The Strategy Unit
At NHS Midlands and Lancashire Commissioning Support Unit

COVID-19 Evidence Alert – 24th July 2020

Welcome

COVID-19 Evidence alert is a weekly update highlighting 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').

We are also working on other key areas of interest such as impacts on inequalities and marginalised groups, which will be added to the alert once completed.

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): guidance on isolation for residential educational settings. Department for Education & Public Health England. (updated 20/7/20).

Commentaries

Covid-19: excess all cause mortality in domiciliary care. Glynn JR et al., BMJ 379:m2751. (published 13/7/20).

Could we have done better with COVID-19 in nursing homes? Sczcerbinska K. European Geriatric Medicine. (published online 16/7/20).

David Oliver: Was the prime minister justified in blaming care homes for poor covid-19 practice? Oliver D. BMJ, 370:m2741. (published online 15/7/20).

Effects of the COVID-19 pandemic on the mental health of prisoners. Hewson T et al., The Lancet Psychiatry. (published online July 2020).

The Effects of COVID-19 on Self-harm in UK Prisons. Hewson T et al., BJPsych Bulletin.

Useful resources

Caring for Carers: Supporting the Mental Health Needs of Care Providers and Caregivers in Light of COVID-19. Nica-Graham I & Lakhanpal G. University of Toronto. (published July 2020).

Impacts of lifting restrictions

Commentary from the collaboration

Chart of the week: How much additional money has the pandemic response cost the NHS so far? Appleby J & Palmer B. Nuffield Trust. (published online 22/7/20).

Guidance

Local authority powers to impose restrictions under coronavirus regulations. Department of Health & Social Care. (published online 17/7/20).

Leicester lockdown: what you can and cannot do. Department of Health & Social Care. (published online 17/7/20).

Face coverings: when to wear one and how to make your own. Cabinet Office. (published online 14/7/20).

COVID-19 contain framework: a guide for local decision-makers. Department of Health & Social Care. (published online 17/7/20).

Practical actions in cities to strengthen preparedness for the COVID-19 pandemic and beyond. WHO. (published online 17/7/20).

COVID-19 Rail Protocol. Recommendations for safe resumption of railway services in Europe. European Union Agency For Railways & ECDC. (published online 21/07/20.)

Emerging evidence

Public perceptions and experiences of social distancing and social isolation during the COVID-19 pandemic: a UK-based focus group study. **Williams SN et al., BMJ Open. "**This qualitative study comprised five focus groups, carried out online during the early stages of the UK's stay at home order ('lockdown'), and analysed using a thematic approach. Setting Focus groups took place via online videoconferencing. Participants (n=27) were all UK residents aged 18 years and older, representing a range of gender, ethnic, age and occupational backgrounds. Qualitative analysis revealed four main themes: (1) loss—participants' loss of (in-person) social interaction, loss of income and loss of structure and routine led to psychological and emotional 'losses' such as loss

of motivation, loss of meaning and loss of self-worth; (2) criticisms of government communication—participants reported a lack of trust in government and a lack of clarity in the guidelines around social distancing and isolation; (3) adherence—participants reported high self-adherence to social distancing guidelines but reported seeing or hearing of non-adherence in others; (4) uncertainty around social reintegration and the future—some participants felt they would have lingering concerns over social contact while others were eager to return to high levels of social activity. Most participants, and particularly those in low-paid or precarious employment, reported feeling that the social distancing and isolation associated with COVID-19 policy has had negative impacts on their mental health and wellbeing during the early stages of the UK's 'lockdown'. A rapid response is necessary in terms of public health programming to mitigate the mental health impacts of COVID-19 social distancing and isolation. Social distancing and isolation 'exit strategies' must account for the fact that, although some individuals will voluntarily or habitually continue to socially distance, others will seek high levels of social engagement as soon as possible."

Understanding COVID-19 transmission, health impacts and mitigation: timely social distancing is the key. Kaur S et al., Environment, Development and Sustainability. "COVID-19 is a highly infectious disease caused by SARS-CoV-2, frst identifed in China and spread globally, resulting into pandemic. Transmission of virus takes place either directly through close contact with infected individual (symptomatic/asymptomatic) or indirectly by touching contaminated surfaces. Virus survives on the surfaces from few hours to days. It enters the human body through nose, eyes or mouth. Other sources of contamination are faeces, blood, food, water, semen etc. Parameters such as temperature/ relative humidity also play an important role in transmission. As the disease is evolving, so are the number of cases. Proper planning and restriction are helping in infuencing the trajectory of the transmission. Various measures are undertaken to prevent infection such as maintaining hygiene, using facemasks, isolation/quarantine, social/physical distancing, in extreme cases lockdown (restricted movement except essential services) in hot spot areas or throughout the country. Countries that introduced various mitigation measures had experienced control in transmission of COVID-19. Python programming is conducted for change point analysis (CPA) using Bayesian probability approach for understanding the impact of restrictions and mitigation methods in terms of either increase or stagnation in number of COVID-19 cases for eight countries. From analysis it is concluded that countries which acted late in bringing in the social distancing measures are sufering in terms of high number of cases with USA, leading among eight countries analysed. The CPA week in comparison with date of lockdown and frst reported case strongly correlates (Pearson's r=− 0.86 to − 0.97) to cases, cases per unit area and cases per unit population, indicating earlier the mitigation strategy, lesser the number of cases. The overall paper will help the decision makers in understanding the possible steps for mitigation, more so in developing countries where the fght against COVID-19 seems to have just begun."

Physical distancing interventions and incidence of coronavirus disease 2019: natural experiment in 149 countries. Islam N et al., BMJ. "Objective: To evaluate the association between physical distancing interventions and incidence of coronavirus disease 2019 (covid-19) globally. Design: Natural experiment using interrupted time series analysis, with results synthesised using metaanalysis. Setting: 149 countries or regions, with data on daily reported cases of covid-19 from the European Centre for Disease Prevention and Control and data on the physical distancing policies from Results: On average, implementation of any physical distancing intervention was associated with an overall reduction in covid-19 incidence of 13% (IRR 0.87, 95% confidence interval

0.85 to 0.89; n=149 countries). Closure of public transport was not associated with any additional reduction in covid-19 incidence when the other four physical distancing interventions were in place (pooled IRR with and without public transport closure was 0.85, 0.82 to 0.88; n=72, and 0.87, 0.84 to 0.91; n=32, respectively). Data from 11 countries also suggested similar overall effectiveness (pooled IRR 0.85, 0.81 to 0.89) when school closures, workplace closures, and restrictions on mass gatherings were in place. In terms of sequence of interventions, earlier implementation of lockdown was associated with a larger reduction in covid-19 incidence (pooled IRR 0.86, 0.84 to 0.89; n=105) compared with a delayed implementation of lockdown after other physical distancing interventions were in place (pooled IRR 0.90, 0.87 to 0.94; n=41). Conclusions: Physical distancing interventions were associated with reductions in the incidence of covid-19 globally. No evidence was found of an additional effect of public transport closure when the other four physical distancing measures were in place. Earlier implementation of lockdown was associated with a larger reduction in the incidence of covid-19. These findings might support policy decisions as countries prepare to impose or lift physical distancing measures in current or future epidemic waves."

Weighing up the risks: school closure and reopening under COVID-19- when, why, and what impacts? The Alliance for Child Protection in Humanitarian Action. "In an effort to prevent the transmission of Covid-19, governments around the world have closed schools. School closures are negatively impacting the well-being of children and young people and, in some contexts, might not be effectively reducing transmission. The INEE and the Alliance call on policymakers to: Consider the impacts of school closures on the education and protection outcomes of children and youth; Balance these impacts with a considered review of the health impacts; and Make informed, child-centered decisions on when and why to reopen schools."

