

COVID-19 Evidence Alert – 11th September 2020

Welcome

Please note this is the penultimate issue of the COVID-19 Evidence Alert.

This alert highlights emerging evidence on the following key topics identified as useful in supporting Covid recovery planning:

1. [Residential settings](#)
2. [Impacts of lifting restrictions](#)
3. [Long term rehabilitation needs](#)
4. [Screening and testing](#)
5. [Broader impacts on health outcomes](#)
6. [Impact on non-Covid care](#)

This update follows on from a series of rapid evidence scans on these key topics, with corresponding evidence trackers providing details of relevant papers.

The evidence scans and corresponding evidence trackers can be found here:

<https://www.strategyunitwm.nhs.uk/covid19-and-coronavirus> (see 'Evidence - Helping you to keep up to date').

Please note that this week's alert excludes summaries of emerging evidence and rapid reviews and will instead present abstracts from these sources, due to the breadth and volume of evidence covered.

Analytical Collaboration for COVID-19

As previously described the collaboration is supporting ad hoc immediate questions raised by national bodies but are also using their expertise to focus on [questions](#) that the NHS may lack the immediate resources to look at, which may be more medium-term, cut across sectors, or benefit from independent analysis.

Residential settings

Guidance

[Coronavirus \(COVID-19\): looking after people who lack mental capacity](#). Department of Health and Social Care. (last updated 7/9/20).

Emerging evidence

[A study of universal SARS-CoV-2 RNA testing of residents and staff in a large group of care homes in South London](#). Marossy A et al., *Journal of Infectious Diseases*, jiaa565, <https://doi.org/10.1093/infdis/jiaa565>. "Care homes have experienced a high number of COVID-19 related deaths of residents since the onset of the pandemic. However, up to May 2020, there has been a lack of information about the extent of SARS-CoV-2 infection in residents and staff in care homes and limited testing in this setting. Results: Overall, the point prevalence of SARS-CoV-2 infection was 6.5% with a higher rate in residents (9.0%) than in staff (4.7%). A key finding was the

<https://www.strategyunitwm.nhs.uk/covid19-and-coronavirus>

high proportion of asymptomatic infection detected in staff (69%) and residents (51%) with evidence of under-detection of symptoms by care home staff. Conclusions: The high proportion of asymptomatic infection combined with under detection of symptoms by care home staff indicates that offering a test to all residents and staff in care homes with rapid reporting of results would assist accurate identification of infected individuals, facilitating prompt infection prevention and control action. Methods: Combined nose and throat swab testing for SARS-CoV-2 RNA was carried out in 2455 residents and staff across 37 care homes in the London Borough of Bromley across a three-week period. Results were reported within 24 hours of sample delivery and data were collected on the presence or absence of symptoms.”

Commentaries

[Could we have done better with COVID-19 in nursing homes?](#) Szczercińska K et al., Eur Geriatr Med, 1–5.

Impacts of lifting restrictions

Commentary from the collaboration

[Chart of the week: What effect will the return to schools and universities have on infection outbreaks this autumn?](#) Fisher et al., Nuffield Trust. (published online 10/9/20)

Rapid reviews

[School closure in response to epidemic outbreaks: Systems-based logic model of downstream impacts.](#) Kneale D et al, F1000 Research, 2020 May 12;9:352. doi:

10.12688/f1000research.23631.1. eCollection 2020. “Background: School closures have been a recommended non-pharmaceutical intervention in pandemic response owing to the potential to reduce transmission of infection between children, school staff and those that they contact. However, given the many roles that schools play in society, closure for any extended period is likely to have additional impacts. Literature reviews of research exploring school closure to date have focused upon epidemiological effects; there is an unmet need for research that considers the multiplicity of potential impacts of school closures. Methods: We used systematic searching, coding and synthesis techniques to develop a systems-based logic model. We included literature related to school closure planned in response to epidemics large and small, spanning the 1918-19 'flu pandemic through to the emerging literature on the 2019 novel coronavirus. We used over 170 research studies and a number of policy documents to inform our model. Results: The model organises the concepts used by authors into seven higher level domains: children's health and wellbeing, children's education, impacts on teachers and other school staff, the school organisation, considerations for parents and families, public health considerations, and broader economic impacts. The model also collates ideas about potential moderating factors and ethical considerations. While dependent upon the nature of epidemics experienced to date, we aim for the model to provide a starting point for theorising about school closures in general, and as part of a wider system that is influenced by contextual and population factors. Conclusions: The model highlights that the impacts of school closures are much broader than those related solely to health, and demonstrates that there is a need for further concerted work in this area. The publication of this logic model should help to frame future research in this area and aid decision-makers when considering future school closure policy and possible mitigation strategies.”

Making sense of the research on COVID-19 and school reopenings. Abbott BW et al., Brigham Young University. “1. Children (0-10 years old) and adolescents (11-18) are not immune to COVID-19, though the disease is usually less severe and less easily transmitted by children. Children may be one-third to one-half as susceptible to COVID-19 as middle-aged adults, though adolescents show intermediate to near-adult susceptibility and transmission. Transmission by children appears to account for a small minority of overall community and household cases (likely no more than 5 to 10%). 2. Evidence on teachers’ risk of infection in school reopenings is limited. Risk of infection may vary based on the school type (lower in elementary, higher in junior high and high school), though this is not well established. Adult to adult contacts within schools may be the greatest risk for teachers. Protective measures are needed because 1 in 4 teachers is in a high-risk category for COVID-19. 3. Many countries have reopened primary and secondary schools with safe outcomes for students and teachers. Some outbreaks have occurred, particularly associated with high schools 15–17. Factors increasing likelihood of success seem to include: low community spread, preventive measures at school (social distancing, masking, handwashing), rapid testing, contact-tracing, and cohorting. 4. No countries have attempted to reopen schools with the level of community spread that the U.S. is currently experiencing. Daily cases in countries that have reopened successfully are typically below 20 per million people. That number is currently 199 for the U.S. and 120 for Utah. Early reports from U.S. districts that have reopened suggest frequent exposures, highlighting how reducing community spread should be paramount. 5. There are substantial risks and costs associated with not reopening schools, especially for primary and secondary school children, including decreased psychological wellbeing, social development, educational progress, nutrition, and safety. While risks can be dependent on or mitigated by family circumstances for some, many children are highly vulnerable to harm from full school shutdowns. 6. Safe reopenings cannot be achieved by interventions at school alone. In-school protective measures must be implemented along with family actions and community support to lower student, teacher, and community infection rates. 7. Observational and modeling studies suggest that risk of outbreaks is very high in colleges and universities. This is due to residential and nonresidential student interactions and high transmission among young adults. Widespread and rapid testing, a large quarantine capacity, and a sustained level of vigilance will be needed before campuses can be safely reopened for in-person instruction, even with mask-wearing and social distancing practices in place for classrooms.”

Emerging evidence

Prospective active national surveillance of preschools and primary schools for SARS-CoV-2 infection and transmission in England, June 2020 (sKIDs COVID-19 surveillance in school KIDs). Ladhani S, Public Health England. “A total of 12,026 participants in 131 schools had 43,039 swabs taken. SARS-CoV-2 infection rate of 3.9 /100,000/week (1/25,674; 95% CI, 0.10 to 21.7) in students and 11.3/100,000/week (2/17,695; 95% CI, 1.4-40.8) in staff. Where a SARS-CoV-2 positive case was identified, there were no additional cases in the household, class bubble or wider education setting when tested. SARS-CoV-2 seropositivity was 10.6% (86/814; 95%CI, 8.5-12.9%) in students and 12.7% (167/1316; 95%CI, 10.9- 14.6%) in staff (p=0.14). Non-white ethnicity, a history of COVID-19 like symptoms and having a healthcare worker in the household were significantly associated with seropositivity in both students and staff, but not school attendance, time spent in school or level of contact between staff and students. SARS-CoV-2 infection and transmission rates were low in preschool and primary schools under surveillance. Seropositivity rates in students and

staff were similar and not associated with school attendance during the lockdown. Similar studies are needed in secondary schools and higher educational settings.”

