The Strategy Unit
At NHS Midlands and Lancashire Commissioning Support Unit

COVID-19 Evidence Alert – 14th August 2020

Welcome

Please note we'll be taking a short break next week – the alert will be back on 28th August.

The *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').

Due to the time taken to compile alerts, we're no longer providing summaries and instead present abstracts where available.

We are also working on other key areas of interest such as impacts on inequalities and marginalised groups, which will be published shortly.

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

Hospital discharge and preventing unnecessary hospital admissions (COVID-19). SCIE.

COVID-19: guidance for hostel services for people experiencing homelessness and rough sleeping. Public Health England (updated 7/8/20).

Supported living services during coronavirus (COVID-19). Department of Health and Social Care (published online 6/8/20).

Rapid reviews

COVID-19 in indoor environments — Air and surface disinfection measures. National Collaborating Centre for Environmental Health. (published online 29/7/20). "The COVID-19 pandemic has led to the closure of workplaces, public facilities, retail and commercial spaces, entertainment venues, and other indoor spaces where groups of people congregate. As cities and provinces reopen, jurisdictions have adopted common measures to mitigate the risks of transmission of SARS-CoV-2, the virus responsible for COVID-19, in indoor environments. Beyond closure, a variety of control measures have been proposed as potential interventions in indoor environments, but their effectiveness against SARS-CoV-2 has not been widely studied. This document provides an overview of commonly used approaches to mitigate the transmission of SARS-CoV-2 indoors and presents three additional control measures based on disinfection — ultraviolet germicidal irradiation (UVGI), electrostatic spraying of disinfectants and disinfectant fogging."

Emerging evidence

Experiences of Home Health Care Workers in New York City During the Coronavirus Disease 2019 Pandemic. A Qualitative Analysis. Sterling MR et al., JAMA Internal Medicine. DOI:10.1001/jamainternmed.2020.3930. "From March to April 2020, a qualitative study with 1-to-1 semistructured interviews of 33 home health care workers in New York City was conducted in partnership with the 1199SEIU Home Care Industry Education Fund, a benefit fund of the 1199 Service Employees International Union United Healthcare Workers East, the largest health care union in the US. Purposeful sampling was used to identify and recruit home health care workers. In total, 33 home health care workers employed by 24 unique home care agencies across the 5 boroughs of New York City participated. Participants had a mean (SD) age of 47.6 (14.0) years, 32 (97%) were women, 21 (64%) were Black participants, and 6 (18%) were Hispanic participants. Five major themes emerged: home health care workers (1) were on the front lines of the COVID-19 pandemic but felt invisible; (2) reported a heightened risk for virus transmission; (3) received varying amounts of information, supplies, and training from their home care agencies; (4) relied on nonagency alternatives for support, including information and supplies; and (5) were forced to make difficult trade-offs in their work and personal lives. In this qualitative analysis, home health care workers reported providing frontline essential care, often at personal risk, during the COVID-19 pandemic. They experienced challenges that exacerbated the inequities they face as a marginalized workforce. Interventions and policies to better support these frontline health care professionals are urgently needed."

Sheltering in place and social distancing when the services provided are housing and social support: The COVID-19 health crisis and recovery housing. Mericle AA et al., Journal of Substance Abuse Treatment. DOI: 10.1016/j.jsat.2020.108094. "Recovery housing is a vital service for individuals with substance use disorders who need both recovery support and safe housing. Recovery housing is a residential service, and it relies heavily on social support provided by peers both within the residence and in outside mutual help groups. As such, efforts to keep residents safe from SARS CoV-2, the virus that causes the illness COVID-19, pose a number of challenges to social distancing. Further, residents are some of the more vulnerable individuals in recovery. They are more likely to have co-occurring health conditions that place them at risk for COVID-19, and they often have risk factors such as employment in low-wage jobs that increase their potential for negative economic impacts of the pandemic. Since most recovery housing operates outside formal

substance use treatment, residents who pay out-of-pocket for services largely support these residences. Comprehensive support for those using, as well as those providing and ensuring the quality of recovery housing, is needed to ensure the viability of recovery housing."

Commentaries

The devastating impact of covid-19 on social care in England. Deeny S & Dunn P, BMJ Blogs. (published online 12/8/20).

Useful resources

Care homes and supported living: Learning and sharing following the COVID-19 lockdown. SCIE. (published online 11/8/20).

Impacts of lifting restrictions

Guidance

COVID-19 contain framework: a guide for local decision-makers. Department of Health and Social Care (published online 7/8/20).

Containing and managing local coronavirus (COVID-19) outbreaks. Department of Health and Social Care. (updated 7/8/20).

Rapid reviews

Increasing handwashing in young children: A brief review. Jess RL & Dozier CL. Journal of Applied Behavior Analysis, 53 (3), 1219-24. "Personal hygiene is critical for preventing the spread of infection. One important component of personal hygiene is handwashing. This review summarizes research on behavioral strategies to address handwashing in children, offers areas for additional research, and suggests a treatment package to teach handwashing to young children."

Cluster infections play important roles in the rapid evolution of COVID-19 transmission: a systematic review. Liu T, International Journal of Infectious Diseases. DOI: 10.1016/j.ijid.2020.07.073. "We searched all of the studies published between January 1, 2020 and June 15, 2020, on the cluster infections of COVID-19 in the English electronic databases including PubMed, Embase, Web of Knowledge, and Scopus. All included studies were independently screened and evaluated by two authors, and information of each study was extracted using a standard form. RESULTS: A total of 65 studies were included in this study which involved 108 cluster infections from 13 countries, areas or territories. Out of the cluster infections, 72(66.7%) were reported in China. The major types of cluster infections include family cluster, community transmission, nosocomial infection, transmission in gathering activities, on transportations, in shopping malls, on conference, among tourists, in religious organizations, among workers, in prisons, office, and in nursing home. CONCLUSIONS: The SARS-CoV-2 can be transmitted in various circumstances, and cluster infection plays important roles in the rapid evolution of COVID-19 transmission. Prevention and control measures such as social distance must be strictly implemented to contain the cluster infections."

Economic Aspects of the COVID-19 Crisis in the UK. DELVE Report No. 5. The DELVE Initiative. (published online 14/8/20). "To help policymakers tackle these challenges we have drawn on insights from recent economic work into the pandemic that transcends the crude 'health versus the economy' dichotomy that indiscriminate lockdown measures tend to invoke, and instead seeks to explore more targeted interventions that have the potential to alleviate the trade-off between lives and livelihoods, attaining more desirable outcomes in both dimensions. We suggest methodologies including how economic models can incorporate insights from epidemiology; we review evidence about pandemic economic impacts; we suggest tools and methods that will be useful in monitoring the economy as it attempts to recover; and we suggest data required for conducting economic analysis."

Emerging evidence

Rapid Risk Assessment: Coronavirus disease 2019 (COVID-19) in the EU/EEA and the UK – eleventh update: resurgence of cases. European Centre for Disease Prevention and Control. (published online 10/8/20). "The COVID-19 pandemic continues to pose a major public health threat to EU/EEA countries and the UK and to countries worldwide. As cases increased, peaking in early April 2020 in the EU/EEA, many countries implemented a range of response measures which led to a reduction in incidence. As countries regained control of transmission and alleviated the burden on healthcare, many measures were relaxed or removed to allow for a more viable way of life with the virus in circulation. Subsequently, a recent increase in COVID-19 cases has been reported in many EU/EEA countries. While many countries are now testing mild and asymptomatic cases, which has resulted in increased case reports, there is a true resurgence in cases in several countries as a result of physical distancing measures being relaxed."

COVID-19 clusters and outbreaks in occupational settings in the EU/EEA and the UK. European Centre for Disease Prevention and Control. (published online 11/8/20). "The aim of this document is to describe COVID-19 clusters and outbreaks in the EU/EEA and the UK linked to occupational settings, including healthcare and non-healthcare settings, and to identify possible factors contributing to transmission in these settings."