Mapping public health responses with attitude networks: the emergence of opinion-based groups in the UK's early COVID-19 response phase. Maher PJ et al., British Journal of Social Psychology. "Partisan patterns of compliance with public health measures are a feature of early COVID-19 responses. In many cases, these differences in behaviour relate to pre-existing group identities. However, in times of rapid societal change, novel opinion-based groups can emerge and provide a new basis for partisan identification and divergent collective behaviour. Here, we use network methods to map the emergence of opposing opinion based groups and assess their implications for public health behaviour. In a longitudinal study, we tracked public health attitudes and self-reported behaviour in a sample of UK participants over four time points. Network visualisation reveal a rift in attitudinal alignment over time and the genesis of two distinct groups characterised by trust, or distrust, in science (Study 1a; N = 253). These groups also diverge in public health behaviour. In a brief follow-up study (N = 206), we find that this opinion polarization partially reflects underlying societal divides. We discuss implications for opinion-based group research and public health campaigns."

Cultural orientation, power, belief in conspiracy theories, and intentions to reduce the spread of COVID-19. Biddlestone M et al., British Journal of Social Psychology. "The current study investigated cultural and psychological factors associated with intentions to reduce the spread of COVID-19. Participants (n = 704) completed measures of individualism–collectivism, belief in conspiracy theories about COVID-19, feelings of powerlessness, and intentions to engage in behaviours that reduce the spread of COVID-19. Results revealed that vertical individualism negatively predicted intentions to engage in social distancing, directly and indirectly through both

belief in COVID-19 conspiracy theories and feelings of powerlessness. Vertical collectivism positively predicted social distancing intentions directly. Horizontal collectivism positively predicted social distancing intentions indirectly through feelings of powerlessness. Finally, horizontal collectivism positively predicted hygiene-related intentions both directly and indirectly through lower feelings of powerlessness. These findings suggest that promoting collectivism may be a way to increase engagement with efforts to reduce the spread of COVID-19. They also highlight the importance of examining the interplay between culture and both personal feelings (powerlessness) and information consumption (conspiracy theories) during times of crisis."

Lockdown timing and efficacy in controlling COVID-19 using mobile phone tracking. Vinceti M et al., EClinicalMedicine. (in press). "Italy's severe COVID-19 outbreak was addressed by a lockdown that gradually increased in space, time and intensity. The effectiveness of the lockdown has not been precisely assessed with respect to the intensity of mobility restriction and the time until the outbreak receded. We used processed mobile phone tracking data to measure mobility restriction, and related those data to the number of new SARS-CoV-2 positive cases detected on a daily base in the three most affected Italian regions, Lombardy, Veneto and Emilia-Romagna, from February 1 through April 6, 2020, when two subsequent lockdowns with increasing intensity were implemented by the Italian government. During the study period, mobility restriction was inversely related to the daily number of newly diagnosed SARS-CoV-2 positive cases only after the second, more effective lockdown, with a peak in the curve of diagnosed cases of infection occurring 14 to 18 days from lockdown in the three regions and 9 to 25 days in the included provinces. An effective reduction in transmission must have occurred nearly immediately after the tighter lockdown, given the lag time of around 10 days from asymptomatic infection to diagnosis. The period from lockdown to peak was shorter in the areas with the highest prevalence of the infection. This effect was seen within slightly more than one week in the most severely affected areas. It appears that the less rigid lockdown led to an insufficient decrease in mobility to reverse an outbreak such as COVID-19. With a tighter lockdown, mobility decreased enough to bring down transmission promptly below the level needed to sustain the epidemic."

Let's get back to work: preventive biological cycle management of coronavirus in the workplace. Vahid G et al., A Journal of Prevention, Assessment and Rehabilitation (accepted for publication). "BACKGROUND The primary response to the coronavirus pandemic has been to minimize social contact through lockdown measures. The closure of non-essential businesses to tackle the spread of coronavirus has had negative consequences for the global economy, production, and employment. OBJECTIVE To outline how known occupational health principles can be used for preventative management of the coronavirus in workplaces to support resumption of work. METHODS A discussion of current knowledge of COVID-19, the cost of the lockdown strategy, and preventative biological cycle management. RESULTS The literature indicates that biological cycle management can control for the risk of coronavirus infection, provide a suitable and sufficient exit strategy from lockdown, and support getting employees back to work. Adherence to PPE standards has been insufficient, indicating a need for workplace investment and education. CONCLUSION Imposed restrictions on workplace operations can be lifted without compromising worker health and safety when a workplace commits to practicing the three principles of biological cycle management."

COVID-19 and the NI Economy: Which jobs are vulnerable and how do social distancing relaxations help? Johnston R & Hogg R. Ulster University. "The global COVID-19 pandemic has resulted a healthcare crisis in many countries around the world. NI has been impacted significantly,

with 5,7721 cases and 8352 deaths recorded in NI to the 10th July 2020. The policy response to the pandemic was necessarily, to restrict travel, to limit contact with other people and to implement social distancing requirements of two metres in order to reduce transmission of the virus, smooth the demands on the healthcare sector and minimise the number of cases and deaths . These restrictions, in combination with the behavioural response of the population have resulted in a significant economic shock in NI with output estimated to have contracted by 21.5% during April and unemployment more than doubling as 35,000 individuals joined the claimant register from March – May2 . The result is that a range of jobs have become vulnerable through two main transmission channels, firstly through reduced demand and secondly as a result of social distancing requirements. As policy and decision makers seek to appropriately balance the healthcare and economic risks to society, this paper examines the potential impact of social distancing requirements and demand reductions on job vulnerabilities in NI at both two-metres and one, which is the minimum social distance required in NI since 29 June, albeit with acceptable mitigations in place3 . The policy interventions that are in place to support individuals, enterprises and the economy are also unprecedented. An additional £1.3bn4 has been allocated to the Executive as part of the Government's response and Barnett consequentials of £43m4 are forthcoming as a result of the summer Budget on the 8th of July. 212,000 jobs were being supported in NI via the Coronavirus Job Retention Scheme (CJRS) and it is estimated that the share of UK wide supports such as the CJRS, the Self Employment Scheme and Business Interruption Loan Schemes etc have resulted in £1.5bn of additional income to enterprises and individuals in NI so far5."

Commentaries

Covid-19: England could need another lockdown in winter, say government's chief advisers. O'Dowd D. BMJ. (published online 20/7/20).

What mobility data has been collected and published during Covid-19? Snaith B. Open Data Institute. (published online 15/7/20).

Assessing national performance in response to COVID-19. Fisher D et al., The Lancet. (published online 15/7/20).

Coronavirus crisis: fiscal cost of support measures since the Budget nearly £190bn. Lea R et al., Arbuthnot Banking Group PLC.

Long term rehabilitation needs

Emerging evidence

The Central Role of Clinical Nutrition in COVID-19 Patients During and After Hospitalization in Intensive Care Unit. Ferrara F et al., SN Comprehensive Clinical Medicine.
"The COVID-19-positive patient who is subject to a hyperinflammatory condition associated with lung injury with the development of pneumonia is hospitalized in the intensive care unit. Before resolving and overcoming the "cytokine storm," with overexpression of pro-inflammatory interleukins (IL-, Il-6), this patient will be intubated for more than 48 h and therefore needs adequate nutrition. Malnutrition can lead to sarcopenia with a decrease in lean body mass and worsening of the inflammatory state underway. In addition, severe debilitation, if not corrected with adequate nutrition, can greatly lengthen rehabilitation times with prolonged hospitalization,

increased costs, and reduced turn over already in crisis due to the health emergency caused by coronavirus. The aim of this study is to focus attention on the nutritional importance that must be provided in case of COVID-19 together with pharmacological treatments to lower the number of circulating proinflammatory cytokines. Oral, enteral, and parenteral nutrition should always be carried out according to the patient's condition and, in the case of a hyperinflammatory patient, such as the one affected by COVID-19, it has been shown that the supplementation of amino acids helps to lower the inflammatory state and promotes normal physiological recovery."