[Apart but not Alone? A cross-sectional study of neighbour support in a major UK urban area during the COVID-19 lockdown.](#) Jones M et al., Emerald Open Research. “Evidence from a range of major public health incidents shows that neighbour-based action can have a critical role in emergency response, assistance and recovery. However, there is little research to date on neighbour-based action during the 2020 coronavirus pandemic. This article reports on a survey of people engaged in supporting their neighbours in weeks three and four of the UK COVID-19 lockdown. Members of area-based and community of interest COVID-19 support groups in the Bristol conurbation were invited to complete an online survey. Of 1,255 people who clicked on the survey link, 862 responded; of these, 539 responses were eligible for analysis. Respondents reported providing a wide range of support that went beyond health information, food and medical prescription assistance, to include raising morale through humour, creativity and acts of kindness and solidarity. A substantial proportion felt that they had become more involved in neighbourhood life following the lockdown and had an interest in becoming more involved in future. Neighbour support spanned all adult age groups, including older people categorised as being at-risk to the virus. With respect to most measures, there were no differences in the characteristics of support between respondents in areas of higher and lower deprivation. However, respondents from more deprived areas were more likely to state that they were involved in supporting certain vulnerable groups. As with previous research on major social upheavals, our findings suggest that responses to the viral pandemic and associated social restrictions may increase existing social and health inequalities, and further research should explore this issue in more depth.”

[Impact of lockdown on Covid-19 case fatality rate and viral mutations spread in 7 countries in Europe and North America.](#) Pachetti M et al., J Transl Med 2020 Sep 2;18(1):338. doi: 10.1186/s12967-020-02501-x. “In this study we analyse how different lockdown strategies and PCR testing capability adopted by Italy, France, Germany, Spain, Sweden, UK and USA have influenced the Case Fatality Rate and the viral mutations spread. We calculated case fatality rates by dividing the death number of a specific day by the number of patients with confirmed COVID-19 infection observed 14 days before and normalized by a ρ factor which takes into account the diagnostic PCR testing capability of each Country and the number of positive cases detected. We notice the stabilization of a clear pattern of mutations at sites nt241, nt3037, nt14408 and nt23403. A novel nonsynonymous SARS-CoV-2 mutation in the spike protein (nt24368) has been found in genomes sequenced in Sweden, which enacted a soft lockdown strategy. Strict lockdown strategies together with a wide diagnostic PCR testing of the population were correlated with a relevant decline of the case fatality rate in different Countries. The emergence of specific patterns of mutations concomitant with the decline in case fatality rate needs further confirmation and their biological significance remains unclear.”

[A Harm Reduction Approach to the Ethical Management of the COVID-19 Pandemic.](#) Weinstock D, Public Health Ethics. phaa026. <https://doi.org/10.1093/phe/phaa026>. “The post-confinement phase of the COVID-19 pandemic will require that governments navigate more complex ethical questions than had occurred in the initial, ‘curve-flattening’ phase, and that will occur when the pandemic is in the past. By looking at the unavoidable harms involved in the confinement and quarantine methods employed during the initial phase of the pandemic, we can develop a harm reduction approach to managing the phase during which society will be gradually reopened in a

context of managed risk. The principles that are at the heart of such an approach include a reckoning with all of the harms involved in policy choice, including harms that might be given rise to by policy implementation itself; a focus on the harms to which already vulnerable populations are susceptible; and a strong preference for policies that economize on the use of prohibitions and of coercive state enforcement, and that instead emphasize the agency of citizens in realizing health-promoting behavior change. This framework is applied to a policy proposal that has been discussed in policy circles in a number of countries, that of immunity ‘passports’, and to policies that emphasize the creative use of space and time to achieve physical distancing goals.”

[Decision making in a crisis. First responses to the coronavirus pandemic.](#) **Institute for Government.** “Over the course of a few weeks, ministers were forced to take big decisions at high speed, with limited information, and with the global picture constantly changing. The analysis in this report focuses on three core areas of decision making: the economic support package, the commitment to conducting 100,000 tests per day by 30 April, and imposing a lockdown. It identifies where good decisions were made and what it was about them that made them successful, and finds common causes of poor decision making.”

[The economics of the COVID-19 pandemic: an assessment.](#) **Susskind D & Vines D, Oxford Review of Economic Policy, graa036.** <https://doi.org/10.1093/oxrep/graa036>. “The COVID-19 pandemic has created both a medical crisis and an economic crisis. As others have noted, we face challenges just as big as those in the Spanish Flu Pandemic and the Great Depression—all at once. The tasks facing policy-makers are extraordinary. Many new kinds of intervention are urgently required. This issue of the Oxford Review of Economic Policy has two objectives. The first is to explore these new interventions: evaluating their use, suggesting how they might be improved, and proposing alternatives. The second is to show that the challenges facing us are global and will require international cooperation if they are to be dealt with effectively. This short introductory essay positions the papers in the issue within an overall conceptual framework, with the aim of telling an overarching story about the pandemic.”

[Quantifying the impact of non-pharmaceutical interventions during the COVID-19 outbreak – The case of Sweden.](#) **Cho W, The Econometrics Journal, 1-25.** “This paper estimates the effect of non-pharmaceutical intervention (NPI) policies on public health during the COVID-19 outbreak by considering a counterfactual case for Sweden. Using a synthetic control approach, I find that strict initial lockdown measures play an important role in limiting the spread of the COVID-19 infection as the infection cases in Sweden would have been reduced by almost 75 percent had its policymakers followed stricter containment policies. As people dynamically adjust their behaviour in response to information and policies, the impact of NPIs becomes visible with a time lag of around five weeks. Supplementary robustness checks and an alternative difference-in-differences framework analysis do not fundamentally alter the main conclusions. Finally, extending the analysis to excess mortality, I find that the lockdown measures would have been associated with a lower excess mortality in Sweden by 25 percentage points, with a steep age gradient of 29 percentage points for the most vulnerable elderly cohort. The outcome of this study can assist policymakers in laying out future guidelines to further protect public health, as well as facilitate plans for economic recovery.”

[A COVID-19-Based Modified Epidemiological Model and Technological Approaches to Help Vulnerable Individuals Emerge from the Lockdown in the UK.](#) **Anderez DO et al., Sensors 20**

(17) 4967. “COVID-19 has shown a relatively low case fatality rate in young healthy individuals, with the majority of this group being asymptomatic or having mild symptoms. However, the severity of the disease among the elderly as well as in individuals with underlying health conditions has caused significant mortality rates worldwide. Understanding this variance amongst different sectors of society and modelling this will enable the different levels of risk to be determined to enable strategies to be applied to different groups. Long-established compartmental epidemiological models like SIR and SEIR do not account for the variability encountered in the severity of the SARS-CoV-2 disease across different population groups. The objective of this study is to investigate how a reduction in the exposure of vulnerable individuals to COVID-19 can minimise the number of deaths caused by the disease, using the UK as a case study. To overcome the limitation of long-established compartmental epidemiological models, it is proposed that a modified model, namely SEIR-v, through which the population is separated into two groups regarding their vulnerability to SARS-CoV-2 is applied. This enables the analysis of the spread of the epidemic when different contention measures are applied to different groups in society regarding their vulnerability to the disease. A Monte Carlo simulation (100,000 runs) along the proposed SEIR-v model is used to study the number of deaths which could be avoided as a function of the decrease in the exposure of vulnerable individuals to the disease. The results indicate a large number of deaths could be avoided by a slight realistic decrease in the exposure of vulnerable groups to the disease. The mean values across the simulations indicate 3681 and 7460 lives could be saved when such exposure is reduced by 10% and 20% respectively. From the encouraging results of the modelling a number of mechanisms are proposed to limit the exposure of vulnerable individuals to the disease. One option could be the provision of a wristband to vulnerable people and those without a smartphone and contact-tracing app, filling the gap created by systems relying on smartphone apps only. By combining very dense contact tracing data from smartphone apps and wristband signals with information about infection status and symptoms, vulnerable people can be protected and kept safer.”