Back to School Study: Interim Report 1, 11 August 2020. Lorenc A et al., University of Bristol. "The Back to School study is a rapid qualitative study examining how young people, parents, carers and school staff in Bristol feel about returning to secondary school in September, including their views on measures to reduce the risk of COVID-19 infections. This first interim report presents preliminary findings from interviews held with five school staff from three schools and eight families from five schools between 15 July and 7 August 2020."

Feasibility study of mitigation and suppression strategies for controlling COVID-19 outbreaks in London and Wuhan. Yang P et al., PLoS One. DOI: 10.1371/journal.pone.0236857. **"**Recent outbreaks of coronavirus disease 2019 (COVID-19) has led a global pandemic cross the world. Most countries took two main interventions: suppression like immediate lockdown cities at epicenter or mitigation that slows down but not stopping epidemic for reducing peak healthcare demand. Both strategies have their apparent merits and limitations; it becomes extremely hard to conduct one intervention as the most feasible way to all countries. Targeting at this problem, this paper conducted a feasibility study by defining a mathematical model named SEMCR, it extended traditional SEIR (Susceptible-Exposed-Infectious-Recovered) model by adding two key features: a

direct connection between Exposed and Recovered populations, and separating infections into mild and critical cases. It defined parameters to classify two stages of COVID-19 control: active contain by isolation of cases and contacts, passive contain by suppression or mitigation. The model was fitted and evaluated with public dataset containing daily number of confirmed active cases including Wuhan and London during January 2020 and March 2020. The simulated results showed that 1) Immediate suppression taken in Wuhan significantly reduced the total exposed and infectious populations, but it has to be consistently maintained at least 90 days (by the middle of April 2020). Without taking this intervention, we predict the number of infections would have been 73 folders higher by the middle of April 2020. Its success requires efficient government initiatives and effective collaborative governance for mobilizing of corporate resources to provide essential goods. This mode may be not suitable to other countries without efficient collaborative governance and sufficient health resources. 2) In London, it is possible to take a hybrid intervention of suppression and mitigation for every 2 or 3 weeks over a longer period to balance the total infections and economic loss. While the total infectious populations in this scenario would be possibly 2 times than the one taking suppression, economic loss and recovery of London would be less affected. 3) Both in Wuhan and London cases, one important issue of fitting practical data was that there were a portion (probably 62.9% in Wuhan) of self-recovered populations that were asymptomatic or mild symptomatic. This finding has been recently confirmed by other studies that the seroprevalence in Wuhan varied between 3.2% and 3.8% in different sub-regions. It highlights that the epidemic is far from coming to an end by means of herd immunity. Early release of intervention intensity potentially increased a risk of the second outbreak."

Perceived efficacy of COVID-19 restrictions, reactions and their impact on mental health during the early phase of the outbreak in six countries. Jensen MM et al, R. Soc. open sci.7200644. The COVID-19 pandemic forced millions of people to drastically change their social life habits as governments employed harsh restrictions to reduce the spread of the virus. Although beneficial to physical health, the perception of physical distancing and related restrictions could impact mental health. In a pre-registered online survey, we assessed how effective a range of restrictions were perceived, how severely they affected daily life, general distress and paranoia during the early phase of the outbreak in Brazil, Colombia, Germany, Israel, Norway and USA. Most of our over 2000 respondents rated the restrictions as effective. School closings were perceived as having the strongest effect on daily life. Participants who believed their country reacted too mildly perceived the risk of contracting SARS-CoV-2 to be higher, were more worried and expressed reduced beliefs in the ability to control the outbreak. Relatedly, dissatisfaction with governmental reactions corresponded with increased distress levels. Together, we found that satisfaction with one's governmental reactions and fear appraisal play an important role in assessing the efficacy of restrictions during the pandemic and their related psychological outcomes. These findings inform policy-makers on the psychological factors that strengthen resilience and foster the well-being of citizens in times of global crisis.

Impact of National Containment Measures on Decelerating the Increase in Daily New Cases of COVID-19 in 54 Countries and 4 Epicenters of the Pandemic: Comparative Observational Study. Wong CKH et al., J Med Internet Res, 22(7):e19904. DOI: 10.2196/19904.
"The aim of this study was to describe and evaluate the impact of national containment measures and policies (stay-at-home orders, curfews, and lockdowns) on decelerating the increase in daily new cases of COVID-19 in 54 countries and 4 epicenters of the pandemic in different jurisdictions

worldwide. We reviewed the effective dates of the national containment measures (stay-at-home order, curfew, or lockdown) of 54 countries and 4 epicenters of the COVID-19 pandemic (Wuhan, New York State, Lombardy, and Madrid), and we searched cumulative numbers of confirmed COVID-19 cases and daily new cases provided by health authorities. Data were drawn from an open, crowdsourced, daily-updated COVID-19 data set provided by Our World in Data. We examined the trends in the percent increase in daily new cases from 7 days before to 30 days after the dates on which containment measures went into effect by continent, World Bank income classification, type of containment measures, effective date of containment measures, and number of confirmed cases on the effective date of the containment measures. We included 122,366 patients with confirmed COVID-19 infection from 54 countries and 24,071 patients from 4 epicenters on the effective dates on which stay-at-home orders, curfews, or lockdowns were implemented between January 23 and April 11, 2020. Stay-at-home, curfew, and lockdown measures commonly commenced in countries with approximately 30%, 20%, or 10% increases in daily new cases. All three measures were found to lower the percent increase in daily new cases to <5 within one month. Among the countries studied, 20% had an average percent increase in daily new cases of 30-49 over the seven days prior to the commencement of containment measures; the percent increase in daily new cases in these countries was curbed to 10 and 5 a maximum of 15 days and 23 days after the implementation of containment measures, respectively. Different national containment measures were associated with a decrease in daily new cases of confirmed COVID-19 infection. Stay-at-home orders, curfews, and lockdowns curbed the percent increase in daily new cases to <5 within a month. Resurgence in cases within one month was observed in some South American countries."

Reactions to COVID-19: Differential Predictors of Distress, Avoidance, and Disregard for Social Distancing. Taylor S. Journal of Affective Disorders. (pre-proof). DOI:10.1016/j.jad.2020.08.002. "A large community sample from the United States and Canada (N=6,854) completed measures of beliefs associated with over- and under-responses, along with measures of distress, excessive avoidance, and nonadherence to social distancing. Over-response beliefs were assessed by scales measuring beliefs about the dangerousness of COVID-19 (personal health and socio-economic threats) and COVID-19-related xenophobia (beliefs that foreigners are spreading the virus). Under-response beliefs were assessed by scales measuring beliefs that the threat of COVID-19 has been exaggerated, and beliefs that one is sufficiently healthy to be robust against the effects of COVID-19. In regression analyses, medium or large effects were obtained whereby over-response beliefs predicted distress (including distress associated with self-isolation) and excessive avoidance during the pandemic, whereas under-response beliefs predicted the disregard for social distancing. It is important to understand under-responses to COVID-19 and how these relate to distress, excessive avoidance, and nonadherence to social distancing. Implications for addressing the problems of over- and under-response are discussed."

Is risk compensation threatening public health in the covid-19 pandemic? Mantzari E et al., BMJ, 370. DOI:10.1136/bmj.m2913. "Unfounded concerns about risk compensation threaten public health when they delay the introduction of protective measures such as wearing of face coverings, argue Theresa Marteau and colleagues."