COVID-19 Ischemic Strokes as an Emerging Rehabilitation Population. A Case Series. Diaz Segarra N et al., Am J Phys Med Rehab. "There is emerging literature that coronavirus disease of 2019 (COVID-19) infections result in an increased incidence of thrombosis secondary to a prothrombotic state. Initial studies reported ischemic strokes primarily occurring in the critically ill COVID-19 population. However, there have been reports of ischemic strokes as the presenting symptom in young non-critically ill COVID-19 patients without significant risk factors. Further characterization of the COVID-19 stroke population is needed. We present four cases of COVID-19 ischemic strokes occurring in patients 37 to 68 years of age with varying COVID-19 infection severities, premorbid risk factors, clinical presentations (e.g. focal and non-focal), and vascular distributions. These cases highlight the heterogeneity of COVID-19 ischemic strokes. The duration of the COVID-19 related prothrombotic state is unknown and it is unclear if patients are at risk for recurrent strokes. With more COVID-19 patients recovering and being discharged to rehabilitation, physiatric awareness of this prothrombotic state and increased incidence of ischemic strokes is essential. Due to the variable presentation of COVID-19 ischemic strokes, clinicians can consider neuroimaging as part of the evaluation in COVID-19 patients with either acute focal or non-focal neurologic symptoms. Additional studies are needed to clarify prothrombotic state duration, determine prognosis for recovery, and establish the physiatrist's role in long term disease management."

Commentaries

COVID-19 Fatigue. Not So Fast. O'Connor C et al., JACC Heart Fail, 8(7). (published online July 2020).

COVID-19: a major cause of cachexia and sarcopenia? Morley JE et al., Jorunal of Cahexia, Sarcopenia & Muscle.

COVID-19: planning for the aftermath to manage the aftershocks. Faux SG et al., Medical Journal of Australia.

NICE advises against using graded exercise therapy for patients recovering from covid-19. Torjesen I. BMJ. (published online 21/7/20).

Rehab facilities face COVID-19 crunch as more patients recover. Daniel A. CMAJ, 192(26).

Recovery after COVID-19: The potential role of pulmonary rehabilitation. Grigoletto I et al., Braz J Phys Ther.

Useful resources

Support for Rehabilitation Self-Management after COVID-19- Related Illness. WHO Regional Office for Europe.

Screening and testing

Emerging evidence

Testing Times: An ethical framework and practical recommendations for COVID-19 testing for NHS workers. Healthcare Improvement Studies Institute, 2020. "This report uses the deliberations of an Expert Group and the results of a consultation exercise to identify ethical considerations relevant to swab testing of NHS workers for current infection (not antibodies) with COVID-19. Though it is focused on those who work in the National Health Service (NHS) in England, the broad principles and recommendations are likely to be transferable to other keyworkers and to the rest of the UK."

A national UK audit for diagnostic accuracy of preoperative CT chest in emergency and elective surgery during COVID-19 pandemic. Callaway M et al., Clinical Radiology. "AIM: To report on a snap audit of all departments in the UK as to the value of preoperative thoracic imaging, preferably computed tomography (CT), of patients undergoing any surgery to assess for changes consistent with COVID-19 preoperatively. MATERIALS AND METHODS: All Imaging departments in the UK were contacted and asked to record the number of preoperative CT examinations performed in patients being considered for both emergency and elective surgical intervention over a 5-day period in May 2020. RESULTS: Forty-seven percent of departments replied with data provided on >820 patients. Nineteen percent of additional preoperative CT was in patients undergoing elective intervention and 81% in patients presenting with surgical abdominal pain. There was a high rate of false positives in patients who tested negative for COVID-19, producing a sensitivity for thoracic CT of 68.4%. CONCLUSION: This UK-wide audit demonstrates that a large number of additional thoracic imaging examinations over a 5-day period were performed with a low sensitivity for the identification of COVID-19 in this preoperative group of patients. Given these findings, it is difficult to justify this additional examination in this group of patients."

Investigation of a nosocomial outbreak of COVID-19 in a pediatric ward in South Korea: Successful control by early detection and extensive contact tracing with testing. Jung J et al., Clin Microbiol Infect. "We describe an outbreak investigation related to a paucisymptomatic 9-year-old girl with COVID-19 admitted at a pediatric ward in a tertiary hospital (South Korea). The pediatric wards were placed under cohort isolation and an extensive contact-tracing was carried out. Of 1,206 close and casual contacts, a female asymptomatic guardian, who was the mother (secondary case) of an infant that shared the room with the index patient, was found positive. Thirteen days after the diagnosis, her asymptomatic 2-year-old daughter (tertiary case) who contacted her at home was found positive. Early detection of an asymptomatic case based on epidemiologic link followed by extensive contact-tracing and testing for SARS-CoV-2 appears to be important in effectively containing a nosocomial outbreak of COVID-19."

Experience of a novel community testing programme for COVID-19 in London: Lessons learnt. Wallis G et al., Clinical Medicine Journal. "We describe the London community testing programme developed for COVID-19, audit its effectiveness and report patient acceptability and patient adherence to isolation guidance, based upon a survey conducted with participants. Any

patients meeting the Public Health England (PHE) case definition for COVID-19 who did not require hospital admission were eligible for community testing. 2,053 patients with suspected COVID-19 were tested in the community between January and March 2020. Of those tested, 75 (3.6%) were positive. 88% of patients that completed a patient survey felt safe and 82% agreed that community testing was preferable to hospital admission. 97% were able to remain within their own home during the isolation period but just 41% were able to reliably isolate from other members of their household. The London community testing programme allowed widespread testing for COVID-19 while minimising patient transport, hospital admissions and staff exposures. Community testing was acceptable to patients and preferable to admission to hospital. Patients were able to reliably isolate in their home but not from household contacts. The authors believe in the importance, feasibility and acceptability of community testing for COVID-19 as a part of a package of interventions to mitigate a second wave of infection."

Serology testing in the COVID-19 pandemic response. Peeling RW et al., Lancet Infectious Diseases. "The collapse of global cooperation and a failure of international solidarity have led to many low-income and middleincome countries being denied access to molecular diagnostics in the COVID-19 pandemic response. Yet the scarcity of knowledge on the dynamics of the immune response to infection has led to hesitation on recommending the use of rapid immunodiagnostic tests, even though rapid serology tests are commercially available and scalable. On the basis of our knowledge and understanding of viral infectivity and host response, we urge countries without the capacity to do molecular testing at scale to research the use of serology tests to triage symptomatic patients in community settings, to test contacts of confirmed cases, and in situational analysis and surveillance. The WHO R&D Blue Print expert group identified eight priorities for research and development, of which the highest is to mobilise research on rapid point-of-care diagnostics for use at the community level. This research should inform control programmes of the required performance and utility of rapid serology tests, which, when applied specifically for appropriate public health measures to then be put in place, can make a huge difference."

Impact of delays on effectiveness of contact tracing strategies for COVID-19: a modelling study. Kretzschmar ME et al., The Lancet Public Health. (in-press). "We evaluated the impact of timeliness and completeness in various steps of a contact tracing strategy using a stochastic mathematical model with explicit time delays between time of infection and symptom onset, and between symptom onset, diagnosis by testing, and isolation (testing delay). The model also includes tracing of close contacts (eg, household members) and casual contacts, followed by testing regardless of symptoms and isolation if testing positive, with different tracing delays and coverages. We computed effective reproduction numbers of a contact tracing strategy (RCTS) for a population with physical distancing measures and various scenarios for isolation of index cases and tracing and quarantine of their contacts. For the most optimistic scenario (testing and tracing delays of 0 days and tracing coverage of 100%), and assuming that around 40% of transmissions occur before symptom onset, the model predicts that the estimated effective reproduction number of 1·2 (with physical distancing only) will be reduced to 0·8 (95% CI 0·7–0·9) by adding contact tracing. The model also shows that a similar reduction can be achieved when testing and tracing coverage is reduced to 80% (RCTS 0·8, 95% CI 0·7–1·0). A testing delay of more than 1 day requires the tracing delay to be at most 1 day or tracing coverage to be at least 80% to keep RCTS below 1. With a testing delay of 3 days or longer, even the most efficient strategy cannot reach RCTS values below 1. The effect of minimising tracing delay (eg, with app-based technology) declines with decreasing coverage of app

use, but app-based tracing alone remains more effective than conventional tracing alone even with 20% coverage, reducing the reproduction number by 17·6% compared with 2·5%. The proportion of onward transmissions per index case that can be prevented depends on testing and tracing delays, and given a 0-day tracing delay, ranges from up to 79·9% with a 0-day testing delay to 41·8% with a 3-day testing delay and 4·9% with a 7-day testing delay."