[An analysis of the policy responses to the COVID-19 pandemic in France, Belgium, and Canada.](#) Desson Z et al., **Health Policy and Technology, pre-proof.**

“This paper presents an overview and comparative analysis of the epidemiological situation and the policy responses in France, Belgium, and Canada during the early stages of the 2020 Covid-19 pandemic (Feb.-Aug. 2020). These three countries are compared because they represent a spectrum of different governance structures while also being OECD nations that are similar in many other respects. Methods: A rapid review of primary data from the three countries was conducted. Data was collected from official government documents whenever possible, supplemented by information from international databases and local media reports. The data was then analyzed to identify common patterns as well as significant divergences across the three countries, especially in the areas of health policy and technology use. Results: France, Belgium and Canada faced differing epidemiological situations during the Covid-19 pandemic, and the wide variety of policy actions taken appears to be linked to existing governance and healthcare structures. The varying degrees of federalism and regional autonomy across the three countries highlight the different constraints faced by national policy-makers within different governance models. Conclusions: The actions taken by all three countries appear to have been largely dictated by existing health system capacity, with increasing federalism associated with more fragmented strategies and less coordination across jurisdictions. However, the implications of certain policies related to economic resilience and health system capacity cannot yet be fully evaluated and may even prove to have net negative impacts into the future.”

Commentaries

[Resurgence of covid-19 in Japan](#). Shimizu K, BMJ, 370:m3221

[Covid-19: breaking the chain of household transmission](#). Haroon S, BMJ, 370:m3181.

Useful resources

Public Health Wales have prepared a [series of rapid evidence summaries](#) in response to the question: *What evidence is there to inform the development and safe delivery of a COVID-19 mass vaccination campaign in developed countries that maximises uptake and minimises the risk of infection?*

Long term rehabilitation needs

Guidance

[COVID-19: long-term health effects](#). Public Health England. (published online 7/9/20).

Rapid reviews

[Clinical characteristics, cause analysis and infectivity of COVID-19 nucleic acid re-positive patients: A literature review](#). Li Y et al., *Journal of Medical Virology*,

<https://doi.org/10.1002/jmv.26491>. "Coronavirus disease 2019 (COVID-19) poses a serious threat to human health and lives. The virus is still spreading throughout the world, and the cumulative number of confirmed cases is increasing. After patients with COVID-19 are treated and discharged, some have repeated clinical symptoms and become positive for nucleic acid tests a second time. Through analysis and review of the existing literature, the proportion of re-positive patients in the discharged patient population and their clinical characteristics were systematically described for the first time. Furthermore, an in-depth analysis of the causes of re-positive nucleic acid tests and the potential transmission of the disease provides the basis for the management and protection of discharged patients with COVID-19."

Emerging evidence

[Development of an integrated rehabilitation pathway for individuals recovering from covid-19 in the community](#). Sivan M et al., *J Rehab Med*, 52 (8). "Objective: COVID-19 is a

multisystem illness with considerable long-term physical, psychological, cognitive, social and vocational sequelae in survivors. The aim of this study is to describe the development of an integrated rehabilitation pathway using tele-medicine approach to manage these sequelae in a systematic and efficient way. Methods: A multidisciplinary team of professionals used a consensus method to define pathway referral criteria based on the COVID-19 Yorkshire Rehabilitation Screen (C19-YRS) telephone screening tool developed previously by the team. Specialists needed for the pathway to operate were also decided. Results: A rehabilitation pathway, which spans the acute hospital trust, community trust and primary care service within the UK National Health Service (NHS) service model was developed. C19-YRS referral criteria thresholds for informing the decision making process were defined. A dedicated multidisciplinary COVID-19 rehabilitation team is responsible for dealing with the management of complex cases with needs spanning across multiple domains of the health condition. Conclusion: An integrated COVID-19 rehabilitation pathway based on our

previously published C19-YRS tool is proposed. Future research is needed for validation of the pathway. We recommend health services dealing with the pandemic to adopt such a pathway to manage the care of the COVID-19 survivors in the community.”

[Mental and behavioural disorders and COVID-19-associated death in older people.](#) Boland B & Gale T, *British Journal of Psychiatry*, 6, e101, 1–3. “Health factors such as diabetes, severe obesity and chronic kidney disease are all associated with a more severe outcome following coronavirus disease 2019 (COVID-19) infection. However, there has been little exploration into the impact of mental and behavioural disorders on outcomes associated with COVID-19. We investigated outcomes for older people who used mental health services. Those who had a COVID-19-associated death had previously rated worse across a range of health and social problems, including mental health related problems. Our findings evidence the need to urgently explore whether mental and behavioural disorders should also be considered a health risk factor for a more severe outcome from COVID-19 infection in older people.”

Commentaries

[Why the biopsychosocial model needs to be the underpinning philosophy in rehabilitation pathways for patients recovering from COVID-19.](#) Wainwright TW & Low M, *Integrated Healthcare Journal*, 2 (1).

[Anticipating the long-term cardiovascular effects of COVID-19.](#) Becker RC, *Journal of Thrombosis and Thrombolysis*.

[COVID-19 and its impact on neurological manifestations and mental health: the present scenario.](#) Sultana S & Ananthapur V, *Neurol Sci*, 31, 1–6.

[Neuropsychological consequences of Covid-19.](#) Wilson BA et al., *Journal of Neuropsychological Rehabilitation*, 30 (9).

[Effect of COVID-19 on the Organs.](#) Jain U, *Cureus*, 12(8): e9540.

Screening and testing

Guidance

[Coronavirus \(COVID-19\): getting tested \(updated\).](#) Department of Health and Social Care. (last updated 7/9/20).

Rapid reviews

[Digital contact tracing technologies in epidemics: a rapid review.](#) Anglemeyer A et al., *Cochrane Database of Systematic Reviews* (18/8/20). “The effectiveness of digital solutions is largely unproven as there are very few published data in real-world outbreak settings. Modelling studies provide low-certainty evidence of a reduction in secondary cases if digital contact tracing is used together with other public health measures such as self-isolation. Cohort studies provide very low-certainty evidence that digital contact tracing may produce more reliable counts of contacts and reduce time to complete contact tracing. Digital solutions may have equity implications for at-risk populations with poor internet access and poor access to digital technology. Stronger primary

research on the effectiveness of contact tracing technologies is needed, including research into use of digital solutions in conjunction with manual systems, as digital solutions are unlikely to be used alone in real-world settings. Future studies should consider access to and acceptability of digital solutions, and the resultant impact on equity. Studies should also make acceptability and uptake a primary research question, as privacy concerns can prevent uptake and effectiveness of these technologies.”

[Rapid, point-of-care antigen and molecular-based tests for diagnosis of SARS-CoV-2](#)

[infection](#). Dinnes J, *Cochrane Database of Systematic Reviews*,

<https://doi.org/10.1002/14651858.CD013705>. “This review identifies early-stage evaluations of point-of-care tests for detecting SARS-CoV-2 infection, largely based on remnant laboratory samples. The findings currently have limited applicability, as we are uncertain whether tests will perform in the same way in clinical practice, and according to symptoms of COVID-19, duration of symptoms, or in asymptomatic people. Rapid tests have the potential to be used to inform triage of RT-PCR use, allowing earlier detection of those testing positive, but the evidence currently is not strong enough to determine how useful they are in clinical practice. Prospective and comparative evaluations of rapid tests for COVID-19 infection in clinically relevant settings are urgently needed. Studies should recruit consecutive series of eligible participants, including both those presenting for testing due to symptoms and asymptomatic people who may have come into contact with confirmed cases. Studies should clearly describe symptomatic status and document time from symptom onset or time since exposure. Point-of-care tests must be conducted on samples according to manufacturer instructions for use and be conducted at the point of care. Any future research study report should conform to the Standards for Reporting of Diagnostic Accuracy (STARD) guideline.”