Public perspectives on protective measures during the COVID-19 pandemic in the Netherlands, Germany and Italy: A survey study. Meier K, PLoS One. DOI: 10.1371/journal.pone.0236917. "An online survey available in multiple languages was disseminated starting on March 19th, 2020. After five days, we computed descriptive statistics for countries with more than 500 respondents. Each day, we assessed enacted community containment measures by

stage of stringency (I-IV). In total, 9,796 adults responded, of whom 8,611 resided in the Netherlands (stage III), 604 in Germany (stage III), and 581 in Italy (stage IV). To explore possible dynamics as containment strategies intensified, we also included 1,365 responses submitted during the following week. Participants indicated support for governmental measures related to avoiding social gatherings, selective closure of public places, and hand hygiene and respiratory measures (range for all measures: 95.0%-99.7%). Respondents from the Netherlands less frequently considered a complete social lockdown effective (59.2%), compared to respondents in Germany (76.6%) or Italy (87.2%). Italian residents applied enforced social distancing measures more frequently (range: 90.2%-99.3%, German and Dutch residents: 67.5%-97.0%) and self-initiated hygienic and social distancing behaviors (range: 36.3%-96.6%, German and Dutch residents: 28.3%-95.7%). Respondents reported being sufficiently informed about the outbreak and behaviors to avoid infection (range: 90.2%-91.1%). Information channels most commonly reported included television newspapers, official health websites, and social media. One week later, we observed no major differences in submitted responses. During the early stage of the COVID-19 pandemic, belief in the effectiveness of protective measures among survey respondents from three European countries was high and participants reported feeling sufficiently informed. In March 2020, implementation of measures differed between countries and were highest among respondents from Italy, who were subjected to the most stringent lockdown measures and greatest COVID-19 burden in Europe during this period."

Estimates of the ongoing need for social distancing and control measures post-"lockdown" from trajectories of COVID-19 cases and mortality. Lonergan M & Chalmers JD, Eur Respir J, 56(1):2001483. DOI: 10.1183/13993003.01483-2020. "By 21 May 2020, severe acute respiratory syndrome-coronavirus-2 (SARS-CoV-2) had caused more than 5 million cases of coronavirus 2019 (COVID-19) across more than 200 countries. Most countries with significant outbreaks have introduced social distancing or "lockdown" measures to reduce viral transmission. So the key question now is when, how and to what extent these measures can be lifted. Publicly available data on daily numbers of newly confirmed cases and mortality were used to fit regression models estimating trajectories, doubling times and the reproduction number (R0) of the disease, before and under the control measures. These data ran up to 21 May 2020, and were sufficient for analysis in 89 countries. The estimates of R0 before lockdown based on these data were broadly consistent with those previously published: between 2.0 and 3.7 in the countries with the largest number of cases available for analysis (USA, Italy, Spain, France and UK). There was little evidence to suggest that the restrictions had reduced R far below 1 in many places, with France having the most rapid reductions: R0 0.76 (95% CI 0.72-0.82) based on cases, and 0.77 (95% CI 0.73-0.80) based on mortality. Intermittent lockdown has been proposed as a means of controlling the outbreak while allowing periods of increased freedom and economic activity. These data suggest that few countries could have even 1 week per month unrestricted without seeing resurgence of the epidemic. Similarly, restoring 20% of the activity that has been prevented by the lockdowns looks difficult to reconcile with preventing the resurgence of the disease in most countries."

SARS-CoV-2 Transmission and Infection Among Attendees of an Overnight Camp — Georgia, June 2020. Szablewski CM et al., MMWR. (published online 7/8/20). "These findings demonstrate that SARS-CoV-2 spread efficiently in a youth-centric overnight setting, resulting in high attack rates among persons in all age groups, despite efforts by camp officials to implement most recommended strategies to prevent transmission. Asymptomatic infection was common and potentially contributed to undetected transmission, as has been previously reported (1–4). This

investigation adds to the body of evidence demonstrating that children of all ages are susceptible to SARS-CoV-2 infection (1–3) and, contrary to early reports (5,6), might play an important role in transmission (7,8). The multiple measures adopted by the camp were not sufficient to prevent an outbreak in the context of substantial community transmission. Relatively large cohorts sleeping in the same cabin and engaging in regular singing and cheering likely contributed to transmission (9). Use of cloth masks, which has been shown to reduce the risk for infection (10), was not universal. An ongoing investigation will further characterize specific exposures associated with infection, illness course, and any secondary transmission to household members. Physical distancing and consistent and correct use of cloth masks should be emphasized as important strategies for mitigating transmission in congregate settings."

Social distancing laws cause only small losses of economic activity during the COVID-19 pandemic in Scandinavia. Sheridan A et al., PNAS. (published online 3/8/20). DOI:10.1073/pnas.2010068117. "This paper uses real-time transaction data from a large bank in Scandinavia to estimate the effect of social distancing laws on consumer spending in the coronavirus 2019 (COVID-19) pandemic. The analysis exploits a natural experiment to disentangle the effects of the virus and the laws aiming to contain it: Denmark and Sweden were similarly exposed to the pandemic but only Denmark imposed significant restrictions on social and economic activities. We estimate that aggregate spending dropped by around 25% (95% CI: 24 to 26%) in Sweden and, as a result of the shutdown, by 4 additional percentage points (95% CI: 3 to 5 percentage points [p.p.]) in Denmark. This suggests that most of the economic contraction is caused by the virus itself and occurs regardless of social distancing laws. The age gradient in the estimates suggests that social distancing reinforces the virus-induced drop in spending for low-health-risk individuals but attenuates it for high-risk individuals by lowering the overall prevalence of the virus in the society."

COVID-19 impact on city and region: what's next after lockdown? Kang M et al., International Journal of Urban Sciences. DOI:10.1080/12265934.2020.1803107. "COVID-19 is unique in that it is spread through everyday contact with other people. Therefore, social protective measures, beyond medical protective measures, such as social distancing, lockdowns, border closures, and human tracing are initiated to control the spread of COVID-19. Such responses have produced secondary issues such as drastic changes in people's way of life and work, housing instability, economic shock, and privacy issues. This paper examines the four domains of urban and regional issues related to the secondary impact of COVID-19, including (1) social distancing, urban structure, community, and density; (2) housing affordability; (3) lockdowns, border closures, reshoring, and regional economic recovery; and (4) smart city technology, contact tracing, and privacy. The following six recommendations have been proposed. First, institutional and cultural factors are more important than urban features, such as population density. To handle infectious diseases such as COVID-19, it is important to build systems, technology, infrastructure, and urban structures that can strengthen resilience instead of implementing a directionless policy of dispersion. Second, it is necessary to improve accessibility to essential services at the community level, including medical facilities and food supply. Third, continuous effort should be made to boost housing affordability, as it is directly related to people's basic life. Fourth, measures are needed to protect those people who are socioeconomically disadvantaged. There is also the need to restore global trade and economic relations. Fifth, since data technology-based COVID-19 control raises the human tracing and privacy issue, we must ensure the principles of privacy management, such as transparency and voluntary consent, are being met. Finally, since COVID-19 is spread through

people, individuals may become anxious and fearful of others without grounds; this may increase prejudice and hatred, including xenophobia. Significant social effort is needed to overcome such ill-defined anxiety and fear and maintain a healthy civil society."

Towards mental health friendly cities during and after COVID-19. Sinha M et al., Cities & Health. DOI: 10.1080/23748834.2020.1790251. "COVID-19 and the resultant stringent control measures have increased social isolation, loneliness, and domestic violence, and generated feelings of uncertainty, fear, anxiety, and hopelessness. Over the past two years, citiesRISE, a global platform that engages youth leadership in mental health system reform, has developed a holistic model for youth mental health and operationalized it through the Mental Health Friendly Cities (MHFC) framework. Using this framework, we surveyed youth from the five cities early in the COVID-19 pandemic, and identified critical needs, based on which we recommend research and programming priorities towards post-COVID-19 Mental Health Friendly Cities."

The environmental dangers of employing single-use face masks as part of a COVID-19 exit strategy. Allison AL et al., UCL Open: Environment. (Preprint). "Most masks available for sale are made from layers of plastics and are designed to be single-use. If every person in the UK used one single-use mask each day for a year, that would create 66,000 tonnes of contaminated plastic waste and create ten times more climate change impact than using reusable masks. - In a hospital environment, single-use protective wear such as masks and gloves are contaminated items, and there are systems in place for their safe disposal, which involve segregation and incineration. - No such segregated system exists for the general public, and a policy that makes wearing face masks mandatory will result in thousands of tonnes of contaminated waste deposited in the street and in the household waste. - Evidence suggests that reusable masks perform most of the tasks of single-use masks without the associated waste stream. - An extensive public health campaign with clear instructions about how to wear, remove, and wash reusable masks will be needed if this is to become part of the UK government's exit strategy."

