did 152 health care workers without a history of infection. • Duration of antibody responses and other potential measures of protective immunity need further investigation.
23.03.2021	Dynamics of SARS-CoV-2 neutralising antibody responses and duration of immunity: a longitudinal study	The Lancet Microbe / Article	• 180 day longitudinal study of 164 patients recovered from COVID-19; monitoring changes in neutralising antibody levels with significance threshold of 30% inhibition • Findings: 19 patients [12%] negative; 44 [27%] rapid waning, seroreverted in less than 180 days; 52 [29%] slow waning, neutralising antibody-positive at 180 days; 52 [32%] persistent, minimal neutralising antibody decay; • Fifth group: three [2%] delayed response, unexpected increase of neutralising antibodies during late convalescence (at 90 or 180 days after symptom onset • Persistence of neutralising antibodies associated with disease severity and sustained level of pro-inflammatory cytokines, chemokines, and growth factors. By contrast, T-cell responses were similar among the different neutralising antibody dynamics groups.
19.03.2021	Neutralizing Antibodies Against SARS-CoV-2 Variants After Infection and Vaccination	Jama / Research letter	• Study found neutralising activity of infection- and mRNA-1273 (Moderna) vaccine-elicited antibodies against four SARS-CoV-2 variants, including B.1, B.1.1.7, and N501Y. • Because neutralisation studies measure the ability of antibodies to block virus infection, these results suggest infection- and vaccine-induced immunity may be retained against the B.1.1.7 variant.
20.03.2021	Seroprevalence and humoral immune durability of anti-SARS-CoV-2 antibodies in Wuhan, China: a longitudinal, population-level, cross-sectional study	Lancet / Article	• Longitudinal seroprevalence study in Wuhan, China. The population sample comprised 9542 individuals from 3556 families across the city. • 6.92% of the sample population developed antibodies against SARS-CoV-2, with 39.8% of this population seroconverting to have neutralising antibodies. • Durability data on humoral responses indicates mass vaccination is needed to effect herd protection. • Associated comment:

			https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)00434-7/fulltext

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Vaccines

Publication Date	Title/URL	Journal / Article type	Digest
25.03.2021	Impact of COVID-19 vaccines on mortality in England: December 2020 to February 2021	Public Health England / Report	• Findings suggest between 6,100 and 6,600 deaths have been averted as a result of the COVID-19 vaccination programme up to the end of February 2021. • Early evidence suggests vaccines reduce transmission, therefore the figure of 6,100 deaths averted may be an underestimation. • Provides evidence that the COVID-19 vaccination programme is having a significant impact on severe COVID-19 disease in England.
25.03.2021	AZD1222 US Phase III primary analysis confirms safety and efficacy	AstraZeneca (non-peer reviewed) / Press Release	• Positive high-level results from the primary analysis of the Phase III trial of AZD1222 in the US have confirmed vaccine efficacy consistent with the pre-specified interim analysis announced on Monday 22 March 2021. • Key findings: 76% vaccine efficacy against symptomatic COVID-19; 100% efficacy against severe or critical disease and hospitalisation; 85% efficacy against symptomatic COVID-19 in participants aged 65 years and over. • The vaccine was well tolerated, and no safety concerns related to the vaccine were identified. • Associated commentary: https://www.bmj.com/content/372/bmj.n793
25.03.2021	Robust antibody responses in 70–80-year-olds 3 weeks after the first or second doses of Pfizer/BioNTech COVID-19 vaccine, United Kingdom, January to February 2021	Eurosurveillance / Rapid communication	• Examines SARS-CoV-2 antibody responses in 185 adults in London aged 70–90 years. • Findings demonstrate that adults aged ≥ 70 years mount robust antibody responses 3 weeks after a single dose of the Pfizer/BioNtech vaccine, with more than 94% of previously uninfected individuals seroconverting after 3 weeks using the Roche S assay.
23.03.2021	BNT162b2 mRNA Covid-19 Vaccine Effectiveness among Health Care Workers	N Engl J Med / Correspondence	• Israeli study: vaccination of health care workers with BNT162b2 vaccine resulted in a major reduction of new cases of Covid-19 among those who received two doses of the vaccine, even when a surge of the B.1.1.7 variant was noted in up to 80% of cases.