Emerging evidence

[Anosmia and Ageusia as Predictive Signs of COVID-19 in Healthcare Workers in Italy: A](#)

[Prospective Case-Control Study](#). La Torre G et al., *Journal of Clinical Medicine*. “Background: The aim of this study was to investigate the diagnostic accuracy of symptoms and signs in healthcare workers (HCW) with Sars-CoV-2. Methods: This was a case-control study. Cases consisted of symptomatic healthcare workers who had a positive SARS-CoV-2 real-time polymerase chain reaction (RT-PCR) test, while controls were symptomatic healthcare workers with a negative RT-PCR test. For each symptom, ROCs were plotted. Diagnostic accuracy was calculated using the sensitivity, specificity, and positive and negative predictive values. A logistic regression analysis was carried out for calculating the OR (95% CI) for each symptom associated to the SARS-CoV-2 positivity. Results: We recruited 30 cases and 75 controls. Fever had the best sensitivity while dyspnea, anosmia, and ageusia had the highest specificity. The highest PPVs were found again for dyspnea (75%), anosmia (73.7%), and ageusia (66.7%). Lastly, the highest NPVs were related to anosmia (81.4%) and ageusia (79.3%). Anosmia (OR = 14.75; 95% CI: 4.27–50.87), ageusia (OR = 9.18; 95% CI: 2.80–30.15), and headache (OR = 3.92; 95% CI: 1.45–10.56) are significantly associated to SARS-CoV-2 positivity. Conclusions: Anosmia and ageusia should be considered in addition to the well-established fever, cough, and dyspnea. In a resource-limited setting, this method could save time and money.”

[Universal Shelter-in-Place Versus Advanced Automated Contact Tracing and Targeted Isolation: A Case for 21st-Century Technologies for SARS-CoV-2 and Future Pandemics.](#)

Nuzzo A et al., *Mayo Clin Proc*, 95(9):1898-1905. “Objective: To model and compare effect of digital contact tracing versus shelter-in-place on severe acute respiratory syndrome - coronavirus 2 (SARS-

CoV-2) spread. Methods: Using a classical epidemiologic framework and parameters estimated from literature published between February 1, 2020, and May 25, 2020, we modeled two non-pharmacologic interventions - shelter-in-place and digital contact tracing - to curb spread of SARS-CoV-2. For contact tracing, we assumed an advanced automated contact tracing (AACT) application that sends alerts to individuals advising self-isolation based on individual exposure profile. Model parameters included percentage population ordered to shelter-in-place, adoption rate of AACT, and percentage individuals who appropriately follow recommendations. Under influence of these variables, the number of individuals infected, exposed, and isolated were estimated.

Results: Without any intervention, a high rate of infection (>10 million) with early peak is predicted. Shelter-in-place results in rapid decline in infection rate at the expense of impacting a large population segment. The AACT model achieves reduction in infected and exposed individuals similar to shelter-in-place without impacting a large number of individuals. For example, a 50% AACT adoption rate mimics a shelter-in-place order for 40% of the population and results in a greater than 90% decrease in peak number of infections. However, as compared to shelter-in-place, with AACT significantly fewer individuals would be isolated. Conclusion: Wide adoption of digital contact tracing can mitigate infection spread similar to universal shelter-in-place, but with considerably fewer individuals isolated."

[An Integrated Strategy for the Prevention of SARS-CoV-2 Infection in Healthcare Workers: A Prospective Observational Study.](#) Cattelan AM et al., *Int J Environ Res Public Health*, **17(16):E5785**. doi: [10.3390/ijerph17165785](https://doi.org/10.3390/ijerph17165785).

"Background: Since the beginning of SARS-CoV-2 outbreak, a large number of infections have been reported among healthcare workers (HCWs). The aim of this study was to investigate the occurrence of SARS-CoV-2 infection among HCWs involved in the first management of infected patients and to describe the measures adopted to prevent the transmission in the hospital. Methods: This prospective observational study was conducted between February 21 and April 16, 2020, in the Padua University Hospital (north-east Italy). The infection control policy adopted consisted of the following: the creation of the "Advanced Triage" area for the evaluation of SARS-CoV-2 cases, and the implementation of an integrated infection control surveillance system directed to all the healthcare personnel involved in the Advance Triage area. HCWs were regularly tested with nasopharyngeal swabs for SARS-CoV-2; body temperature and suggestive symptoms were evaluated at each duty. Demographic and clinical data of both patients and HCWs were collected and analyzed; HCWs' personal protective equipment (PPE) consumption was also recorded. The efficiency of the control strategy among HCWs was evaluated identifying symptomatic infection (primary endpoint) and asymptomatic infection (secondary endpoint) with confirmed detection of SARS-CoV-2. Results: 7595 patients were evaluated in the Advanced Triage area: 5.2% resulted positive and 72.4% was symptomatic. The HCW team was composed of 60 members. A total of 361 nasopharyngeal swabs were performed on HCWs. All the swabs resulted negative and none of the HCWs reached the primary or the secondary endpoint. Conclusions: An integrated hospital infection control strategy, consisting of dedicated areas for infected patients, strict measures for PPE use and mass surveillance, is successful to prevent infection among HCWs."

Commentary

[Airborne transmission of covid-19.](#) Wilson N, *BMJ*, 370:m3206.

[Covid-19 mass testing programmes.](#) Raffle AE, *BMJ*, 370:m3262.

[Covid-19: Is local contact tracing the answer?](#) Iacobucci G, BMJ, 370:m3248.

Broader impacts on health outcomes

Commentary from the collaboration

[The Health Foundation COVID-19 Survey – second poll](#). The Health Foundation & Ipsos MORI. (published online September 2020).

Rapid reviews

Mental health

[The psychosocial impact of flu influenza pandemics on healthcare workers and lessons learnt for the COVID-19 emergency: a rapid review](#). Barello S et al., *International Journal of Public Health*. “Across all the studies—both qualitative and quantitative—HCWs working during the epidemic reported frequent concerns regarding their own health and the fear of infecting their families, friends and colleagues. Moreover, social isolation, uncertainty, fears of stigmatization and reluctance to work or considering absenteeism were frequently reported. Moreover, many studies highlighted a high prevalence of high levels of stress, anxiety and depression symptoms, which could have long-term psychological implications in HCWs. This rapid review offers an overview of the major concerns regarding HCWs’ psychosocial well-being and possible preventive strategies, which could be useful for the current COVID-19 outbreak and similar future pandemics. Studies suggested to invest on preventive psychological, social, family and physical support and to guaranteeing reasonable work conditions and others in order to protect HCWs from the long-lasting psychological effect of the COVID-19 pandemic.”

[Coronavirus Disease \(COVID-19\) and Traumatic Stress: Probable Risk Factors and Correlates of Posttraumatic Stress Disorder](#). Boyraz G & Legros DN, *Journal of Loss and Trauma*, 25 (6-7), 503-22. “The Coronavirus Disease (COVID-19) outbreak, which first began in December 2019 in China, has since become a global health crisis with vast and devastating consequences for individuals and societies. Both earlier research and recent findings suggest that infectious disease epidemics and pandemics can be highly traumatic experiences for some individuals and lead to posttraumatic stress disorder (PTSD) and chronic psychological distress. Mental health risks associated with COVID-19 have yet to be systematically studied; however, the emerging literature on COVID-19, as well as previous studies on infectious disease outbreaks provide insights into probable risk factors and correlates of PTSD. In this paper, we provide a brief review of these studies and discuss probable risk factors for PTSD and chronic psychological distress related to COVID-19.”

Emerging evidence

Mental health – public

[How has Covid-19 and associated lockdown measures affected loneliness in the UK? What Works Centre for Wellbeing](#). “People who felt most lonely prior to Covid in the UK now have even higher levels of loneliness. This increase began as physical distancing and lockdown measures were introduced in the UK, in March 2020. Adults most at risk of being lonely, and increasingly so over this period, have one or more of the following characteristics: they are young, living alone, on low

incomes, out of work and, or with a mental health condition. The impact on wellbeing from people at risk of loneliness is likely to be compounded by other economic and social impacts experienced by the same people, such as those experiencing job losses and health anxieties.”