Functional and Dysfunctional Fear of COVID-19: A Classification Scheme. Solymosi R et al., SocArXiv. (Preprint). "Worry about COVID-19 is a central topic of research into the social and economic consequences of the COVID-19 pandemic. Worry can be a negative and debilitating experience that damages mental health and discourages healthy re-engagement with the world, but it can also be a problem solving activity, directing people's attention to problems, and encouraging them to act accordingly. We present in this paper a way of measuring worry about catching COVID-19 that distinguishes between "functional fear" and "dysfunctional fear". Drawing on work into fear of crime, our classification divides people into three groups: (1) the unworried, (2) the functionally worried (adaptive emotions encourage proactive behaviours to reduce the chance of infection) and (3) the dysfunctionally worried (quality of life is damaged by the emotional experience or taking ineffective or damaging precautions). Analysing data from two waves of a longitudinal panel study of over 1,000 individuals living in ten cities in England, Scotland and Wales, we find differing levels of negative anxiety, anger, loneliness, unhappiness and life satisfaction for each of the three groups, with dysfunctionally worried experiencing the most negative outcomes and functionally worried experiencing less negative outcomes than unworried. We find no difference between groups in compliance and willingness to re-engage in social life. Finally, we compare perceptions of risk (differentiating between likelihood, control and consequence) for each group, and find a difference between the dysfunctionally worried compared with functional and unworried groups. Our findings inform what sort of content-targeted messaging aimed at reducing dysfunctional worry might wish

to promote. We conclude with some thoughts on the applicability of our measurement scheme for future research."

Commentaries

Leicester lockdown: could better data have prevented it? Wise J. BMJ, 370. DOI: 10.1136/bmj.m3028

European Case-Fatality Rates beyond lockdown and the UK's outlier status. Oke J & Heneghan C, Oxford CEBM, COVID-19 Evidence Service.

Covid-19: Was the decision to delay the UK's lockdown over fears of "behavioural fatigue" based on evidence? Mahase E, BMJ, 370. DOI: 10.1136/bmj.m3166.

Critical Reflections on COVID-19 Communication Efforts Targeting Adolescents and Young Adults. Abbott A et al., Journal of Adolescent Health 67, 159e160.

COVID-19 policy measures—Advocating for the inclusion of the social determinants of health in modelling and decision making. Rangel JC et al., Journal of Evaluation in Clinical Practice. DOI: 10.1111/jep.13436.

The COVID-19 pandemic and the Swedish strategy: Epidemiology and postmodernism . Lindström M, SSM – Population Health. (In-press, pre-proof). DOI: 10.1016/j.ssmph.2020.100643.

Long term rehabilitation needs

Guidance

Management of post-acute covid-19 in primary care. Greenhalgh T et al., BMJ, 370:m3026. "Post-acute covid-19 ("long covid") seems to be a multisystem disease, sometimes occurring after a relatively mild acute illness.1 Clinical management requires a whole-patient perspective.2 This article, intended for primary care clinicians, relates to the patient who has a delayed recovery from an episode of covid-19 that was managed in the community or in a standard hospital ward. Broadly, such patients can be divided into those who may have serious sequelae (such as thromboembolic complications) and those with a non-specific clinical picture, often dominated by fatigue and breathlessness."

Why Rehabilitation must have priority during and after the COVID-19-pandemic: A position statement of the Global Rehabilitation Alliance. **Gutenbrunner C et al., Journal of Rehabilitation Medicine. DOI: 10.2340/16501977-2713. "**COVID-19 has become a pandemic with strong influence on health systems. In many cases it leads to a disruption of rehabilitation service provision. On the other hand, rehabilitation must be an integral part of COVID-19 management. Rehabilitation for COVID-19 should start from acute and early post-acute care and needs to be continued in the post-acute and long-term rehabilitation phase. Of course, it should follow specific safety protocol. Additionally, rehabilitation must be kept available for all other people who are in need. From the perspective of health system, the Global Rehabilitation Alliance urges decision makers to ensure that rehabilitation services will be available for all patients with COVID-19 in the acute, post-acute and long-term phase. Additionally, it must be ensured that all other persons with rehabilitation need have access to rehabilitation services. Rehabilitation services must be equipped

with personal protection equipment and follow strict hygiene measures. In particular, rehabilitation must be accessible for vulnerable populations. For that reason, rehabilitation must be kept a health priority during the COVID-19 pandemic and given adequate financial resources. Last but not least, scientific studies should be performed to clarify the impact of the pandemic on rehabilitation services as well as on the needs for rehabilitation of COVID-19 patients."

Emerging evidence

Low physical functioning and impaired performance of activities of daily life in COVID-19 patients who survived the hospitalisation. Belli S et al., European Respiratory Journal. DOI: 10.1183/13993003.02096-2020. "Thousands of Italians with COVID-19 were admitted to the hospital. In the Piedmont Region 12 272 patients as of May 12 2020 survived the hospital admission, and most of them were discharged home. As the influx of COVID-19 patients is exceeding the hospital bed-capacity in Northern Italy, patients are discharged home after two negative reverse transcription polymerase chain reaction (RT-PCR) tests for the acute respiratory syndrome (SARS)-CoV-2, notwithstanding their physical status. Nevertheless, lower-limb muscle deconditioning and an impaired performance of activities of daily living (ADLs) are likely to occur. Indeed, COVID-19 patients suffer from multiple symptoms during hospitalisation, and the acute care takes place in strict isolation, which will reduce patient's mobility to zero. To date, no data exist on the physical functioning and performance of ADLs at discharge from the hospital. Nevertheless, it seems reasonable to hypothesise that patients with COVID-19 are in need of rehabilitative interventions directly following hospital admission. This retrospective study assessed the proportion of patients with a low physical functioning and/or impaired performance of ADLs at time they were discharged home."

Multimodality cardiac evaluation in children and young adults with multisystem inflammation associated with COVID-19. Theocharis P et al., European Heart Journal: Cardiovascular Imaging, jeaa212. DOI: 10.1093/ehjci/jeaa212. "Twenty consecutive patients (mean age 10.6 ± 3.8 years) presenting to our institution underwent serial echocardiographic evaluation on admission (median day 5 of illness), the day coinciding with worst cardiac function (median day 7), and the day of discharge (median day 15). We performed cardiac computed tomography (CT) to assess coronary anatomy (median day 15) and cardiac magnetic resonance imaging (CMR) to assess dysfunction (median day 20). On admission, almost all patients displayed abnormal strain and tissue Doppler indices. Three-dimensional (3D) echocardiographic ejection fraction (EF) was <55% in half of the patients. Valvular regurgitation (75%) and small pericardial effusions (10%) were detected. Serial echocardiography demonstrated that the mean 3D EF deteriorated (54.7 ± 8.3% vs. 46.4 ± 8.6%, P = 0.017) before improving at discharge (P = 0.008). Left main coronary artery (LMCA) dimensions were significantly larger at discharge than at admission (Z score –0.11 ± 0.87 vs. 0.78 ± 1.23, P = 0.007). CT showed uniform coronary artery dilatation commonly affecting the LMCA (9/12). CMR detected abnormal strain in all patients with global dysfunction (EF <55%) in 35%, myocardial oedema in 50%, and subendocardial infarct in 5% (1/20) patients. Pancarditis with cardiac dysfunction is common and associated with myocardial oedema. Patients require close monitoring due to coronary artery dilatation and the risk of thrombotic myocardial infarction."

Lung Ultrasound in COVID -19 A Role Beyond the Acute Phase? Gaspardone C et al., Journal of Ultrasound in Medicine. DOI: 10.1002/jum.15425. "We prospectively enrolled 70 consecutive patients with COVID-19 who had a prolonged hospitalization with inpatient rehabilitation between

April 6 and May 22, 2020. All of the patients underwent an LUS evaluation at discharge. Data of patients with more severe disease during the acute phase (ie, required ventilatory support) were compared to those of patients with milder disease. Among the 70 patients with COVID-19 (22 women and 48 men; mean age ± SD, 68 ± 13 years), the LUS score before discharge was still frankly pathologic and higher in patients who had more severe disease during the acute phase compared to patients with milder disease (median [interquartile range], 8.0 [5.5–13.5] versus 2.0 [1.0–7.0]; P < .001), even when both categories met internationally defined discharge criteria. Lung ultrasound can identify the persistence of subclinical residual lung damage in patients with severe COVID-19 even if they meet discharge criteria. Considering the low cost, easy application, and lack of radiation exposure, LUS seems the ideal tool to be adopted in outpatient and primary care settings for the follow-up of patients with COVID-19."