SARS-CoV-2 and the Role of Orofecal Transmission: Evidence Brief. Jefferson T et al., Oxford CEBM. (published online 16/7/20). "Various observational and mechanistic evidence presented throughout this evidence brief, support the hypothesis that SARS-CoV-2 can infect and be shed from the human gastrointestinal tract. Policy should emphasise routine surveillance of food, wastewaters and effluent. The importance of strict personal hygiene measures, chlorine-based disinfection of surfaces in locations with presumed or known SARS CoV-2 activity should form part of public policy and education campaigns. Stool testing should be carried out in discharges from the hospital or other holding facilities well before discharge date and discharge should be conditional either on cessation of fecal excretion or strict quarantine and personal hygiene measures in those still excreting viral particles by stool independently from respiratory excretion."

Rapid implementation of SARS-CoV-2 sequencing to investigate cases of health-care associated COVID-19: a prospective genomic surveillance study. Meredith LW et al., The Lancet Infectious Diseases. "In this prospective surveillance study, we set up rapid SARS-CoV-2 nanopore sequencing from PCR-positive diagnostic samples collected from our hospital (Cambridge, UK) and a random selection from hospitals in the East of England, enabling sample-to-sequence in less than 24 h. We established a weekly review and reporting system with integration of genomic and epidemiological data to investigate suspected health-care associated COVID-19 cases. Between March 13 and April 24, 2020, we collected clinical data and samples from 5613 patients with COVID-19 from across the East of England. We sequenced 1000 samples producing 747 high-quality genomes. We combined epidemiological and genomic analysis of the 299 patients from our hospital and identified 35 clusters of identical viruses involving 159 patients. 92 (58%) of 159 patients had strong epidemiological links and 32 (20%) patients had plausible epidemiological links. These results were fed back to clinical, infection control, and hospital management teams, leading to infection-control interventions and informing patient safety reporting. We established real-time genomic surveillance of SARS-CoV-2 in a UK hospital and showed the benefit of combined genomic and epidemiological analysis for the investigation of health-care associated COVID-19. This approach enabled us to detect cryptic transmission events and identify opportunities to target infection-control interventions to further reduce health-care associated infections. Our findings have important implications for national public health policy as they enable rapid tracking and investigation of infections in hospital and community settings."

Should point-of-care ultrasound become part of healthcare worker testing for COVID? Smallwood N et al., Clinical Medicine. (published online 17/7/20). "The NHS in England has rapidly expanded staff testing for COVID-19 in order to allow healthcare workers who would otherwise be isolating with symptoms suspicious of COVID-19 to be cleared to work. However, the high false negative rate associated with current RT-PCR tests could put other staff, family members and patients at risk. We believe combining swab testing with real-time lung ultrasound (LUS) would improve the ability to rule-in COVID-19 infection in those requiring screening."

A Framework for Sustainable Contact Tracing and Exposure Investigation for Large Health Systems. Breeher L et al., Mayo Clinic Proc, 95(7)." Contact tracing is a cornerstone of communicable disease containment and involves identifying, quarantining, and monitoring contacts of infected people. Although contact tracing is a known evidence-based strategy in the community setting, the COVID-19 pandemic highlighted the challenges to implementing labor-intensive contact tracing in the occupational setting of large health care systems and hospitals, the epicenter of the pandemic. We present a framework for feasible, scalable COVID-19 contact tracing in a large multistate health system in the United States employing approximately 69,000 health care personnel. The framework is shared with sufficient details to allow adoption or adaptation by other health systems. Continuous enhancement, optimization, and evaluation of the framework are ongoing."

Commentaries

Testing for coverage from personal protective equipment. Heij A et al., Anaesthesia, 75.

Covid-19: UK test and trace system still missing 80% target for reaching contacts. O'Dowd A. BMJ, 370:m2875. (published online 17/7/20).

Sewage monitoring is the UK's next defence against covid-19. Baraniuk C. BMJ, 379:m2599.

Cities — try to predict superspreading hotspots for COVID-19. Bouffanais R & Lim SS. Nature. (published online 10//7/20).

Contact Tracing to Manage COVID-19 Spread—Balancing Personal Privacy and Public Health. Kapa S et al., Mayo Clinic Proc.

Broader impacts on health outcomes

Commentary from the collaboration

Using data to tackle COVID-19: what we've learned at the Network Data Lab. Deeny S. The Health Foundation. (published online 23/7/20).

Rapid reviews

Public health

Direct and indirect impacts of COVID-19 on health and wellbeing. Jones L et al., Champs Intelligence & Evidence Service. Liverpool John Moores University. "This rapid evidence review identifies what the current evidence tells us about the direct and indirect impacts of COVID-19 on health and wellbeing. Rapid searches were carried out of the academic and grey literature. COVID-19 evidence sources (e.g. COVID-END) were primarily searched between 18 May and 8 June 2020 to scope and collate evidence. These sources were analysed and used to prepare this rapid evidence review. As well as the direct impacts of COVID-19 disease, the social distancing and lockdown measures have had a huge and unequal impact of their own on individuals, households and communities through the restrictions imposed on our everyday social and economic activities. To begin to understand the full extent of the onward impacts on health and wellbeing, we have

examined the impacts of COVID-19 on the 'wider determinants of health', as these are the factors that largely determine our opportunities for good health and wellbeing."

Mental health

Healthcare workers

The Psychological Impact of Epidemic and Pandemic Outbreaks on Healthcare Workers: Rapid Review of the Evidence. Preti E et al., Current Psychiatry Reports. "Purpose of Review: We aim to provide quantitative evidence on the psychological impact of epidemic/pandemic outbreaks (i.e., SARS, MERS, COVID-19, ebola, and influenza A) on healthcare workers (HCWs). Recent Findings: Forty-four studies are included in this review. Between 11 and 73.4% of HCWs, mainly including physicians, nurses, and auxiliary staff, reported post-traumatic stress symptoms during outbreaks, with symptoms lasting after 1–3 years in 10–40%. Depressive symptoms are reported in 27.5–50.7%, insomnia symptoms in 34–36.1%, and severe anxiety symptoms in 45%. General psychiatric symptoms during outbreaks have a range comprised between 17.3 and 75.3%; high levels of stress related to working are reported in 18.1 to 80.1%. Several individual and work-related features can be considered risk or protective factors, such as personality characteristics, the level of exposure to affected patients, and organizational support. Summary: Empirical evidence underlines the need to address the detrimental effects of epidemic/pandemic outbreaks on HCWs' mental health. Recommendations should include the assessment and promotion of coping strategies and resilience, special attention to frontline HCWs, provision of adequate protective supplies, and organization of online support services."

Occupational burnout syndrome and posttraumatic stress among healthcare professionals during the novel Coronavirus Disease 2019 (COVID-19) pandemic. Raudenská J et al., Best Practice & Research Clinical Anaesthesiology. "This comprehensive review aims to explain the potential impact of COVID-19 on mental wellbeing of health care professionals. Based on up-to-date research and psychological diagnostic manuals of DSM-5 and ICD-11, we describe associated psychological disorders and experiences that may arise related to COVID-19. Appropriate psychological measures are introduced, along with potential methodological limitations. Lastly, resilience building and preventative measures with interventions that may mitigate the impact on mental health of health care professionals are described."