[Wellcome Monitor 2020 Covid-19 Study](#). Craig S et al., Wellcome & NatCen. “This report looks at British adults’ views and experiences during the first few weeks of lockdown in April 2020, when hospitalisations and deaths due to COVID-19 were at their highest and government restrictions at their strictest. It explores what the public were concerned about and how difficult they were finding it to follow the restrictions in place. It also looks at how clear people felt information about what they should do to stay safe and limit the spread of infection was, their levels of trust in the information they were receiving from different sources, and how these were associated with the perceived effectiveness and take up of spread-prevention measures. These data are useful not just retrospectively, but also for helping to plan in the longer-term and consider how best to address future outbreaks.”

[Are older adults also at higher psychological risk from COVID-19?](#) Garcia-Portilla P et al., *Aging and Mental Health*. doi: 10.1080/13607863.2020.1805723. “Objective: Given the lack of information on the psychological impact of COVID-19 on people aged 60, we aimed to describe their psychological responses to this pandemic and lockdown situation and compare them with those under 60 years of age. Methods: Secondary analysis of a larger online cross-sectional study designed to determine the psychological impact of the COVID-19 pandemic and lockdown across Spain. We analyzed a total of 1690 respondents aged 60 years and compared them with 13,363 respondents under 60 years of age. We employed the Depression, Anxiety, and Stress Scale and the Impact of Event Scale to evaluate psychological responses. Results: In all, 52.6% of women and 34.3% of men were found to be probable cases of any emotional distress ($p < 0.001$). In both sexes, the most common psychological response was avoidance behavior (34.7% and 23.8%, respectively), followed by depression (28.5 and 14.2%). Older women and men were considered probable cases of any emotional distress less often than younger ones (women: 52.6% vs. 72.3%, $p < 0.001$; men: 34.3% vs. 50.6%, $p < 0.001$). Finally, the results of the binary logistic regression showed that only depressive and stress responses are psychological factors associated with age group [age 60 years, O.R. $\frac{1}{4}$ 0.617 (95% CI $\frac{1}{4}$ 0.501 0.759) and 0.437 (95% CI $\frac{1}{4}$ 0.334 0.573), respectively]. Conclusion: Contrary to our hypothesis and despite the high percentage of emotional distress we found in older adults, especially women, they are actually at lower risk of developing depressive and stress consequences from COVID-19 and lockdown than those under 60 years of age. That said, we believe our results highlight the need for expert guidance in this age group, especially older women living alone.”

Mental health – Pre-existing conditions

[Understanding the experiences of people who inject drugs during the COVID-19 pandemic: Interim report 4](#). Hines LA et al., University of Bristol. (published online 4/9/20). “The LUCID-B (Living Under Coronavirus and Injecting Drugs in Bristol) study is a rapid qualitative interview study examining how people living in Bristol who inject drugs are being affected by the COVID-19 pandemic, lockdown, and changes to service delivery. Working with Bristol Drugs Project (BDP), the researchers from University of Bristol are undertaking up to 30 in-depth interviews with people who inject drugs (PWID). This interim report has been created to keep key local and national stakeholders updated with interview findings before a more rigorous analysis takes place, to allow rapid responses in service development and inform further research.”

Exploring the impact of the COVID-19 pandemic and UK lockdown on individuals with experience of eating disorders. Branley-Bell D & Talbot CV, *Journal of Eating Disorders*, 8(44).

“The coronavirus disease 2019 (COVID-19) pandemic may raise unique challenges for individuals with experience of eating disorders. Many factors have potential for detrimental impacts on psychological wellbeing and eating disorder recovery, including: Disruption to living situations, ‘social distancing’ restrictions, difficult access to healthcare, and societal changes to food behaviours and technology usage. To date, little is known on the impact of the pandemic on this population, particularly within the UK. Method: A mixed-methods online survey was developed for the purpose of this study. Data was collected from 129 individuals currently experiencing, or in recovery from, an eating disorder during the early stages of the UK pandemic lockdown. Participants were aged between 16 and 65 years, with 121 participants identifying as female, 7 male and 1 participant preferring not to disclose their gender. Results: Findings suggest that the pandemic is having a profound, negative impact upon individuals with experience of eating disorders. Eight key themes were generated: Disruption to living situation, increased social isolation and reduced access to usual support networks, changes to physical activity rates, reduced access to healthcare services, disruption to routine and perceived control, changes to relationship with food, increased exposure to triggering messages, and positive outcomes. The results suggest detrimental impacts on psychological wellbeing including decreased feelings of control, increased feelings of social isolation, increased rumination about disordered eating, and low feelings of social support. Conclusions: Individuals with eating disorders are at significant risk of negative impacts of the pandemic. There is a vital need for interventions to support this population. Inequalities in healthcare provision were identified, emphasising a need for a more cohesive approach to remote treatment across UK healthcare services. Positive aspects of technology use were identified but the results suggest a need to address and/or limit the potential for negative impacts of public messages around food and exercise behaviours, and to co-design technologies with end-users to facilitate effective treatment.”

Public health

Impact of COVID-19 lockdown on lifestyle adherence in stay-at-home patients with chronic coronary syndromes: Towards a time bomb. Cransec-Miet A et al., *International Journal of Cardiology*, in press.

“We aimed to evaluate the impact of coronavirus disease 2019 (COVID-19)-related lockdown on adherence to lifestyle and drug regimens in stay-at-home chronic coronary syndromes patients living in urban and rural areas. Methods: A cross-sectional population-based study was performed in patients with chronic coronary syndromes. A sample of 205 patients was randomly drawn from the RICO (Observatoire des infarctus de Côte d’Or) cohort. Eight trained interviewers collected data by phone interview during week 16 (April 13 to April 19), i.e. 4 weeks after implementation of the French lockdown (start March 17, 2020). Results: Among the 195 patients interviewed (of the 205, 3 had died, 1 declined, 6 lost), mean age was 65.5 ± 11.1 years. Only six patients (3%) reported drug discontinuation, mainly driven by media influence or family members. All 166 (85%) patients taking aspirin continued their prescribed daily intake. Lifestyle rules were less respected since almost half (45%) declared >25% reduction in physical activity, 26% of smokers increased their tobacco consumption by >25%, and 24% of patients increased their body weight > 2 kg. The decrease in physical activity and the increase in smoking were significantly greater in urban patients ($P < .05$). Conclusions: The COVID-19-related lockdown had a negative impact on lifestyle in a representative sample of stay-at-home CCS patients.”

[Child and parent physical activity, sleep and screen time during COVID-19 compared to pre-pandemic nationally representative data and associations with mental health.](#)

Olive LS et al., PsyArXiv. (preprint). “Objective: To investigate differences in movement behaviors (physical activity, sleep, screen time) in both parents and children during the early stages of COVID-19 pandemic in Australia, compared to pre-COVID-19 national data; and, estimate associations between these movement behaviors with parent and child mental health. Methods: We used cross-sectional baseline data from the COVID-19 Pandemic Adjustment Study (CPAS; N=2,365). Participants were parents of children aged ≤18 years, residing in Australia. We drew on nationally representative pre-COVID data from the Longitudinal Study of Australian Children (LSAC; N=9,438). In both studies, parents provided the same self-report measures of physical activity, sleep quality, as well as measures of child physical activity and screen time. Parents reported on their own and their child’s mental health. Results: Compared to LSAC, children in CPAS had more sleep problems (17.4% vs 8.9%, $p<.001$) and more weekend screen time (3.98 hours vs 3.35 hours, $p<.001$), while more parents had poor sleep quality (56.7% vs 21.0%, $p<.001$) despite increased weekly physical activity (3.86 days vs 2.85 days, $p<.001$). Children’s sleep problems were associated with increased depression, anxiety and irritability symptoms, after accounting for physical activity and screen time (all $p<.001$). Poorer parent sleep quality and lower levels of physical activity were associated with poorer mental health across all indicators (all $p\leq.001$). Conclusion: Government funded mental health programs to implement evidence-based sleep interventions for children and their parents, along with targeted messaging around physical activity should be considered to promote mental health within the family context during lockdown restrictions.”