COVID-19 and functional disability: current insights and rehabilitation strategies (research letter). Ambrosino P et al., Postgrad Med J. (First published as 10.1136/postgradmedj-2020-138227 on 4/8/20).

Commentaries

Long term respiratory complications of covid-19. Fraser E, BMJ, 370. DOI: 10.1136/bmj.m3001.

Screening and testing

Commentary from the collaboration

New contact tracing app welcome but government must ensure app works for the hardest hit groups. Health Foundation. (published online 13/8/20).

Guidance

Objectives for COVID-19 testing in school settings. European Centre for Disease Prevention and Control. (published online 10/8/20).

COVID-19 in children and the role of school settings in COVID-19 transmission. European Centre for Disease Prevention and Control. (published online 6/8/20).

Rapid reviews

Rapid Review: What is known about using wastewater surveillance to monitor the COVID-19 pandemic in the community? National Collaborating Centre for Methods and Tools (29/7/20). "Water-based epidemiology is an evolving methodology that uses samples collected from municipal wastewater to monitor exposure patterns at the community level. This methodology has been used previously to identify the presence of the Aichi virus in the Netherlands before cases were reported; for polio surveillance; for antimicrobial resistance; and has been proposed as a potential cost-effective method to monitor COVID-19. As a number of jurisdictions around the world begin to lift restrictions put in place to flatten the curve of the pandemic, wastewater surveillance has been proposed as a method to monitor levels of the virus within the community in real time, possibly before individuals start to display symptoms. This rapid review was produced to support public health decision makers' response to the coronavirus disease 2019 (COVID-19) pandemic. This review

seeks to identify, appraise, and summarize emerging research evidence to support evidence-informed decision making."

Emerging evidence

Drive-Through COVID-19 Testing During the 2020 Pandemic: A Safe, Efficient, and Scalable Model for Pediatric Patients and Health Care Workers. Flynn EF et al., Academic Pediatrics, 20(6), P753-755. "High-volume testing is critical to COVID-19 containment. In this report, we share our team's development of a pediatric-focused drive-through COVID-19 testing center, and discuss how this process can inform future pediatric public health efforts."

Specific risk factors for SARS-CoV-2 transmission among health care workers in a university hospital. Celebi G, Americal Journal of Infection Control, DOI: 10.1016/j.ajic.2020.07.039. "Upper respiratory samples of HCWs were tested for SARS-CoV-2 by RT-PCR. A case-control study was conducted to explore the possible risk factors that lead to SARS-CoV-2 transmission to HCWs. Of 703 HCWs screened between March 20 and May 20, 2020, 50 (7.1%) were found to be positive for SARS-CoV-2. The positivity rates for SARS-CoV-2 among physicians, nurses, cleaning personnel, and the other occupations were 6.3%, 8.0%, 9.1%, and 2.6%, respectively. The infection rate was 8.3% among HCWs who worked in COVID-19 units and 3.4% among those who did not work in COVID-19 units (RR = 2.449, CI = 1.062–5.649, p = .027). The presence of a SARS-CoV-2 positive person in the household (p = .016), inappropriate use of personnel protective equipment (PPE) while caring for patients with COVID-19 infection (p = .003), staying in the same personnel break room as an HCW without a medical mask for more than 15 minutes (p = .000), consuming food within one meter of an HCW (p = .003), and failure to keep a safe social distance from an HCW (p = .003) were statistically significant risk factors for infection. HCWs have a high risk for SARS-CoV-2 transmission while providing care to COVID-19 patients. Transmission may also occur in non-medical areas of the hospital while speaking or eating. Periodic screening of HCWs for SARS-CoV-2 may enable early detection and isolation of infected HCWs."

Acceptability of app-based contact tracing for COVID-19: Cross-country survey evidence. Altmann S et al., JMIR mHealth and uHealth, 24/07/2020:19857 (forthcoming/in press). DOI: 10.2196/19857. "The objective of this study is to investigate user acceptability of a contact-tracing app in five countries hit by the pandemic. We conducted a multi-country, large-scale (N = 5995) study to measure public support for digital contact tracing of COVID-19 infections. We ran anonymous online surveys in France, Germany, Italy, the UK and the US. We measured intentions to use a contact-tracing app across different installation regimes (voluntary installation vs. automatic installation by mobile phone providers), and studied how these intentions vary across individuals and countries. We found strong support for the app under both regimes, in all countries, across all sub-groups of the population, and irrespective of regional-level COVID-19 mortality rates. We investigated the main factors that may hinder or facilitate take-up and found that concerns about cyber security and privacy, together with lack of trust in government, are the main barriers to adoption. Epidemiological evidence shows that app-based contact-tracing can suppress the spread of COVID-19 if a high enough proportion of the population uses the app and that it can still reduce the number of infections if take-up is moderate. Our findings show that the willingness to install the app is very high. The available evidence suggests that app-based contact tracing may be a viable approach to control the diffusion of COVID-19."

Diagnostic accuracy of serological tests for covid-19: systematic review and meta-analysis. Bastos ML et al., BMJ, 370. DOI: https://doi.org/10.1136/bmj.m2516. "Eligible studies measured sensitivity or specificity, or both of a covid-19 serological test compared with a reference standard of viral culture or reverse transcriptase polymerase chain reaction. Studies were excluded with fewer than five participants or samples. Risk of bias was assessed using quality assessment of diagnostic accuracy studies 2 (QUADAS-2). Pooled sensitivity and specificity were estimated using random effects bivariate meta-analyses. 5016 references were identified and 40 studies included. 49 risk of bias assessments were carried out (one for each population and method evaluated). High risk of patient selection bias was found in 98% (48/49) of assessments and high or unclear risk of bias from performance or interpretation of the serological test in 73% (36/49). Only 10% (4/40) of studies included outpatients. Only two studies evaluated tests at the point of care. For each method of testing, pooled sensitivity and specificity were not associated with the immunoglobulin class measured. The pooled sensitivity of ELISAs measuring IgG or IgM was 84.3% (95% confidence interval 75.6% to 90.9%), of LFIAs was 66.0% (49.3% to 79.3%), and of CLIAs was 97.8% (46.2% to 100%). In all analyses, pooled sensitivity was lower for LFIAs, the potential point-of-care method. Pooled specificities ranged from 96.6% to 99.7%. Of the samples used for estimating specificity, 83% (10 465/12 547) were from populations tested before the epidemic or not suspected of having covid-19. Among LFIAs, pooled sensitivity of commercial kits (65.0%, 49.0% to 78.2%) was lower than that of non-commercial tests (88.2%, 83.6% to 91.3%). Heterogeneity was seen in all analyses. Sensitivity was higher at least three weeks after symptom onset (ranging from 69.9% to 98.9%) compared with within the first week (from 13.4% to 50.3%). Higher quality clinical studies assessing the diagnostic accuracy of serological tests for covid-19 are urgently needed. Currently, available evidence does not support the continued use of existing point-of-care serological tests."

SARS-CoV-2 serology: Test, test, test, but interpret with caution! Bermingham WH et al., Clinical Medicine, 20(4), 365-8. "SARS-CoV-2 serological tests are a subject of intense interest and have the potential to significantly enhance the diagnostic capability of healthcare services in the current pandemic. However, as with all novel assays, significant validation is required to understand the clinical relevance of results. We present the first study to assess clinician interpretation of SARS-CoV-2 serology scenarios. We identify common key assumptions regarding patient infectivity and protection that are not currently supported by the SARS-CoV-2 evidence base. In this rapidly developing field, we therefore strongly recommend serological assay results are accompanied by clear interpretive support from laboratory and infectious diseases specialists."