Mental Health Planning During the COVID-19 Crisis: A Systematic Review of Online International Strategies and Recommendations. Almeda N et al., BMC Psychiatry (pre-print). Doi: 10.21203/rs.3.rs-33638/v1. "Mental Health care systems have been dramatically affected by COVID-19. Containment measures have been imposed with negative consequences on population mental health. Therefore, an increase in both symptomatology and mental disorders incidence is expected. This research aims to identify, describe and assess the empirical background on online strategies and recommendations developed by international organizations and governments to cope with the psychological impact of COVID-19. A new questionnaire has been developed to identify the existence of common patterns in the selected documents. Questions were classed in three domains: COVID-19 information, mental health strategies and mental health recommendations. The PRISMA statements were adapted to review online documents. A two-steps cluster analysis was carried out to highlight underlying behaviors in data (patterns). Results were shown by using spider graphs (pattern proles). Multidimensional links between questions were identified and assessed by

conceptual maps. 26 documents were included in the review. The questionnaire assessed document complexity and identied key mental health issues (i.e. tools for dealing with stress, depression and anxiety), which show a high agreement level among them. Cluster analysis highlighted the existence of common patterns in the selected question domains. Strong relationships between individual questions were also identied such as, for example, include psychological tips for maintaining good mental health and coping with COVID-19 (question nº 4), describe some psychological skills to help people cope with anxiety and worry about COVID-19 (question nº 6) and, nally, promote social connection at home (question nº 8). When fast results are needed to develop health strategies and policies, rapid reviews associated to statistical and graphical methods are essential. Results obtained from the proposed analytical procedures are relevant to a) classify the documents about the psychological impact of COVID-19, b) develop new documents according to the selected objectives for matching population needs, c) improve psychological interventions in a pandemic, and d) adapt new documents to local situations. The relevance of adapting e-mental health to community mental health care model principles was highlighted. For developing e-mental health potential, some problems related to the digital gap, stigma and ethical issues must be considered."

Emerging evidence

Public health

Does the COVID-19 Pandemic Improve Global Air Quality? New Cross-National Evidence on Its Unintended Consequences. **Dang HAH & Trinh TA. Institute of Labor Economics.** "Despite a growing literature on the impacts of the COVID-19 pandemic, scant evidence currently exists on its impacts on air quality. We offer the first study that provides crossnational evidence on the causal impacts of COVID-19 on air pollution. We assemble a rich database consisting of daily, sub-national level data of air quality for 178 countries before and after the COVID-19 lockdowns, and investigate their impacts on air quality using a Regression Discontinuity Design approach. We find the lockdowns to result in significant decreases in global air pollution. These results are consistent across measures of air quality and data sources and robust to various model specifications. Some limited evidence also emerges that countries with a higher share of manufacturing in the economy or with an initial lower level of air pollution witness more reduced air pollution after the lockdowns; but the opposite result holds for countries near the equator. We also find that mobility restrictions following the lockdowns is a possible explanation for improved air quality"

Poverty and Covid-19: Amplifying, isolating, stalling. **British Psychological Society. (published online 08/7/20). "**Three days after the Government announced the Coronavirus lockdown, new figures from the Department for Work and Pensions announced that 4.2 million children were living in relative poverty – an increase of 100,000 from the previous year1. This laid bare the stark reality that many families were facing even before the Covid-19 crisis hit. Analysis from the Joseph Rowntree Foundation suggests that as many as 70 per cent of these children are in a working family, compared to just 39 per cent over 20 years ago2. As a result of the Covid-19 crisis, widescale lockdown and social distancing measures, up to a fifth of all UK employees are estimated to have been furloughed as part of the Government's Job Retention Scheme. However, the reduction in hours and loss of jobs is not spread evenly. The Resolution Foundation has found that almost a third of low-paid employees have lost their jobs or been furloughed compared to less than one in ten of the top-earning employees3. While we are all 'in this together', there must be a recognition that many of us are in very different boats and may struggle to chart this prolonged storm. The British

Psychological Society (BPS) Poverty to Flourishing campaign draws together the expertise of our membership to call for a psychological approach to tackling poverty and its associated impacts that can lead to negative outcomes across the life course. As the Government's Job Retention Scheme and other financial measures have been introduced to protect the economy, this briefing, and our approach, focuses on the people at the heart of this crisis. For individuals and families in poverty, including lone parents and families with disabled people, many of the problems they are facing have been exacerbated, and many more may be pulled into poverty as a result of the pandemic."

Mental health- General public

Mental health before and during the COVID-19 pandemic: a longitudinal probability sample survey of the UK population. Pierce M et al., The Lancet Psychiatry. "Background: The potential impact of the COVID-19 pandemic on population mental health is of increasing global concern. We examine changes in adult mental health in the UK population before and during the lockdown. Methods: In this secondary analysis of a national, longitudinal cohort study, households that took part in Waves 8 or 9 of the UK Household Longitudinal Study (UKHLS) panel, including all members aged 16 or older in April, 2020, were invited to complete the COVID-19 web survey on April 23–30, 2020. Participants who were unable to make an informed decision as a result of incapacity, or who had unknown postal addresses or addresses abroad were excluded. Mental health was assessed using the 12-item General Health Questionnaire (GHQ-12). Repeated cross-sectional analyses were done to examine temporal trends. Fixed-effects regression models were fitted to identify within-person change compared with preceding trends. Findings: Waves 6–9 of the UKHLS had 53 351 participants. Eligible participants for the COVID-19 web survey were from households that took part in Waves 8 or 9, and 17 452 (41·2%) of 42 330 eligible people participated in the web survey. Population prevalence of clinically significant levels of mental distress rose from 18·9% (95% CI 17·8–20·0) in 2018–19 to 27·3% (26·3–28·2) in April, 2020, one month into UK lockdown. Mean GHQ-12 score also increased over this time, from 11·5 (95% CI 11·3–11·6) in 2018–19, to 12·6 (12·5–12·8) in April, 2020. This was 0·48 (95% CI 0·07–0·90) points higher than expected when accounting for previous upward trends between 2014 and 2018. Comparing GHQ-12 scores within individuals, adjusting for time trends and significant predictors of change, increases were greatest in 18–24-year-olds (2·69 points, 95% CI 1·89–3·48), 25–34-year-olds (1·57, 0·96–2·18), women (0·92, 0·50–1·35), and people living with young children (1·45, 0·79–2·12). People employed before the pandemic also averaged a notable increase in GHQ-12 score (0·63, 95% CI 0·20–1·06). Interpretation: By late April, 2020, mental health in the UK had deteriorated compared with pre-COVID-19 trends. Policies emphasising the needs of women, young people, and those with preschool aged children are likely to play an important part in preventing future mental illness."

Coronavirus: Impact on young people with mental health needs. Survey 2: Summer 2020. Young Minds. "The findings in this report are the results of a second survey YoungMinds carried out into the impact of coronavirus on young people with a history of mental health needs. The surveys were conducted three months apart (the initial survey was over the first weekend of lockdown) and although the results reveal similar themes, there is a clear message that some of the pressures young people face have intensified, and that more are struggling to get the help they need. In the last few months, many young people have found it hard to cope with social isolation, anxiety and fears about what the future holds. A smaller number have adjusted comparatively well to life under lockdown, but are now concerned about a return to the pressures of 'normal' life."

Mapping population mental health concerns related to COVID-19 and the consequences of physical distancing: a Google trends analysis. Knipe D et al., Wellcome Open Research. (updated 5/7/20). "Background: The 2020 Coronavirus pandemic is a major international public health challenge. Governments have taken public health protection measures to reduce the spread of the virus through non-pharmalogical measures. The impact of the pandemic and the public health response on individual and population mental health is unknown.Methods: We used Google Trends data (1 Jan 2020 - 30 Mar 2020) to investigate the impact of the pandemic and government measures to curb it on people's concerns, as indexed by changes in search frequency for topics indicating mental distress, social and economic stressors and mental health treatment-seeking. We explored the changes of key topics in Google trends in Italy, Spain, USA, UK, and Worldwide in relation to sentinel events during the pandemic. Results: Globally there appears to be significant concerns over the financial and work-related consequences of the pandemic, with some evidence that levels of fear are rising. Conversely relative searching for topics related to depression and suicide fell after the pandemic was announced, with some evidence that searches for the latter have risen recently. Concerns over education and access to medication appear to be particular social stressors. Whilst searches for face-to-face treatments have declined, those for self-care have risen. Conclusions: Monitoring Google trends shows promise as a means of tracking changing public concerns. In weeks to come it may enable policy makers to assess the impact of their interventions including those aiming to limit negative consequences, such as government funded financial safety nets."