23.03.2021	SARS-CoV-2 Infection after Vaccination in Health Care Workers in California	N Engl J Med / Correspondence	• Cohort study of 36,659 vaccinated healthcare workers at two health systems (UCSD and UCLA) in California, USA: 28,184 (77%) received the second dose. • Absolute risk of testing positive for SARS-CoV-2 after vaccination was 1.19% among healthcare workers at UCSD and 0.97% at UCLA; higher than risks reported in trials of mRNA-1273 vaccine and BNT162b2 vaccine. • Possible explanations: availability of regular testing; regional surge in infections in Southern California during this vaccination campaign; differences in demographic characteristics between trial participants and our cohort.

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Diagnostics and genomics

Publication Date	Title/URL	Journal / Article type	Digest
20.03.2021	Diagnostic accuracy of rapid antigen tests in pre-/asymptomatic close contacts of individuals with a confirmed SARS-CoV-2 infection	medRxiv (non-peer reviewed) / Article	• Study of two antigen-detecting rapid diagnostic tests (BD VeritorTM System, and Roche/SD Biosensor) with 4,296 adults found sensitivity for detecting SARS-CoV-2 in pre-/asymptomatic close contacts is over 60%, increasing to over 85% after applying an infectiousness viral load cut-off.
19.03.2021	Surveillance-based informative testing for detection and containment of SARS-CoV-2 outbreaks on a public university campus: an observational and modelling study	Lancet Child Adolesc Health / Article	• Retrospective cohort study of 6273 on-campus students at a US university USA using a novel surveillance-based informative testing (SBIT) strategy, consisting of random surveillance testing to identify outbreaks and targeted follow-up testing (Sept 23 to Oct 5); followed by repeated weekly surveillance testing (Oct 6 to Nov 22). • Observational findings and modelling suggest SBIT is an effective strategy to mitigate COVID-19 spread among the student population when high-frequency testing is not possible.
15.04.2021	Reduced neutralization of SARS-CoV-2 B.1.1.7 variant by convalescent and vaccine sera	Cell / Article	• Authors examine ability of B.1.1.7 variant (UK) to evade antibody responses elicited by natural SARS-CoV-2 infection or vaccination. • Neutralization titers against B.1.1.7 are reduced, but remain robust. No evidence of vaccine escape.
25.03.2021	Detection of SARS-CoV-2 lineage P.1 in patients from a region with exponentially increasing hospitalisation rate, February 2021, Rio Grande do Sul, Southern Brazil	Eurosurveillance / Rapid communication	• Although a relatively low number of specimens were analysed (337 and 307 oro/nasopharyngeal swabs), the finding that the previously undetected P.1 lineage now accounts for almost nine in 10 specimens from a COVID-19 referral hospital in the Brazilian State of Rio Grande do

			Sul, where exponential growth in hospitalisations have also been observed, warrants close attention.
23.03.2021	Emergence of the E484K Mutation in SARS-CoV-2 Lineage B.1.1.220 in Upstate New York	medRxiv (non-peer reviewed) / Article	• Provides the first report of a Lineage B.1.1.220 bearing the important E484K mutation in New York State, USA.

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Epidemiology and clinical - children and pregnancy

Publication Date	Title/URL	Journal / Article type	Digest
18.03.2021	Association between living with children and outcomes from covid-19: OpenSAFELY cohort study of 12 million adults in England	BMJ / Research	• Among 9,157,814 English adults ≤65 years, living with children 0-11 years was not associated with increased risks of COVID-19 infection or related hospital or ICU admission, but was associated with reduced risk of COVID-19 death. • Living with children aged 12-18 years was associated with a small increased risk of recorded COVID-19 infection, but not associated with other COVID-19 outcomes. • Living with children of any age was associated with lower risk of dying from non-COVID-19 causes. • Among 2,567,671 adults >65 years there was no association between living with children and outcomes related to COVID-19. • No consistent change in risk was observed following school closure. • Preprint previously included, focusing on first wave.
18.03.2021	Sharing a household with children and risk of COVID-19: a study of over 300 000 adults living in healthcare worker households in Scotland	Arch Dis Child / Original research	• Large cohort of Scottish NHS healthcare workers: 241,266 / 41,198 / 23,783 and 3850 adults shared a household with 0, 1, 2 and 3+ young children (0–11 years) respectively. • Over study period, risk of COVID-19 requiring hospitalisation was reduced progressively with increasing numbers of household children. • After schools reopened Aug 2020, no association seen between exposure to young children and risk of any COVID-19 (aHR per child 1.03; 95% CI 0.92 to 1.14). • Preprint previously included
22.03.2021	Newborn antibodies to SARS-CoV-2 detected in cord blood after maternal vaccination - a case report	BMC Pediatr / Case report	• Reports the first known case of an infant with SARS-CoV-2 IgG antibodies detectable in cord blood after maternal mRNA vaccination received 3 weeks prior to delivery.