A cross-sectional study of immune seroconversion to SARS-CoV-2 in frontline maternity health professionals. Bampoe S et al., Anaesthesia, https://doi.org/10.1111/anae.15229. "COVID-19, the respiratory disease caused by SARS-CoV-2, is thought to cause a milder illness in pregnancy with a greater proportion of asymptomatic carriers. This has important implications for the risk of patient-to-staff, staff-to-staff and staff-to-patient transmission among health professionals in maternity units. The aim of this study was to investigate the prevalence of previously undiagnosed SARS-CoV-2 infection in health professionals from two tertiary-level maternity units in London, UK, and to determine associations between healthcare workers' characteristics, reported symptoms and serological evidence of prior SARS-CoV-2 infection. In total, 200 anaesthetists, midwives and obstetricians, with no previously confirmed diagnosis of COVID-19, were tested for immune seroconversion using laboratory IgG assays. Comprehensive symptom and medical histories were also collected. Five out of 40 (12.5%; 95%CI 4.2–26.8%) anaesthetists, 7/52

(13.5%; 95%CI 5.6–25.8%) obstetricians and 17/108 (15.7%; 95%CI 9.5–24.0%) midwives were seropositive, with an overall total of 29/200 (14.5%; 95%CI 9.9–20.1%) of maternity healthcare workers testing positive for IgG antibodies against SARS-CoV-2. Of those who had seroconverted, 10/29 (35.5%) were completely asymptomatic. Fever or cough were only present in 6/29 (21%) and 10/29 (35%) respectively. Anosmia was the most common symptom occurring in 15/29 (52%) seropositive participants and was the only symptom that was predictive of positive seroconversion (OR 18; 95%CI 6–55). Of those who were seropositive, 59% had not self-isolated at any point and continued to provide patient care in the hospital setting. This is the largest study of baseline immune seroconversion in maternity healthcare workers conducted to date and reveals that one out of six were seropositive, of whom one out of three were asymptomatic. This has significant implications for the risk of occupational transmission of SARS-CoV-2 for both staff and patients in maternity units. Regular testing of staff, including asymptomatic staff should be considered to reduce transmission risk."

Modelling the impact of testing, contact tracing and household quarantine on second waves of COVID-19. Aleta A, Nature Human Behaviour, (2020). DOI: 10.1038/s41562-020-0931-9. "While severe social-distancing measures have proven effective in slowing the coronavirus disease 2019 (COVID-19) pandemic, second-wave scenarios are likely to emerge as restrictions are lifted. Here we integrate anonymized, geolocalized mobility data with census and demographic data to build a detailed agent-based model of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) transmission in the Boston metropolitan area. We find that a period of strict social distancing followed by a robust level of testing, contact-tracing and household quarantine could keep the disease within the capacity of the healthcare system while enabling the reopening of economic activities. Our results show that a response system based on enhanced testing and contact tracing can have a major role in relaxing social-distancing interventions in the absence of herd immunity against SARS-CoV-2."

Digital technologies in the public-health response to COVID-19. Budd J, Nature Medicine, 26, 1183–1192. DOI: 10.1038/s41591-020-1011-4. "Digital technologies are being harnessed to support the public-health response to COVID-19 worldwide, including population surveillance, case identification, contact tracing and evaluation of interventions on the basis of mobility data and communication with the public. These rapid responses leverage billions of mobile phones, large online datasets, connected devices, relatively low-cost computing resources and advances in machine learning and natural language processing. This Review aims to capture the breadth of digital innovations for the public-health response to COVID-19 worldwide and their limitations, and barriers to their implementation, including legal, ethical and privacy barriers, as well as organizational and workforce barriers. The future of public health is likely to become increasingly digital, and we review the need for the alignment of international strategies for the regulation, evaluation and use of digital technologies to strengthen pandemic management, and future preparedness for COVID-19 and other infectious diseases."

Using the COVID-19 to influenza ratio to estimate early pandemic spread in Wuhan, China and Seattle, US. Du Z et al, EClinical Medicine, DOI: 10.1016/j.eclinm.2020.100479. "For each city, we estimate the ratio of COVID-19 to influenza infections from the retrospective testing data and estimate the age-specific prevalence of influenza from surveillance reports during the same time period. Combining these, we approximate the total number of symptomatic COVID-19 infections. In Wuhan, there were an estimated 1386 [95% CrI: 420-3793] symptomatic cases over 30 of COVID-19

between December 30, 2019 and January 12, 2020. In Seattle, we estimate that 2268 [95% CrI: 498, 6069] children under 18 and 4367 [95% CrI: 2776, 6526] adults were symptomatically infected between February 24 and March 9, 2020. We also find that the initial pandemic wave in Wuhan likely originated with a single infected case who developed symptoms sometime between October 26 and December 13, 2019; in Seattle, the seeding likely occurred between December 25, 2019 and January 15, 2020. The spread of COVID-19 in Wuhan and Seattle was far more extensive than initially reported. The virus likely spread for months in Wuhan before the lockdown. Given that COVID-19 appears to be overwhelmingly mild in children, our high estimate for symptomatic pediatric cases in Seattle suggests that there may have been thousands more mild cases at the time."

Commentaries

Digital technology applications for contact tracing: the new promise for COVID-19 and beyond? Owusu PN, Global Health Research and Policy, 5(36).

Broader impacts on health outcomes

Rapid reviews

Mental health- general public

Health behaviour changes during COVID-19 and the potential consequences: A mini-review. Arora T & Grey I, Journal of Health Psychology, 25(9), 1155-63. "The COVID-19 pandemic has brought about profound changes to social behaviour. While calls to identify mental health effects that may stem from these changes should be heeded, there is also a need to examine potential changes with respect to health behaviours. Media reports have signalled dramatic shifts in sleep, substance use, physical activity and diet, which may have subsequent downstream mental health consequences. We briefly discuss the interplay between health behaviours and mental health, and the possible changes in these areas resulting from anti-pandemic measures. We also highlight a call for greater research efforts to address the short and long-term consequences of changes to health behaviours."

Rapid Review: What is known about the impact of the COVID-19 pandemic on families with children? National Collaborating Centre for Methods and Tools (22/7/20). "Many families with children have experienced effects associated with the COVID-19 pandemic on employment, income, household division of labour, and child and parental mental health and well-being. Understanding the specific implications of these changes is important for public health and policy makers as decisions are being made about next steps and potential future pandemics. This rapid review was produced to support public health decision makers' response to the coronavirus disease 2019 (COVID-19) pandemic. This review seeks to identify, appraise, and summarize emerging research evidence to support evidence-informed decision making."

Mental health – healthcare workers

Psychological effects of the COVID 19 pandemic on healthcare workers globally: A systematic review. Sheraton M et al, Psychiatry Research, 292, DOI: 10.1016/j.psychres.2020.113360. "In this systematic review, we compared the incidences of psychological issues during the COVID-19 pandemic, such as anxiety, depression, occupational stress,

PTSD and insomnia, in healthcare workers (HCW) and non-healthcare workers (NHCW). PubMed, Ovid, Google Scholar and PsycInfo were systematically searched for related published articles. In all electronic databases, the following search strategy was implemented, and these key words were used: "COVID 19" OR "SARS-CoV-2" AND "psychological" OR "stress" OR "depression" AND "healthcare$". We identified 6 studies, out of the final 15 selected, which reported numerical estimates for incidences of psychological effects. Meta-analysis was conducted, comparing both combined and individual effect sizes of all psychological manifestations. Qualitative evidence was reported from the remaining 9 cross- sectional studies. The summary effects of the combined quantitative meta-analysis conducted on 6 studies did indicate near significant differences between HCW and NHCW. Summary effects of individual manifestations indicated significantly higher incidence of insomnia among HCW, when compared to NHCW. Qualitative evidence from remaining cross-sectional studies provided additional information into the nature of the psychological issues. We conclude that even though reasons for psychological distress among HCW and NHCW may be different, both suffered in equal measures excepting for insomnia."