Healthcare workers

Exploring the challenges faced by frontline workers in health and social care amid the COVID-19 pandemic: experiences of frontline workers in the English Midlands region, UK. Nyashanu M et al., Journal of Interprofessional Care. "The first cases of Coronavirus (COVID-19) were reported in Wuhan, China in December 2019. Globally millions of people have been diagnosed with the virus whilst thousands have died. As the virus kept spreading health and social care frontline workers (HSCFW) were faced with difficulties when discharging their duties. This paper was set out to explore the challenges faced by different frontline workers in health and social care during the COVID-19 pandemic. The research utilized an explorative qualitative approach. A total of forty (N = 40) in-depth one-to-one semi-structured interviews were undertaken with HSCFW who included support workers (n = 15), nurses (n = 15), and managers (N = 10). Health and social care workers were drawn from domiciliary care and care homes (with and without nursing services). All the interviews were done online. The data were thematically analyzed, and the emergent themes were supported by quotes from the interviews held with participants. Following data analysis the research study found that lack of pandemic preparedness, **s**hortage of Personal Protective Equipment (PPE), anxiety and fear amongst professionals, challenges in enforcing social distancing, challenges in fulfilling social shielding responsibility, anxiety and fear amongst residents and service users, delay in testing, evolving PPE guidance and shortage of staff were challenges faced by frontline health and social care workers during COVID-19 pandemic. The results of the current study point to a need for adequate pandemic preparedness within the health and social care sector to protect both frontline workers and the individuals they look after."

Factors contributing to the distress, concerns, and needs of UK Neuroscience health care workers during the COVID-19 pandemic. Cipolotti L et al., Psychology and Psychotherapy:

Theory, Research and Practice. "COVID-19 research from China suggests health care workers are at risk of distress, have specific concerns, and need support. It remains unknown whether findings are applicable to UK health care staff and whether psychological support based on generic approaches is effective. We administered an online survey at a leading neuroscience hospital in the UK to examine how individual staff characteristics contribute to distress, concerns, and interventions most valued during the COVID-19 pandemic. We found a high incidence of distress, particularly in females and staff with previous mental health history. Concerns fell into three factors: 'risk of infection', 'work challenges', and 'social change', and were affected by professional role and contact with COVID-19 patients. These three factors predicted distress. Psychological support and clear updates were deemed most useful, with specific needs affected by age, professional role, and contact with COVID-19 patients. This is the first documentation of a high incidence of psychological distress predicted by three types of concerns in health care workers of a neuroscience hospital. Distress, concerns, and interventions most valued were all affected by individual staff characteristics. These findings highlight the importance of providing stratified, one to one support interventions, tailored to professional group, and background, rather than more generic approaches."

Commentaries

Public health

One in three parents 'out of their depth' as children struggle with pandemic fallout. Action for Children. (published online 14/7/20).

Ethnicity and covid-19: working locally to reduce inequalities. England R. BMJ. (published 13/7/20).

Spotlight on child abuse and neglect response in the time of COVID-19. York Thomas E et al., Lancet Public Health, 5(7). (published online July 2020).

Domestic violence during COVID-19: the GP role. Gibson J. BJGP, 70(696). (published online July 2020).

Mitigating the Impacts of the COVID-19 Pandemic Response on At-Risk Children. Wong CA et al., Pediatrics, 146(1).

Mental health

Opioids and the COVID-19 pandemic: does chronic opioid use or misuse increase clinical vulnerability? Lambert D. Br J Anaesth. (published online 19/7/20).

COVID-19, mental health and ethnic minorities. Smith K et al., BMJ Evidence Based Mental Health. (published online 17/7/20).

Long-term conditions

Lockdown's side effect: mental health deterioration of people affected by dementia, with third 'giving up. Alzheimer's Society. (published online 14/7/20).

Useful resources

Building a country that works for all children post COVD-19. Association of Directors of Children's services. (published online July 2020).

Impact on non-Covid care

Commentary from the collaboration

Primary and Community Qualitative Insights. Mason P & Mulla A. The Strategy Unit. (published online July 2020).

Resuming health services during the Covid-19 pandemic: What can the NHS learn from other countries? Reed S. Nuffield Trust. (published online 24/7/20).

Recovering from Covid-19: the international picture. Reed S. Nuffield Trust. (published online 24/7/20).

NHS system capacity. Davies J. Nuffield Trust. (published online 22/7/20).

Money is welcome but won't get the NHS back to full speed – Nuffield Trust response to Prime Minister's announcement. Nuffield Trust. (published online 17/7/20).

The road to renewal: five priorities for health and care. Charles A & Ewbank L. The King's Fund. (published online 16/7/20).

The new NHS and mental health: where are we going wrong? Malasi J. The King's Fund. (published online 23/7/20).

Mental health and primary care networks: understanding the opportunities. Naylor C et al., The King's Fund. (published online 23/7/20).

How has COVID-19 affected service delivery in GP practices that offered remote consultations before the pandemic? Clarke G et al., The Health Foundation. (published online 16/7/20).

Thinking local and global: exploring the UK's reliance on international nurses and the impact of COVID-19. Buchan J Shembavenkar N. The Health Foundation. (published online 24/7/20).

Guidance

Caring for patients with pain during the COVID-19 pandemic: consensus recommendations from an international expert panel. Shanthanna H et al., Anaesthesia, 75.

Preparing for a challenging winter 2020/21. The Academy of Medical Sciences. (published online 14/7/20).

Preparing for COVID-19 surges and winter. Academy of Medical Royal Colleges. (published online July 2020).

The next chapter in our plan to rebuild: The UK Government's COVID-19 recovery strategy. Cabinet Office. (last updated 17/7/20).

Emerging evidence

The impact of COVID-19 on services for people affected by sexual and gender-based violence. Johnson K et al., Int J Gynae & Obstet. "Sexual and gender-based violence (SGBV), and particularly intimate partner violence (IPV), has spiked dramatically during the COVID-19 pandemic. At the same time, the pandemic is impacting and interrupting SGBV and IPV services of all kinds. This paper focuses on the impact of the COVID-19 pandemic on clinical care and forensic medical documentation for SGBV survivors, including an analysis of the response in the UK and Kenya, and provides recommendations for safe implementation of these services during the pandemic."

Primary care

Investigating changing demands on primary care during COVID-19: Summary report 3. Murphy M et al., Centre for Academic Primary Care & University of Bristol. "This third summary report presents qualitative findings from 20 interviews held with GPs and managers from 20 GP practices between 15 June and 2 July 2020. We found that practices are still coping well. However, despite giving high coping scores (8-9 out of 10), many of them commented on an increase in fatigue. Challenges faced in the last period included: rising demand; restarting services; prescribing remotely; managing long-term conditions remotely; delays in secondary referrals; managing patient expectations; mental load on staff; and the shielding list. New challenges identified in this period are: restarting services; continuation of pre-COVID-19 plans; online triage consultations; planning for winter; support from secondary care; drug manufacture and supply problems; test and trace and infection control."

The hidden impact of COVID-19 on patient care in the NHS in England. BMA. (published online July 2020). "The COVID-19 outbreak has had a huge impact on core NHS services. In order to free up enough capacity to deal with the initial peak of the pandemic, the NHS was forced to shut down or significantly reduce many areas of non-COVID care during April, May and June 2020. This, combined with fewer patients seeking care during lockdown, means that there has been a significant drop in elective procedures, urgent cancer referrals, first cancer treatments and outpatient appointments. The full impact of this drastic reduction in routine NHS care in England is only now emerging. Millions of patients living with health problems (including life-threatening conditions such as cancer) have been affected, with their treatment postponed or cancelled. And millions of patients will have missed vital opportunities to receive initial assessment and diagnosis for health problems in the first place. This is the hidden impact of the COVID crisis – patient safety is being severely compromised not just by the virus itself, but by the knock-on effects of an unprecedented disruption to NHS services."