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Epidemiology and clinical - long-term complications / sequelae

Publication Date	Title/URL	Journal / Article type	Digest
24.03.2021	Characterising long COVID more than 6 months after acute infection in adults; prospective longitudinal cohort study, England	medRxiv (non-peer reviewed) / Article	• Surveyed a cohort of healthcare workers a median of 7.5 months after initial enrolment (1,671 respondents). • Among those with history of mild-to-moderate COVID-19 infection (n=140) 14.3% had ongoing (4/140, 2.9%) or episodic (16/140, 11.4%) symptoms. • Three symptom clusters were associated with long COVID: sensory (ageusia, anosmia, loss of appetite and blurred vision), neurological (forgetfulness, short-term memory loss and confusion/brain fog) and cardiorespiratory (chest tightness/pain, unusual fatigue, breathlessness after minimal exertion/at rest, palpitations). • Sensory cluster had the highest specificity and strength of association.
24.03.2021	Self-reported smell and taste recovery in COVID-19 patients: a one-year prospective study	medRxiv (non-peer reviewed) / Article	• In a follow-up survey of patients (n=268) with previous mild-to-moderate symptomatic COVID-19, a substantial proportion of cases characterised by new onset of chemosensory dysfunction at baseline (n=187) still reported altered sense of smell or taste one-year after onset: 21.9% (41/187) with some decrease in severity, and 8.6% (16/187) with unchanged or worsened symptoms.
22.03.2021	Post-acute COVID-19 syndrome	Nat Med / Review article	• Review of current literature on post-acute COVID-19, its pathophysiology and its organ-specific sequelae. • Authors discuss considerations for multidisciplinary care of COVID-19 survivors, framework for identifying those at high risk for post-acute COVID-19 and coordinated management through dedicated COVID-19 clinics.
22.03.2021	Radiological and functional lung sequelae of COVID-19: a systematic review and meta-analysis	BMC Pulm Med	• Systematic review (15 studies; 3066 patients) found the frequency of residual computed tomography (CT) abnormalities 1-6 months after hospital discharge was 55.7%; most frequent chest CT abnormalities were ground glass opacity (44.1%) and parenchymal band or fibrous stripe (33.9%). • The frequency of abnormal pulmonary function test was 44.3%, and impaired diffusion capacity was the most frequently observed finding in 34.8%. Restrictive and obstructive patterns were observed in 16.4% and 7.7%, respectively.

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Epidemiology and clinical – risk factors

Publication Date	Title/URL	Journal / Article type	Digest
20.03.2021	Intensity of COVID-19 in care homes following Hospital Discharge in the early stages of the UK epidemic	medRxiv (non-peer reviewed) / Article	• Analysis of a health record cohort (n=186,772) in Wales, UK found no significant association between hospital discharge and subsequent increases in care home case numbers. • An outbreak model found significant effect of hospital discharge on subsequent intensity of cases. However effect was small, and considerably less than effect of care home size, suggesting the highest risk of introduction came from interaction with the community. • An estimated 1.8% of hospital discharged patients may have been infected.
19.03.2021	Outcomes and Risk Factors Associated With SARS-CoV-2 Infection in a North American Registry of Patients With Multiple Sclerosis	JAMA Neurol / Original investigation	• Cross-sectional study of 1626 patients with multiple sclerosis (MS) and COVID-19. Ambulatory disability, both non-ambulatory and requiring assistance to walk, was independently associated with worse clinical severity including death from COVID-19. • Other risk factors for worse outcomes included older age, Black race, cardiovascular comorbidities, and recent treatment with corticosteroids.

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Epidemiology and clinical – other

Publication Date	Title/URL	Journal / Article type	Digest
23.03.2021	Human rhinovirus infection blocks SARS-CoV-2 replication within the respiratory epithelium: implications for COVID-19 epidemiology	J Infect Dis / Accepted manuscript	• Examines replication kinetics of SARS-CoV-2 in the human respiratory epithelium in the presence or absence of rhinovirus (the common cold). • Findings suggest human rhinovirus triggers an interferon response that blocks SARS-CoV-2 replication. • Mathematical simulations show that this virus-virus interaction is likely to have a population-wide effect.
24.03.2021	COVID-19 Infection Risk amongst 14,104 Vaccinated Care Home Residents: A national observational longitudinal cohort study in Wales, United Kingdom, December 2020 to March 2021	medRxiv (non-peer reviewed) / Article	• Observational study of 14,104 vaccinated older care home residents in Wales, UK: 1.05% (N=148) tested positive following vaccination with 90% of those occurring within 28-days, suggesting extra precautions to