Commentaries

[Fears grow of nutritional crisis in lockdown UK.](#) Baraniuk C, BMJ, 370:m3193

[The COVID-19 pandemic and epidemiologic insights from recession-related suicide mortality.](#) Bastiampillai T et al., Molecular Psychiatry, <https://doi.org/10.1038/s41380-020-00875-4>.

Impact on non-Covid care

Guidance

[How mental health care should change as a consequence of the COVID-19 pandemic.](#)

Moreno C et al., Lancet Psychiatry, 7 (9), 813-24.

Rapid reviews

Outpatient care

[Delivering healthcare remotely to cardiovascular patients during COVID-19: A rapid review of the evidence.](#) Neubeck L et al., European Journal of Cardiovascular Nursing, 19 (6), 486-94.

“Background: Although attention is focused on addressing the acute situation created by the COVID-19 illness, it is imperative to continue our efforts to prevent cardiovascular morbidity and mortality, particularly during a period of prolonged social isolation which may limit physical activity, adversely affect mental health and reduce access to usual care. One option may be to deliver healthcare interventions remotely through digital healthcare solutions. Therefore, the aim of this paper is to

bring together the evidence for remote healthcare during a quarantine situation period to support people living with cardiovascular disease during COVID-19 isolation. Methods: The PubMed, CINAHL and Google Scholar were searched using telehealth OR digital health OR mHealth OR eHealth OR mobile apps AND COVID-19 OR quarantine search terms. We also searched for literature relating to cardiovascular disease AND quarantine. Results: The literature search identified 45 potentially relevant publications, out of which nine articles were included. Three overarching themes emerged from this review: (1) preparing the workforce and ensuring reimbursement for remote healthcare, (2) supporting mental and physical health and (3) supporting usual care. Conclusion: To support people living with cardiovascular disease during COVID-19 isolation and to mitigate the effects of quarantine and adverse effect on mental and physical well-being, we should offer remote healthcare and provide access to their usual care.”

Cancer care

[The Impact of the COVID-19 Pandemic on Genitourinary Cancer Care: Re-envisioning the Future.](#)

Wallis CJD et al., European Urology, in press. “A collaborative narrative review was conducted using literature published through May 2020 (PubMed), which comprised three main topics: reduced in-person interactions arguing for increasing virtual and image-based care, optimisation of the delivery of care, and the effect of COVID-19 in [health care facilities](#) on decision-making by patients and their families. Evidence synthesis: Patterns of care will evolve following the COVID-19 pandemic. Telemedicine, virtual care, and [telemonitoring](#) will increase and could offer broader access to multidisciplinary expertise without increasing costs. Comprehensive and integrative [telehealth](#) solutions will be necessary, and should consider patients’ mental health and access differences due to socioeconomic status. Investigations and treatments will need to maximise efficiency and minimise health care interactions. Solutions such as one stop clinics, day case surgery, [hypofractionated radiotherapy](#), and oral or less frequent drug dosing will be preferred. The pandemic necessitated a triage of those patients whose treatment should be expedited, delayed, or avoided, and may persist with [severe acute respiratory syndrome](#) coronavirus-2 (SARS-CoV-2) in circulation. Patients whose demographic characteristics are at the highest risk of complications from COVID-19 may re-evaluate the benefit of intervention for less aggressive cancers. Clinical research will need to accommodate virtual care and trial participation. Research dissemination and medical education will increasingly utilise virtual platforms, limiting in-person professional engagement; ensure data dissemination; and aim to enhance patient engagement. Conclusions: The COVID-19 pandemic will have lasting effects on the [delivery of health care](#). These changes offer opportunities to improve access, delivery, and the value of care for patients with genitourinary cancers but raise concerns that physicians and health administrators must consider in order to ensure equitable access to care.”

Emerging evidence

[The impact of the COVID-19 pandemic on noncommunicable disease resources and services: results of a rapid assessment.](#)

WHO. “With the rapid spread of COVID-19 across the world, the ability of countries to address and respond to NCDs has been impacted. The virus has caused broad disruptions to health services while at the same time drawing attention to countries’ NCD burden, as those living with NCDs are at increased risk of becoming severely ill with the virus. The disruption of health services is particularly problematic for those living with NCDs who need regular care. Several examples from countries show how the disruption of NCD services has directly

affected people. For example, screening, case identification, and referral systems for cancer have all been affected by the COVID-19 pandemic which has resulted in a substantial decrease in cancer diagnoses (6). The reduction in admission to hospital of patients with acute coronary syndrome often results in increases in out-of-hospital deaths and long-term complications of myocardial infarction (7). Disruption in rehabilitation services for people with NCDs in various countries has potentially impacted their functional outcomes and consequently increased the burden of care (8). These few examples, however, do not capture the whole picture around the world. There has not been comprehensive information gathered about the countries in which disruption of NCD related services has occurred nor the extent of those disruptions and the factors associated to those disruptions (such as inclusion in COVID-19 Strategic Plans). That information is important to a) understand how countries need to be supported during the response to COVID-19, b) plan how to build back better health systems with integrated NCD services after the pandemic and c) shed light to the consequences of the disruptions in people's lives. In line with this, the objective of this study was to gain direct in-depth knowledge from countries on the extent to which NCDs services have been affected during the COVID-19 response."

Primary care

[Respiratory specialists working in different ways: Development of a GP hotline and respiratory support service during the COVID-19 pandemic.](https://doi.org/10.7861/fhj.2020-0082) Kumar K, *Future Healthcare Journal*. <https://doi.org/10.7861/fhj.2020-0082>. "Integration of primary and secondary care for the management of respiratory disease is a long-held ambition. Here, we describe how respiratory specialists at a large NHS trust, working with primary care clinicians in the area, set up a GP hotline and respiratory support service in response to the COVID-19 pandemic, with the aim of enhancing delivery of care to patients in this unprecedented time. Working across traditional organisational boundaries in this way confers benefits to patients and clinicians, illustrating the value of new, integrated models of care."

Secondary care

[Establishing a remote clinical advice service during the COVID-19 pandemic.](https://doi.org/10.7861/fhj.2020-0092) Burrows S, *Future Healthcare Journal*. <https://doi.org/10.7861/fhj.2020-0092>. "Service redevelopment has taken place across the NHS in response to the COVID-19 pandemic. At North Bristol NHS Trust, six vulnerable medical staff in non-patient facing roles set up a virtual advice service called 'Ask the Medical Reg'. This service aimed to provide senior medical support to inpatient and community teams for general medical and COVID-19-related queries. Here we outline the structure of our service and present data from the first 4 weeks of operation. We describe how the service has supported both junior doctors working within the hospital and GPs and paramedics, helping with complex decisions to prevent unnecessary admissions."

[Neurosurgical referral patterns during the COVID-19 pandemic: A United Kingdom experience.](#) Jayakumar N et al., *World Neurosurgery*, preproof. "Electronic referrals were identified from the referrals database for the period between 01/01/2020 and 31/05/2020, inclusive, with the month of January used as a baseline. Demographics and referral diagnoses were captured on Excel (Microsoft). Statistical analyses were performed on SPSS v22 (IBM). Differences between referral volumes were evaluated by chi-square goodness-of-fit tests. Results: A total of 2293 electronic referrals were received during the study period. Median age was 63 years. Overall,

referrals fell significantly in volume during the study period ($\chi^2(4)=60.95$; $p<0.001$). Patterns in daily referrals as the pandemic progressed are described. There was a statistically significant reduction in the volume of referrals for degenerative spine cases and traumatic brain injuries ($p<0.001$).

Conclusions: Referrals for degenerative spine and traumatic brain injuries fell significantly during the pandemic which can be explained by the lower vehicular traffic and patient avoidance of healthcare services, respectively. The risk of neurological deterioration and increased morbidity and mortality, as a consequence, is of concern and neurosurgeons worldwide need to consider optimal strategies to mitigate these risks as the pandemic eases.”