A national model of remote care for assessing and providing opioid agonist treatment during the COVID-19 pandemic: a report. Crowley D & Delargy I. Harm Reduction Journal. "Health services globally are struggling to manage the impact of COVID-19. The existing global disease burden related to opioid use is significant. Particularly challenging groups include older drug users who are more vulnerable to the effects of COVID-19. Increasing access to safe and effective opioid agonist treatment (OAT) and other harm reduction services during this pandemic is critical to reduce risk. In response to COVID-19, healthcare is increasingly being delivered by telephone and video consultation, and this report describes the development of a national model of remote care to eliminate waiting lists and increase access to OAT in Ireland. The purpose of this initiative is to

provide easy access to OAT by developing a model of remote assessment and ongoing care and eliminate existing national waiting lists. The Irish College of General Practitioners in conjunction with the National Health Service Executive office for Social Inclusion agreed a set of protocols to enable a system of remote consultation but still delivering OAT locally to people who use drugs. This model was targeted at OAT services with existing waiting lists due to a shortage of specialist medical staff. The model involves an initial telephone assessment with COVID-risk triage, a single-patient visit to local services to provide a point of care drug screen and complete necessary documentation and remote video assessment and ongoing management by a GP addiction specialist. A secure national electronic health link system allows for the safe and timely delivery of scripts to a designated local community pharmacy. The development of a remote model of healthcare delivery allows for the reduction in transmission risks associated with COVID-19, increases access to OAT, reduces waiting times and minimises barriers to services. An evaluation of this model is ongoing and will be reported once completed. Fast adaptation of OAT delivery is critical to ensure access to and continuity of service delivery and minimise risk to our staff, patients and community. Innovative models of remote healthcare delivery adapted during the COVID-19 crisis may inform and have important benefits to our health system into the future."

Secondary care

Strategies in reconfiguration of hand injuries management during COVID-19 pandemic.
Venkatesan A et al., J Clini Ortho Trauma. "During the COVID-19 pandemic there has been a re-organisation of care provided by the Trauma and Orthopaedic services in the United Kingdom. The National Health Service England (NHSE) speciality guide forms the primary responses to this pandemic, whilst British Society for the Surgery of Hand (BSSH) provides sub-specialty guidance on management of hand trauma. The orthopaedic community's responsibility of providing a continuity of care for patients has to be balanced with measures to reduce risk of viral transmission (e.g. reduce face to face consultations) and also protect ion of both the patients and staff. We highlight the strategies applied whilst reconfiguration of hand injury management following publication of COVID-19 British Society for the Surgery of Hand and Indian Orthopaedic Association (IOA) guidelines."

COVID -19 outbreak and pediatric diabetes: perceptions of health care professionals worldwide. Elbarbary NS et al., Pediatric Diabetes. "COVID-19 is an infectious disease that started in Wuhan, China in late 2019 and later spread around the world. Diabetes has been recognized as a possible risk factor for COVID-19 complications. ISPAD investigated perceptions, challenges and experience of healthcare professionals (HCP) taking care of children and young people with diabetes world-wide during COVID-19 pandemic. From 21st April to 17th May 2020, during COVID-19 pandemic, a web-based survey was sent to ISPAD members and former participants of ISPAD conferences by email. Responders from 215 diabetes centres from 75 countries completed the survey. Majority were from UK (35; 16.3%), USA (20; 9.3%) and India (15; 7%). HCP were mostly pediatric endocrinologists (64%). During COVID-19 pandemic, 16.5% of responders continued face-to-face consultation while most changed to telephone (32%) or video (18%) consultations. 19% reported a shortage of medical supplies. 22% reported a delay in diagnosis of patients with new-onset diabetes, while 15% reported a higher incidence of DKA. 12% reported having one or more patients with COVID-19. Most of the 86 children and adolescents with diabetes and COVID-19 had only mild/moderate symptoms, while 5 required admission to an intensive care unit. No deaths were reported. This large global survey during COVID-19 pandemic showed that many HCP adapted to the

pandemic by resorting to telemedicine. One fourth of HCP reported delays in diagnosis and an increased rate of DKA. The emergence of COVID-19 pandemic had an important impact on family's behaviour that might have led to increase in DKA presentation."

The management of adult appendicitis during the COVID-19 pandemic: an interim analysis of a UK cohort study. Javanmard-Emamghissi H et al., Techniques in Coloproctology. "Patients 18 years or older, diagnosed clinically and/or radiologically with AA were eligible for inclusion in this prospective, multicentre cohort study. Data was collected from 23rd March 2020 (beginning of the UK Government lockdown) to 1st May 2020 and included: patient demographics, COVID status; initial management (operative and conservative); length of stay; and 30-day complications. Analysis was performed on the first 500 cases with 30-day follow-up. The patient cohort consisted of 500 patients from 48 sites. The median age of this cohort was 35 [26–49.75] years and 233 (47%) of patients were female. Two hundred and seventy-one (54%) patients were initially treated conservatively; with only 26 (10%) cases progressing to an operation. Operative interventions were performed laparoscopically in 44% (93/211). Median length of hospital stay was significantly reduced in the conservatively managed group (2 [IQR 1–4] days vs. 3 [2–4], $p < 0.001$). At 30 days, complications were significantly higher in the operative group ($p < 0.001$), with no deaths in any group. Of the 159 (32%) patients tested for COVID-19 on admission, only 6 (4%) were positive. COVID-19 has changed the management of acute appendicitis in the UK, with non-operative management shown to be safe and effective in the short-term. Antibiotics should be considered as the first line during the pandemic and perhaps beyond."

Restoration and recovery of stroke services during the COVID-19 pandemic. Ford GA et al., GIRFT & Oxford AHSN. "Since the coronavirus disease 2019 (COVID-19) pandemic began, many changes have been made to the way in which stroke teams work and the way in which stroke services are delivered. The UK has now passed the first peak of the pandemic and is entering a phase of 'restoration and recovery', during which services will stand down some 'peak' interventions while still adapting to the presence of patients, carers and staff who may be infected with COVID-19. The pandemic has demonstrated the ability of NHS stroke services to adapt and change rapidly, to use digital solutions and explore the use of artificial intelligence technologies. It is critically important that stroke services continue to adopt effective interventions rapidly and that we do not move back to holding on to outmoded ways of working. Some changes that have been introduced will require further evaluation and continued monitoring of patient outcomes through the Sentinel Stroke National Audit Programme (SSNAP) and local audits. Engagement with patients and the public to understand how these changes have affected the patient experience is even more important than before the pandemic. This document provides pragmatic guidance to support acute and community teams to deliver high-quality stroke care while maintaining staff wellbeing and safety. Regular regional calls have been held with stroke teams in both hospitals and the community during this period, and common themes and questions have emerged. These are summarised below and are addressed in detail within this document."

Mechanical thrombectomy for acute ischaemic stroke during the COVID-19 pandemic: changes to UK practice and lessons learned. McConachie D et al., Clinical Radiology. "The UK Neurointerventional Group (UKNG) and the British Society of Neuroradiologists (BSNR) sent out a national survey on 1 May 2020 to all 28 UK neuroscience centres that have the potential capability to perform MT. RESULTS: Responses were received from 27/28 MT-capable centres (96%). Three of the 27 centres do not currently provide MT services. There was a 27.7% reduction in MTs performed

during April 2020 compared with the first 3 months of the year. All MT patients in 20/24 centres that responded were considered as COVID-19 suspicious/positive unless or until proven otherwise. Twenty-two of the 24 centres reported delays to the patient pathway. Seventeen of the 24 centres reported that the COVID-19 pandemic had reduced training opportunities for specialist registrars (SpR). Fourteen of the 24 centres reported that the pandemic had hampered their development plans for their local or regional MT service. CONCLUSION: The present survey has highlighted a trend of decreasing cases and delays in the patient pathway during the early stages of the COVID-19 pandemic across UK centres."

Recommendations on how to provide cardiac rehabilitation services during the COVID-19 pandemic. Kemps HMC et al., Neth Heart J. "The ongoing coronavirus disease 2019 (COVID-19) crisis is having a large impact on acute and chronic cardiac care. Due to public health measures and the reorganisation of outpatient cardiac care, traditional centre-based cardiac rehabilitation is currently almost impossible. In addition, public health measures are having a potentially negative impact on lifestyle behaviour and general well-being. Therefore, the Working Group of Cardiovascular Prevention and Rehabilitation of the Dutch Society of Cardiology has formulated practical recommendations for the provision of cardiac rehabilitation during the COVID-19 pandemic, by using telerehabilitation programmes without face-to-face contact based on current guidelines supplemented with new insights and experiences."