			reduce transmission risk should be taken in this time frame. • Increased risk of infection after 21-days was associated with frailty.
24.03.2021	First and second SARS-CoV-2 waves in inner London: a comparison of admission characteristics and the effects of the B.1.1.7 variant	medRxiv (non-peer reviewed) / Article	• Health record data linked with SARS-CoV-2 genome sequence data provides valuable insight into the evolving characteristics of hospitalised COVID-19 cases. • The proportion of cases with hypoxia on admission was greater in those infected with the B.1.1.7 variant, suggesting B.1.1.7 variant is associated with more severe disease. • The number of nosocomial cases was similar in both waves despite introduction of many infection control interventions before wave two, an observation requiring further investigation.
17.03.2021	Details of SARS-CoV-2 reinfections at a major UK tertiary centre	J Infect / Correspondence	• Presents details of 3 patients who appear to have SARS-CoV-2 reinfections based on sequencing results. They are thought to have been re-infected with new COVID-19 variants (B.1.177 and B.1.1.7), as neither was circulating in the UK when the patients first tested positive.

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Transmission

Publication Date	Title/URL	Journal / Article type	Digest
05.03.2021	Factors contributing to the transmission of COVID-19 within food manufacturing and processing settings: a rapid review	Public Health England / Rapid review	• Rapid review includes 6 studies (search date: 1 January to 21 December 2020). • Three outbreak investigations in meat processing plants (USA=2, Germany=1). Difficulty maintaining 2-metre distance may be a risk factor. • Three cross-sectional studies on aggregated data of outbreaks in meat and poultry processing facilities in the US. Data suggests Hispanic workers were more affected by COVID-19 than White or Black workers, although factors such as health status were not taken into account. • Some risk of bias: further studies of higher quality are required to assess broader food processing settings and identify risk factors.
05.03.2021	Rapid Review Update 1: What is known about how long the virus can survive with potential for infection on surfaces found in community settings?	NCCMT / Rapid review	• Rapid review based on 8 syntheses and 32 primary studies. • Overall, studies that have sampled surfaces within community settings suggest that while viral genetic material can be detected, these fragments may not be viable (have potential to infect). Only one study measured live, viable virus and found none to be present.

24.03.2021	SARS-CoV-2 and the role of airborne transmission: a systematic review	F1000 Research (non-peer reviewed) / Systematic Review	• Systematic review (67 primary studies, 22 reviews) found SARS-CoV-2 RNA is detected intermittently in the air in various settings including hospitals (ICU and non-ICU), outdoors or in the community. Lack of recoverable viral culture samples of SARS-CoV-2 prevents firm conclusions over airborne transmission. • Standardised guidelines for conducting and reporting research on airborne transmission are needed.
24.03.2021	SARS-CoV-2 and the role of fomite transmission: a systematic review	F1000 Research (non-peer reviewed) / Systematic review	• Systematic review (63 primary studies, 1 review): majority of studies report identification of SARS-CoV-2 RNA on inanimate surfaces, however there is lack of evidence demonstrating the recovery of viable virus. Lack of positive viral cultures and variation in cycle thresholds create uncertainty about fomites as a mode of transmission. • Standardised guidelines for conducting and reporting research on fomite transmission is warranted.
25.03.2021	Pilot Investigation of SARS-CoV-2 Secondary Transmission in Kindergarten Through Grade 12 Schools Implementing Mitigation Strategies — St. Louis County and City of Springfield, Missouri, December 2020	MMWR Morb Mortal Wkly Rep / Report	• Among 22 participating K–12 schools implementing multiple COVID-19 mitigation strategies (mask mandates, physical distancing and increased ventilation), transmission was lower that in the wider community. • School-based SARS-CoV-2 secondary transmission was detected in two of 102 tested close contacts of 37 persons with COVID-19. Among 21 tested student contacts participating in a modified quarantine, all SARS-CoV-2 test results were negative.
26.03.2021	Low SARS-CoV-2 Transmission in Elementary Schools — Salt Lake County, Utah, December 3, 2020–January 31, 2021	MMWR Morb Mortal Wkly Rep / Report	• In a high community transmission setting (Salt Lake County, Utah, USA) low school-associated transmission was observed across 20 elementary schools, with a 0.7% secondary attack rate. Mask adherence was high, but students' classroom seats were <6 feet apart and a median of 3 feet apart. • Suggests elementary schools can be opened safely when critical prevention strategies are implemented, even where maintaining ≥6 feet between students' seats might not be possible.