Outpatient care

[Near Me at Home: codesigning the use of video consultations for outpatient](#)

[appointments in patients' homes](#). Beattie M et al., *BMJ Open Quality*, 9(3):e001035. “Reforming the delivery of outpatient appointments (OPA) was high on the healthcare policy agenda prior to COVID-19. The current pandemic exacerbates the financial and associated resource limitations of OPA. Videoconsulting provides a safe method of real-time contact for some remotely residing patients with hospital-based clinicians. One factor in failing to move from introduction of service change to its general adoption may be lack of patient and public involvement. This project, based in the largest Island in the Inner Hebrides of Scotland, aimed to codesign the use of the NHS Near Me video consulting platform for OPA to take place in the patient’s home. A codesign model was used as a framework. This included: step 1—presenting a process flow map of the current system of using Near Me to public participants and establishing their ideas on various steps in the process, step 2—conducting numerous Plan, Do, Study, Act (PDSA) tests and creating a current process flow diagram based on learning and step 3—conducting telephone interviews and thematic analysis of transcripts ($n=7$) to explore participants’ perceptions of being involved in the codesign process. Twenty-five adaptations were made to the Near Me at Home video appointment process from participants’ PDSA testing. Four themes were identified from thematic analysis of participants’ feedback of the codesign process, namely: altruistic motivation, valuing community voices, the usefulness of the PDSA cycles and the power of ‘word of mouth’. By codesigning the use of Near Me with people living in a remote area of Scotland, multiple adaptations were made to the processes to suit the context in which Near Me at Home will be used. Learning from testing and adapting with the public will likely be useful for others embarking on codesign approaches to improve spread and sustainability of quality improvement projects.”

[Organisational changes and challenges for inflammatory bowel disease services in the UK during the COVID-19 pandemic](#). Kennedy NA et al., *Frontline Gastroenterology*, 11(5).

“Objective To determine the challenges in diagnosis, monitoring, support provision in the management of inflammatory bowel disease (IBD) patients and explore the adaptations of IBD services. Methods: Internet-based survey by invitation of IBD services across the UK from 8 to 14 April 2020. Results: Respondents from 125 IBD services completed the survey. The number of whole-time equivalent gastroenterologists and IBD nurses providing elective outpatient care decreased significantly between baseline (median 4, IQR 4–7.5 and median 3, IQR 2–4) to the point of survey (median 2, IQR 1–4.8 and median 2, IQR 1–3) in the 6-week period following the onset of the COVID-19 pandemic ($p<0.001$ for both comparisons). Almost all (94%; 112/119) services reported an increase in IBD helpline activity. Face-to-face clinics were substituted for telephone consultation by 86% and video consultation by 11% of services. A variation in the provision of laboratory faecal calprotectin testing was noted with 27% of services reporting no access to faecal calprotectin, and a

further 32% reduced access. There was also significant curtailment of IBD-specific endoscopy and elective surgery. Conclusions: IBD services in the UK have implemented several adaptive strategies in order to continue to provide safe and high-quality care for patients. National Health Service organisations will need to consider the impact of these changes in current service delivery models and staffing levels when planning exit strategies for post-pandemic IBD care. Careful planning to manage the increased workload and to maintain IBD services is essential to ensure patient safety.”

[Cohort study of outpatient hemodialysis management strategies for COVID-19 in North-West London.](#) Medjeral-Thomas NR et al., *Kidney International Reports*,

<https://doi.org/10.1016/j.ekir.2020.08.022>. “Dialysis patients are at risk of severe COVID-19. We managed COVID-19 haemodialysis outpatients in dedicated satellite dialysis units. This provided rare opportunity to study early disease progress in community-based patients. We aimed to (1) understand COVID-19 progression, (2) identify markers of future clinical severity and (3) assess associations between dialysis management strategies and COVID-19 clinical outcomes. Methods: We conducted a cohort study of all outpatients managed at a COVID-19 haemodialysis unit. We analysed data recorded as part of providing COVID-19 clinical care. We analysed associations between features at diagnosis and the first 3 consecutive haemodialysis sessions in patients who required future hospital admission, and those who had died at 28 days. Results: Isolated outpatient haemodialysis was provided to 106 patients over 8 weeks. No patients received antiviral medication or hydroxychloroquine. 21 patients (20%) were admitted at COVID-19 diagnosis. 29 of 85 patients (34%) were admitted after initial outpatient management. 16 patients (15%) died. By multivariate analysis, non-active transplant list status, use of institutional transport, and increased white cell count associated with future hospitalisation and increased age associated with death. Oxygen saturations progressively decreased over the first 3 dialysis sessions in the cohorts who progressed to future hospital admission or death. Mean ultrafiltration volume of the first three haemodialysis sessions was reduced in the same cohorts. Conclusions: Outpatient haemodialysis in patients with COVID-19 is safe for patients and staff. Features at the first 3 dialysis sessions can identify individuals at risk of future hospitalisation and death from COVID-19.”

[Remote cardiac rehabilitation is a good alternative of outpatient cardiac rehabilitation in the COVID-19 era.](#) Nakayama A, *Environmental Health and Preventive Medicine*, **25(48)**.

“We prospectively investigated patients hospitalized for heart failure (HF) with a left ventricular ejection fraction of < 50%. As for patients who participated in the remote CR program, telephone support was provided by cardiologists and nurses who specialized in HF every 2 weeks after discharge. The emergency readmission rate within 30 days of discharge was compared among the outpatient CR, remote CR, and non-CR groups, and the EQ-5D score was compared between the outpatient CR and remote CR groups. Results: The participation rate of HF patients in our remote CR program elevated during the COVID-19 pandemic. As observed in the outpatient CR group (n = 69), the emergency readmission rate within 30 days of discharge was lower in the remote CR group (n = 30) than in the non-CR group (n = 137) (P = 0.02). The EQ-5D score was higher in the remote CR group than in the outpatient CR group (P = 0.03) 30 days after discharge. Conclusions: Remote CR is as effective as outpatient CR for improving the short-term prognosis of patients hospitalized for heart failure post-discharge. This suggests that the remote CR program can be provided as a good alternative to the outpatient CR program.”

Emergency care

Barriers to seeking emergency care during the COVID-19 pandemic may lead to higher morbidity and mortality – a retrospective study from a Swiss university hospital. Hautz WE, *Swiss Medical Weekly*, 150:w20331. “While COVID-19 significantly overburdens emergency rooms (ERs) and hospitals in affected areas, ERs elsewhere report a marked decrease in patient numbers. This study aimed to investigate the assumption that patients with urgent problems currently avoid the ER. Electronic health records from the ER of a large Swiss university hospital were extracted for three periods: first, the awareness phase (ap) from the publication of the national government’s initiative “How to protect ourselves” on 1 March 2020 to the lockdown of the country on 16 March; second, the mitigation phase (mp) from 16–30 March; finally, patients presenting in March 2019 were used as a control group. We compared parameters including a critical illness as the discharge diagnosis (e.g., myocardial infarction, stroke, sepsis and ER death) using logistic and linear regression, as well as 15-day bootstrapped means and 95% confidence intervals for the control group. In the three periods, a total of 7143 patients were treated. We found a 24.9% (42.5%) significant decline in the number of patients presenting during the ap (mp). Patients presenting during the mp were more likely to be critically ill. There was an increase of 233% and 367% (ap and mp, respectively) of ER deaths (none related to COVID-19) compared to the control period. Apart from polytrauma (increase of 5% in the mp), all other critical illnesses as discharge diagnosis showed a lower incidence in descriptive analysis. Significantly more patients died in the ER in both the ap and mp. Barriers to seeking emergency care during COVID-19 pandemic may lead to higher morbidity and mortality. Healthcare authorities and hospitals must ensure low barriers to treatment and business as usual for all patients.”