Tertiary care

Exploring the ways in which COVID-19 and lockdown has affected the lives of adult patients with anorexia nervosa and their carers. Bryan DC et al., European Eating Disorders Review. "OBJECTIVE: This qualitative study explores the ways in which the coronavirus disease 2019 (COVID-19) pandemic and associated lockdown measures have affected the lives of adult patients with anorexia nervosa (AN) and their carers. METHOD: Semi-structured interviews were conducted with patients with AN (n = 21) and carers (n = 28) from the start of UK Government imposed lockdown. Data related directly to the impact of lockdown and COVID-19 were analysed using thematic analysis. RESULTS: Four broad themes were identified for patients and carers separately. Patients experienced: 1. reduced access to eating disorder (ED) services; 2. disruption to routine and activities in the community; 3. heightened psychological distress and ED symptoms; 4. increased attempts at self-management in recovery. Carer themes included: 1. concern over provision of professional support for patients; 2. increased practical demands placed on carers in lockdown; 3. managing new challenges around patient wellbeing; 4. new opportunities. CONCLUSIONS: Reduced access to ED services, loss of routine and heightened anxieties and ED symptoms resulting from COVID-19 and lockdown measures presented challenges for patients and carers. Increased remote support by ED services enabled the continuation of treatment and self-management resources and strategies promoted self-efficacy in both groups."

Cancer services

'No turning back' Psycho-oncology in the time of COVID-19: Insights from a survey of UK professionals. Archer S et al., Psycho-Oncology. "To gain insight on UK professionals' experiences and views of the impact of the COVID-19 pandemic on psycho-oncology activity the British Psychosocial Oncology Society (BPOS) conducted an online survey of members and UK colleagues. Qualitative data from 94 respondents were analysed thematically. Key themes were summarised

using the strengths, weaknesses, opportunities and threats (SWOT) framework. Professionals reported severe disruptions in delivering clinical and supportive care to people affected by cancer and associated research activity. There were major concerns that the full impact of the pandemic is yet to be realised. In both care and research settings the pandemic has also been an impetus for positive changes in working practices, technology adoption, reducing process barriers and fostering collaborations which has to potential to be sustained. To mitigate ongoing challenges, is it vital that cancer organisations work together to adapt and promote psycho-oncology activity to maximise benefit for patients and professionals in the longer-term."

The impact of the COVID-19 pandemic on cancer deaths due to delays in diagnosis in England, UK: a national, population-based, modelling study. Maringe C et al., The Lancet Oncology. "We collected data for 32 583 patients with breast cancer, 24 975 with colorectal cancer, 6744 with oesophageal cancer, and 29 305 with lung cancer. Across the three different scenarios, compared with pre-pandemic figures, we estimate a 7·9–9·6% increase in the number of deaths due to breast cancer up to year 5 after diagnosis, corresponding to between 281 (95% CI 266–295) and 344 (329–358) additional deaths. For colorectal cancer, we estimate 1445 (1392–1591) to 1563 (1534–1592) additional deaths, a 15·3–16·6% increase; for lung cancer, 1235 (1220–1254) to 1372 (1343–1401) additional deaths, a 4·8–5·3% increase; and for oesophageal cancer, 330 (324–335) to 342 (336–348) additional deaths, 5·8–6·0% increase up to 5 years after diagnosis. For these four tumour types, these data correspond with 3291–3621 additional deaths across the scenarios within 5 years. The total additional YLLs across these cancers is estimated to be 59 204–63 229 years. Substantial increases in the number of avoidable cancer deaths in England are to be expected as a result of diagnostic delays due to the COVID-19 pandemic in the UK. Urgent policy interventions are necessary, particularly the need to manage the backlog within routine diagnostic services to mitigate the expected impact of the COVID-19 pandemic on patients with cancer."

Effect of delays in the 2-week-wait cancer referral pathway during the COVID-19 pandemic on cancer survival in the UK: a modelling study. Sud A et al., The Lancet Oncology. "Across England in 2013–16, an average of 6281 patients with stage I–III cancer were diagnosed via the 2-week-wait pathway per month, of whom 1691 (27%) would be predicted to die within 10 years from their disease. Delays in presentation via the 2-week-wait pathway over a 3-month lockdown period (with an average presentational delay of 2 months per patient) would result in 181 additional lives and 3316 life-years lost as a result of a backlog of referrals of 25%, 361 additional lives and 6632 life-years lost for a 50% backlog of referrals, and 542 additional lives and 9948 life-years lost for a 75% backlog in referrals. Compared with all diagnostics for the backlog being done in month 1 after lockdown, additional capacity across months 1–3 would result in 90 additional lives and 1662 life-years lost due to diagnostic delays for the 25% backlog scenario, 183 additional lives and 3362 life-years lost under the 50% backlog scenario, and 276 additional lives and 5075 life-years lost under the 75% backlog scenario. However, a delay in additional diagnostic capacity with provision spread across months 3–8 after lockdown would result in 401 additional lives and 7332 life-years lost due to diagnostic delays under the 25% backlog scenario, 811 additional lives and 14 873 life-years lost under the 50% backlog scenario, and 1231 additional lives and 22 635 life-years lost under the 75% backlog scenario. A 2-month delay in 2-week-wait investigatory referrals results in an estimated loss of between 0·0 and 0·7 life-years per referred patient, depending on age and tumour type. Prompt provision of additional capacity to address the backlog of diagnostics will minimise deaths as a result of diagnostic delays that could add to those predicted due to expected presentational delays.

Prioritisation of patient groups for whom delay would result in most life-years lost warrants consideration as an option for mitigating the aggregate burden of mortality in patients with cancer."

Adapting care for older cancer patients during the COVID-19 pandemic: recommendations from the International Society of Geriatric Oncology (SIOG) COVID-19 Working Group.
Battisti NML et al., Journal of Geriatric Oncology. "The COVID-19 pandemic poses a barrier to equal and evidence-based management of cancer in older adults. The International Society of Geriatric Oncology (SIOG) formed a panel of experts to develop consensus recommendations on the implications of the pandemic on several aspects of cancer care in this age group including geriatric assessment (GA), surgery, radiotherapy, systemic treatment, palliative care and research. Age and cancer diagnosis are significant predictors of adverse outcomes of the COVID-19 infection. In this setting, GA is particularly valuable to drive decisionmaking. GA may aid estimating physiologic reserve and adaptive capability, assessing risk-benefits of either providing or temporarily withholding treatments, and determining patient preferences to help inform treatment decisions. In a resource-constrained setting, geriatric screening tools may be administered remotely to identify patients requiring comprehensive GA. Tele-health is also crucial to ensure adequate continuity of care and minimize the risk of infection exposure. In general, therapeutic decisions should favor the most effective and least invasive approach with the lowest risk of adverse outcomes. In selected cases, this might require deferring or omitting surgery, radiotherapy or systemic treatments especially where benefits are marginal and alternative safe therapeutic options are available. Ongoing research is necessary to expand knowledge of the management of cancer in older adults. However, the pandemic presents a significant barrier and efforts should be made to ensure equitable access to clinical trials and prospective data collection to elucidate the outcomes of COVID-19 in this population."

Commentaries

The hidden impact of Covid-19. Nagpaul C. BMA. (published online 16/7/20).

Cancer care

Cancer diagnostic delay in the COVID-19 era: what happens next? Hamilton W. The Lancet Oncology. (published online 20/7/20).

How cancer services are fighting to counter covid-19's impact. Wilkinson E. BMJ, 370:m2747. (published online 15/7/20).

Practice patterns of diagnostic upper gastrointestinal endoscopy during the initial COVID-19 outbreak in England. Makar SR et al., The Lancet Gastroenterol Hepatol. (published online 16/7/20).

Mental health services

Responding to COVID-19 in Psychiatric Rehabilitation: Collaboration Is Vital. Parry SJ et al., J Psychosoc Rehabil Ment Health. (published online 17/7/20).

How mental health care should change as a consequence of the COVID-19 pandemic. Moreno C et al., The Lancet Psychiatry. (published online 16/7/20).

Useful resources

Time to be radical? The view from system leaders on the future of 'system by default. Pett W. NHS Reset & NHS Confederation ICS Network.

In the balance: Ten principles for how the NHS should approach restarting 'non-Covid care'. BMA.

Health Policy and Leadership Models During the COVID-19 Pandemic- Review Article. Nicola M et al., Int J Surgery.