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Modelling

Publication Date	Title/URL	Journal / Article type	Digest
18.03.2021	The potential health and economic value of SARS-CoV-2 vaccination alongside physical distancing in	Lancet Infect Dis / Article	• Model findings highlight substantial health and economic value of introducing SARS-CoV-2 vaccination, alongside physical distancing in the

	the UK: a transmission model-based future scenario analysis and economic evaluation		UK. • Smaller outbreaks could continue even with vaccines, but population-wide implementation of increased physical distancing might no longer be justifiable. Provides early insights about possible future post-vaccination scenarios from an economic and epidemiological perspective. • Associated comment: https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(21)00126-2/fulltext • Preprint previously included
18.03.2021	Vaccination and non-pharmaceutical interventions for COVID-19: a mathematical modelling study	Lancet Infect Dis / Article	• Authors estimate vaccination alone is insufficient to contain UK outbreak. In absence of non-pharmaceutical interventions (NPIs), R estimated at best to be 1·58 once all eligible adults offered both doses of vaccine • For all vaccination scenarios, predictions highlight risks of early or rapid relaxation of NPIs. • Vaccination reduces total deaths but only provides partial protection for the individual; estimates 48·3% and 16·0% of deaths will be in individuals who received one or two vaccine doses, respectively. • Associated comment: https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(21)00167-5/fulltext
24.03.2021	Comparison between one and two dose SARS-CoV-2 vaccine prioritisation for a fixed number of vaccine doses	medRxiv (non-peer reviewed) / Article	• Modelling suggests vaccines offering relatively high protection from the first dose favour strategies that prioritise giving more people one dose rather than a smaller number two. • The optimal mix of one and two doses between the defined priority groups of Phase 1 shows a pattern of returning to give second doses to the highest risk groups as the number of available doses increases.
22.03.2021	Lives Saved from Age-Prioritised COVID-19 Vaccination	medRxiv (non-peer reviewed) / Article	• Modelling suggests that in the United States, age-prioritisation would reduce deaths during a vaccine campaign by about 93 percent relative to no vaccine and 85 percent relative to age-neutral vaccine distribution. In countries with younger age structures, such as Bangladesh, the benefits of age-prioritisation are even greater.
20.03.2021	Modelling the impact of rapid tests, tracing and distancing in lower-income countries suggest optimal policies varies with rural-urban settings	medRxiv (non-peer reviewed) / Article	• Modelling suggests the impact of testing, tracing and social distancing in low- and middle-income countries (LMICs) varies with rural-urban settings. • In rural communities, either high quality (sensitivity > 50%) antigen rapid diagnostic tests or moderate physical distancing could contain

			transmission. • In non-slum urban communities, both physical distancing and case finding are essential for containing COVID-19 (average infection rate < 10%). Physical distancing is less effective in urban slum communities. • In all communities contact quarantine is essential for effective containment and is effective at a low compliance rate (30%).

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Guidance and consensus statements

Publication Date	Title/URL	Journal / Article type
23.03.2021	Stroke Care during the COVID-19 Pandemic: International Expert Panel Review	Cerebrovasc Dis / Review

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Overviews, comments and editorials

Publication Date	Title/URL	Journal / Article type
25.03.2021	Rolling out COVID-19 antigen rapid diagnostic tests: the time is now	The Lancet Infectious Diseases / Comment
19.03.2021	Testing for SARS-CoV-2 infection: a key strategy to keeping schools and universities open	Lancet Child Adolesc Health / Comment
24.03.2021	New SARS-CoV-2 Variants - Clinical, Public Health, and Vaccine Implications	N Engl J Med / Correspondence
19.03.2021	Appropriate names for COVID-19 variants	Science / Letter
20.03.2021	Trials to find preventative COVID-19 treatments for most vulnerable to launch in UK	Gov.uk / Press release
23.03.2021	Pfizer begins early-stage study of oral COVID-19 drug	Reuters / News
18.03.2021	COVID-19 and the new variant strain in England - What are the implications for those from ethnic minority groups?	EClinicalMedicine / Commentary
16.03.2021	Triple jeopardy: disabled people and the COVID-19 pandemic	Lancet / Comment
01.04.2021	Communication combats hesitancy [*patients with rheumatic and musculoskeletal diseases and COVID-19 vaccination]	The Lancet Rheumatology / Editorial

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Produced by the PHE COVID-19 Literature Digest Team

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