Mental health – pre-existing conditions

Severe mental illness and risks from COVID-19. Barber S, Oxford CEBM COVID-19 Evidence Service. (published online 5/8/20). "People with severe mental illness (SMI) are a vulnerable population. In the context of COVID-19, there is reason to suspect they may be at increased risk of contracting SARS-CoV-2 and have worse outcomes following infection, however we found no existing data that quantified these risks. Public health measures associated with COVID-19, including quarantine of suspected cases and lockdowns may negatively affect the mental health status of people with SMI, through change of environment, disruption of services, increased stress and isolation. Existing research points to greater psychological distress during the pandemic for people with SMI, rather than demonstrating this distress is due to the pandemic."

Emerging evidence

Public health

Caring for Bereaved Family Members During the COVID-19 Pandemic: Before and After the Death of a Patient. Morris SE et al., J Pain Symptom Management. 2020 Aug;60(2):e70-e74. "Bereavement care is considered an integral component of quality end-of-life care endorsed by the palliative care movement. However, few hospitals and health care institutions offer universal bereavement care to all families of patients who die. The current coronavirus disease 2019 pandemic has highlighted this gap and created a sense of urgency, from a public health perspective, for institutions to provide support to bereaved family members. In this article, drawing on the palliative care and bereavement literature, we offer suggestions about how to incorporate palliative care tools and psychological strategies into bereavement care for families during this pandemic."

Mental health- general public

Covid-19—Beyond virology: Potentials for maintaining mental health during lockdown. Munk AJL et al., PLoS One, https://doi.org/10.1371/journal.pone.0236688. "The current study aimed to assess prevalence of mental disorders during Covid-19 pandemic- and respective lockdown in Germany, and potential behaviors/states that can have protective functions on preventing severe mental problems. Assessing prevalence of mental disorders, as well as to find potential protective

variables is very important in order to determine people's psychological suffering. It provides the basis for teaching possible coping styles in order to prevent a major breakdown on mental health. Prevalence on mental disorders was expected to increase during the pandemic, especially depression, (general-/and health-) anxiety, panic attacks- and disorder, as well as obsessive-compulsive disorder. Additionally, potentially protective variables, such as resilience and coping, were included. Prevalence of mental disorders in the current sample was much higher than usual prevalence of mental disorders, with 50.6% expressing at least one mental disorder. Resilience was associated with lower risks for any mental disorder (OR = 4.23, p < .0001, 95%CI = 3.21–5.57), as well as with any other measured mental illness (all ORs between = 2.82 for obsessive-compulsive disorder and OR = 41.44 for panic disorder, all p < .001). Similar results were obtained regarding coping (focus on positive)."

The Interpersonal and Psychological Impacts of COVID-19 on Risk for Late-Life Suicide. Sheffler JL et al., The Gerontologist, https://doi.org/10.1093/geront/gnaa103. "Older adults experience increased risk for suicide compared to the general population, and the circumstances surrounding the Coronavirus Disease 2019 (COVID-19) may potentiate this risk. We discuss how current COVID-19 pandemic-related policies are likely to harm older adults disproportionately. COVID-19 pandemic social distancing policies and ethical guidelines for COVID-19 treatment may exacerbate experiences of social isolation, perceived expendability, and exposure to suffering, which are related to the three main components of the Interpersonal Theory of Suicide (i.e. thwarted belongingness, perceived burdensomeness to society, and capability for suicide). The COVID-19 pandemic poses a drain on services and has drawn ethical debates about policies around treating younger adults first. These experiences may lead older adults to have reduced access to needed medical and psychiatric services and may convey damaging messages of expendability. Further, the potential prolonged stress associated with the COVID-19 pandemic may impact neurological, immunological, and health functioning – exacerbating suicide risk. Potential venues to increase treatment options and decrease social isolation are discussed. We acknowledge optimistic effects as well, such as 'pulling together' as a society and the many valuable ways older adults may contribute during this crisis."

Who is lonely in lockdown? Cross-cohort analyses of predictors of loneliness before and during the COVID-19 pandemic. Bu F et al., Public Health, 186, 31-34. "This study compared sociodemographic predictors of loneliness before and during the COVID-19 pandemic using cross-cohort analyses of data from UK adults captured before the pandemic (UK Household Longitudinal Study, n = 31,064) and during the pandemic (UCL (University College London) COVID-19 Social Study, n = 60,341). RESULTS: Risk factors for loneliness were near identical before and during the pandemic. Young adults, women, people with lower education or income, the economically inactive, people living alone and urban residents had a higher risk of being lonely. Some people who were already at risk of being lonely (e.g. young adults aged 18-30 years, people with low household income and adults living alone) experienced a heightened risk during the COVID-19 pandemic compared with people living before COVID-19 emerged. Furthermore, being a student emerged as a higher risk factor during lockdown than usual. CONCLUSIONS: Findings suggest that interventions to reduce or prevent loneliness during COVID-19 should be targeted at those sociodemographic groups already identified as high risk in previous research. These groups are likely not just to experience loneliness during the pandemic but potentially to have an even higher risk than normal of experiencing loneliness relative to low-risk groups."

Managing Psychological Distress in Children and Adolescents Following the COVID-19 Epidemic: A Cooperative Approach. Zhou X, Psychological Trauma: Theory, Research, Practice and Policy, 12(S1), S76-8. "Children and adolescents are susceptible to the 2019 novel coronavirus (COVID-19) epidemic and tend to show posttraumatic distress. Immediately after an epidemic, governments and social organizations often provide psychological services for children and adolescents to relieve their distress. However, many adolescents report distress even long after a traumatic event because of the unaddressed traumatic atmosphere in schools or families. To advance this issue, this article proposes a cooperative model of psychological services provision for children and adolescents in response to the COVID-19 epidemic. This model suggests that psychological services should simultaneously include social, school, and family systems, which interact and have a synergistic effect. The social system provides direct services not only for children and adolescents but also for their school and family systems; school and family systems cooperate to support adolescents. Psychological work also needs to emphasize the key elements of school and family systems. Attention should be given to teachers' distress, teacher–student relationships, and peer relationships in the school system, as well as to parents' distress, parent–child relationships, and the marital relationship in the family system. In these ways, adolescents can achieve an efficient and sustainable recovery following a disaster."

Loneliness, physical activity and mental health during Covid-19: a longitudinal analysis of depression and anxiety between 2015 and 2020. Creese B et al., medRxiv. (Preprint), DOI: 10.1101/2020.07.30.20165415. "Background Loneliness and physical activity are important targets for research into the impact of COVID-19 because they have established links with mental health, could be exacerbated by social distancing policies and are potentially modifiable. Methods We analysed mental health data collected during COVID-19 from adults aged 50 and over alongside comparable annual data collected between 2015 and 2019 from the same sample. Trajectories of depression (PHQ-9) and anxiety (GAD-7) were analysed with respect to loneliness, physical activity levels and a number of socioeconomic and demographic characteristics using zero-inflated negative binomial regression. Findings 3,281 people completed the COVID-19 mental health questionnaire, all had at least one data point prior to 2020. In 2020, the adjusted PHQ-9 score for loneliness was 3.2. (95% CI: 3.0-3.4), an increase of one point on previous years and 2 points higher than people not rated lonely, whose score did not change in 2020 (1.2, 95% CI: 1.1-1.3). PHQ-9 was 2.6 (95% CI: 2.4-2.8) in people with decreased physical activity, an increase of 0.5 on previous years. In contrast, PHQ-9 in 2020 for people whose physical activity had not decreased was 1.7 (95% CI: 1.6-1.8), similar to previous years. A similar relationship was observed for GAD-7 though the differences were smaller and the absolute burden of symptoms lower. Interpretation After accounting for pre-COVID-19 trends, we show that experiencing loneliness and decreased physical activity are risk factors for worsening mental health during the pandemic. Our findings highlight the need to examine policies which target these potentially modifiable risk factors."