Mental health services

Rapid response to crisis: Health system lessons from the active period of COVID-19. Salvador-Carulla L et al., *Health Policy and Technology*, preproof. “This paper outlines the need for a health systems approach and rapid response strategy for gathering information necessary for policy decisions during pandemics and similar crises. It suggests a new framework for assessing the phases of the pandemic. Method: The paper draws its information and conclusions from a rapid synthesis and translation process (RSTP) of a series of webinars and online discussions from the Pandemic-Mental Health International Network (Pan-MHIN) - policy experts from across 16 locations in Australia, Denmark, Italy, Spain, Taiwan, the UK and the USA. While the initial focus of this research was on mental health, COVID-19 has raised much broader issues and questions for health planners. Results: We identified gaps affecting the capacity to respond effectively and quickly, including in relation to system indicators, the inadequacy of the prior classification of the phases of the pandemic, the absences of a healthcare ecosystem approach, and the quick shift to digital technologies. The strengths and weaknesses of COVID-19 responses across different systems, services, sites and countries been identified and compared, including both low and high impacted areas. Conclusions: There is an urgent need for managerial epidemiology based on healthcare ecosystem research encompassing multidisciplinary teams, visualization tools and decision analytics for rapid response. Policy and healthcare context played a key role in the response to COVID-19. Its severity, the containment measures and the societal response varied greatly across sites and countries. Understanding this variation is vital to assess the impact of COVID-19 in specific areas such as ageing or mental health.”

Trauma and orthopaedics

[The impact of COVID-19 on trauma and orthopaedic patients requiring surgery during the peak of the pandemic.](https://doi.org/10.1302/2633-1462.19.BJO-2020-0108.R1) Mackay ND et al., *Bone and Joint Open*, <https://doi.org/10.1302/2633-1462.19.BJO-2020-0108.R1>.

“We retrospectively included all patients who underwent a trauma or urgent orthopaedic procedure from 23 March to 23 April 2020. Electronic records were reviewed for COVID-19 swab results and mortality, and patients were screened by telephone a minimum 14 days postoperatively for symptoms of COVID-19. A total of 214 patients had orthopaedic surgical procedures, with 166 included for analysis. Patients undergoing procedures under general or spinal anaesthesia had a higher risk of contracting perioperative COVID-19 compared to regional/local anaesthesia ($p = 0.0058$ and $p = 0.0007$, respectively). In all, 15 patients (9%) had a perioperative diagnosis of COVID-19, 14 of whom had fragility fractures; six died within 30 days of their procedure (40%, 30-day mortality). For proximal femoral fractures, our 30-day mortality was 18.2%, compared to 7% in 2019. Based on our findings, patients undergoing procedures under regional or local anaesthesia have minimal risk of developing COVID-19 perioperatively. Those with multiple comorbidities and fragility fractures have a higher morbidity and mortality if they contract COVID-19 perioperatively; therefore, protective care pathways could go some way to mitigate the risk. Our 30-day mortality of proximal femoral fractures was 18.2% during the COVID-19 pandemic in comparison to the annual national average of 6.1% in 2018 and the University Hospital Coventry average of 7% for the same period in 2019, as reported in the National Hip Fracture Database. Patients undergoing procedures under general or spinal anaesthesia at the peak of the pandemic had a higher risk of contracting perioperative COVID-19 compared to regional block or local anaesthesia. We question whether young patients undergoing day-case procedures under regional block or local anaesthesia with minimal comorbidities require fourteen days self-isolation; instead, we advocate that compliance with personal protective equipment, a negative COVID-19 swab three days prior to surgery, and screening questionnaire may be sufficient.”

Social care

[Screening for economic hardship for child welfare-involved families during the COVID-19 pandemic: A rapid partnership response.](#) Fallon B et al., *Child Abuse and Neglect*, pre-proof.

“Given the range of negative consequences related to the pandemic and the evolving supports available to families, child protection workers needed a clinical tool to guide and support work with families informed by an understanding of economic hardship. The objective of this paper is to report on the development and implementation strategy of a tool to be used for practice intervention during the pandemic. Methods: Action research methodology was utilized in the creation of the clinical tool. The tool’s development and implementation occurred through an academic/child welfare sector partnership involving child welfare agencies representing diverse regions and populations in Ontario, Canada. Factor analysis of representative child welfare data from the Ontario Incidence Study of Reported Child Abuse and Neglect 2018 (OIS-2018) on economic hardship was used to inform the development of questions on the clinical tool. Results: The development and implementation strategy of the clinical tool are described, including the results from analyses of the OIS-2018. Conclusions: Future directions for the project are discussed, including considerations for using this tool beyond the pandemic.”

Cancer care

[One Piece of the Jigsaw for the Cancer Recovery Strategy: Prevalence of COVID-19 in Patients With Cancer.](#) Moss C et al., *Cancer Control*, 27(3). “COVID-19 has forced governments to

make drastic changes to healthcare systems. To start making informed decisions about cancer care, we need to understand the scale of COVID-19 infection. Therefore, we introduced swab testing for patients visiting Guy's Cancer Centre. Our Centre is one of the largest UK Cancer Centers at the epicenter of the UK COVID-19 epidemic. The first COVID-19 positive cancer patient was reported on 29 February 2020. We analyzed data from 7-15 May 2020 for COVID-19 tests in our cancer patients. 2,647 patients attended for outpatient, chemotherapy, or radiotherapy appointments. 654 were swabbed for COVID-19 (25%). Of those tested, 9 were positive for COVID-19 (1.38%) of which 7 were asymptomatic. Cancer service providers will need to understand their local cancer population prevalence. The absolute priority is that cancer patients have the confidence to attend hospitals and be reassured that they will be treated in a COVID-19 managed environment."

Commentaries

[Managing uncertainty in the covid-19 era](#). Rutter H et al, BMJ, 370:m3349

Useful resources

[Digital innovation in adult social care: how we've been supporting communities during COVID-19](#). Local Government Association.

Forthcoming event: Insight 2020

[The Strategy Unit](#) is hosting a 6-week festival of virtual events, called *Insight 2020*, exploring some of the challenges facing decision-makers in health and care in 2020 and beyond; emerging models of practice to make best use of analysis to inform decision-making; and some of the exciting work that is already happening in this area.

Insight 2020: a festival of analysis and learning for the NHS, Local Government and our partners will run from **28 Sep to 13 Nov 2020**. The festival will comprise a mixture of events, workshops and panels, representing conversations at a local, national and international level. For example, our festival launch session includes [Ben Goldacre](#) talking about 'How open approaches can revolutionise health data science in the UK' and [Andi Orłowski](#) on "Dangerous analytics...and how local analysts can save you!", with Q&A hosted by [Professor Mohammed A Mohammed](#).

Who is *Insight 2020* for? We've collaborated with inspirational people and organisations across the sector to bring together a programme which has something for **everyone** who is involved with decision-making in health and care.

What will *Insight 2020* look like? Sessions will be varied and flexible. People can commit as little or as much time as they'd like, and most of the sessions will be recorded so you can fit them into your schedule in a way that suits you. Every session is free.

Each week will focus on a central theme, starting with a 'headline' presentation on the Monday. This will be supported by targeted sessions and the week's speakers will convene each Friday for an interactive panel discussion and Q&A to respond to the key debates raised during the week. The festival themes are:

Week 1: Our decision-making context in 2020

Week 2: The role of the Midlands Decision Support Network

Week 3: The analytical priorities of the Decision Support Network

Week 4: Building momentum around addressing health inequalities

Week 5: The decision-making toolbox

Week 6: Making the most of our decision-making resources

To register your interest please go to our [Eventbrite page](#). The full-week programmes will be released on a staggered basis starting from week commencing 7th September where you will be invited to register for specific sessions.

Any questions regarding the festival please contact David.callaghan@nhs.net or rachel.caswell@nhs.net.

This alert has formed part of a national evidence update service, provided by the Strategy Unit, as part of a collaboration to provide analytical support to the health and care system to help inform the initial response to COVID-19. Thank you for the very helpful feedback we have received since we published the first issue back in June. We'll be updating the evidence trackers on our [web site](#) to include all the links from the weekly alerts. In response to feedback, we'll be adding sub-themes to the trackers on rehabilitation needs, impacts on health outcomes, and impacts on non-Covid care, to help you navigate evidence to date.

For more information, visit: <https://www.strategyunitwm.nhs.uk/covid19-and-coronavirus> or contact our Covid Evidence team on: mlcsu.covidevidence@nhs.net