Mental health – health care workers

Exposure to COVID-19 patients increases physician trainee stress and burnout. Kannampallil TG, PLoS One, https://doi.org/10.1371/journal.pone.0237301. "The coronavirus disease 2019 (COVID-19) pandemic has put considerable physical and emotional strain on frontline healthcare workers. Among frontline healthcare workers, physician trainees represent a unique group—functioning simultaneously as both learners and caregivers and experiencing considerable

challenges during the pandemic. However, we have a limited understanding regarding the emotional effects and vulnerability experienced by trainees during the pandemic. We investigated the effects of trainee exposure to patients being tested for COVID-19 on their depression, anxiety, stress, burnout and professional fulfillment. All physician trainees at an academic medical center (n = 1375) were invited to participate in an online survey. We compared the measures of depression, anxiety, stress, burnout and professional fulfillment among trainees who were exposed to patients being tested for COVID-19 and those that were not, using univariable and multivariable models. We also evaluated perceived life stressors such as childcare, home schooling, personal finances and work-family balance among both groups. 393 trainees completed the survey (29% response rate). Compared to the non-exposed group, the exposed group had a higher prevalence of stress (29.4% vs. 18.9%), and burnout (46.3% vs. 33.7%). The exposed group also experienced moderate to extremely high perceived stress regarding childcare and had a lower work-family balance. Multivariable models indicated that trainees who were exposed to COVID-19 patients reported significantly higher stress (10.96 [95% CI, 9.65 to 12.46] vs 8.44 [95% CI, 7.3 to 9.76]; P = 0.043) and were more likely to be burned out (1.31 [95% CI, 1.21 to1.41] vs 1.07 [95% CI, 0.96 to 1.19]; P = 0.002]. We also found that female trainees were more likely to be stressed (P = 0.043); while unmarried trainees were more likely to be depressed (P = 0.009), and marginally more likely to have anxiety (P = 0.051). To address these challenges, wellness programs should focus on sustaining current programs, develop new and targeted mental health resources that are widely accessible and devise strategies for creating awareness regarding these resources."

Symptoms of burnout in intensive care unit specialists facing the COVID-19 outbreak.
Azoulay E et al., Ann. Intensive Care 10, 110 (2020). https://doi.org/10.1186/s13613-020-00722-3.
"The COVID-19 pandemic has resulted in an unprecedented healthcare crisis with a high prevalence of psychological distress in healthcare providers. We sought to document the prevalence of burnout syndrome amongst intensivists facing the COVID-19 outbreak. Cross-sectional survey among intensivists part of the European Society of Intensive Care Medicine. Symptoms of severe burnout, anxiety and depression were collected. Factors independently associated with severe burnout were assessed using Cox model. Response rate was 20% (1001 completed questionnaires were returned, 45 years [39–53], 34% women, from 85 countries, 12 regions, 50% university-affiliated hospitals). The prevalence of symptoms of anxiety and depression or severe burnout was 46.5%, 30.2%, and 51%, respectively, and varied significantly across regions. Rating of the relationship between intensivists and other ICU stakeholders differed significantly according to the presence of anxiety, depression, or burnout. Similar figures were reported for their rating of the ethical climate or the quality of the decision-making. Factors independently associated with anxiety were female gender (HR 1.85 [1.33–2.55]), working in a university-affiliated hospital (HR 0.58 [0.42–0.80]), living in a city of > 1 million inhabitants (HR 1.40 [1.01–1.94]), and clinician's rating of the ethical climate (HR 0.83 [0.77–0.90]). Independent determinants of depression included female gender (HR 1.63 [1.15–2.31]) and clinician's rating of the ethical climate (HR 0.84 [0.78–0.92]). Factors independently associated with symptoms of severe burnout included age (HR 0.98/year [0.97–0.99]) and clinician's rating of the ethical climate (HR 0.76 [0.69–0.82]). The COVID-19 pandemic has had an overwhelming psychological impact on intensivists. Follow-up, and management are warranted to assess long-term psychological outcomes and alleviate the psychological burden of the pandemic on frontline personnel."

Mental Health of Medical and Non-Medical Professionals during the Peak of the COVID-19 Pandemic: A Cross-Sectional Nationwide Study. Maciaszek J et al., Journal of Clinical Medicine, 9, 2527; doi:10.3390/jcm9082527. "The study aimed to compare psychopathological expressions during the COVID-19 (novel coronavirus disease 2019) pandemic, as declared on March 11th 2020 by the World Health Organization, with respect to which institutional variables might distinguish the impact of COVID-19 in medical and non-medical professionals. Methods: A cross-sectional study was performed nationwide between 16th March and the 26th April 2020 in Poland. A total of 2039 respondents representing all healthcare providers (59.8%) as well as other professionals filled in the sociodemographic section, the General Health Questionnaire-28 and the author's questionnaire with questions related to exposure to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection, the availability of protective measures, quarantine, change of working hours and place of employment during the pandemic, as well as feelings associated with the state of the pandemic. Results: Medical professionals more often presented with relevant psychopathological symptoms (GHQ-28 (General Health Questionnaire-28) total score >24) than the non-medical group (60.8% vs. 48.0%, respectively) such as anxiety, insomnia and somatic symptoms even after adjustment for potential confounding factors. Male sex, older age and appropriate protective equipment were associated with significantly lower GHQ-28 total scores in medical professionals, whereas among non-medical professionals, male sex was associated with significantly lower GHQ-28 total scores. Conclusions: Somatic and anxiety symptoms as well as insomnia are more prevalent among medical staff than workers in other professions. Targeting the determinants of these differences should be included in interventions aimed at restoring psychological well-being in this specific population. Apparently, there are present gender differences in psychological responses that are independent of profession."

Pre-existing conditions

Negative impacts of COVID-19 lockdown on mental health service access and follow-up adherence for immigrants and individuals in socio-economic difficulties. Aragona M et al., Public Health, 186, 52-6. "The design of this study is a retrospective cross-sectional study. All patients who visited the mental health outpatient service in the months of February and March in the years 2017–2020 were included in the study. To compare service utilisation before and after the lockdown, the number of patients who visited the mental health outpatient service for psychiatric interview were recorded. Follow-up adherence was calculated as the percentage of patients who visited in February and subsequently attended a follow-up visit in March of the same year. The number of patients who visited the outpatient service between February 2017 and February 2020 was continuously increasing. In March 2020, fewer patients visited the service for psychiatric interview, in line with the introduction of lockdown measures. In addition, the number of the patients who visited in February 2020 and returned for their follow-up visits in March 2020 declined from approximately 30% over the same months in 2017–2019 to 17.53% in March 2020. The lockdown-related reduction in numbers of patients accessing the mental health service makes it difficult to help vulnerable populations during a period of time in which their mental health needs are expected to increase. Moreover, the reduction seen in follow-up compliance increases the risk of treatment discontinuation and possible relapse. Proactive alternative strategies need to be developed to reach these vulnerable populations."

Commentaries

The Psychological Impact of COVID-19. COVID-MINDS. (updated 5/8/20).

Understanding the mental health burden of COVID-19 in the United Kingdom. Lopes BC & Jaspal R, Psychological Trauma: Theory, Research, Practice & Policy, 12 (3), 465-467.

Useful resources

Cochrane Special Collections. Coronavirus (COVID-19): support for wellbeing in the healthcare workforce. Cochrane Library. (updated 10 August 2020).

Impact on non-COVID care

Commentary from the collaboration

Supporting staff wellbeing during COVID-19: a Northumbrian experience. Laverty A, Health Foundation. (published online 5/8/20).

How did the NHS free up hospital capacity at the start of the pandemic? Elias L & Scobie S, Nuffield Trust. (published online 6/8/20).

The NHS is still nowhere close to business as usual following the first outbreak of COVID-19. Health Foundation. (published online 13/8/20).

Reflections on organisational development during Covid-19: restoring purpose and driving change. Hulks S, King's Fund. (published online 6/8/20).

What is Covid-19 revealing about innovation in the NHS? Collins B, King's Fund. (published online 3/8/20).

Guidance

Covid-19: Guidelines for Community Palliative Care – which is the 'Best in Show'? Jenkins L, Oxford CEBM COVID-19 Evidence Service. (published online 10/8/20).

Implementing phase 3 of the NHS response to the COVID-19 pandemic. NHS England.

Emerging evidence

Primary and community care

RAPCI Project Summary Report 4, 31 July 2020. Murphy M et al., Centre for Academic Primary Care (CAPC), University of Bristol. "The Rapid COVID-19 intelligence to improve primary care response (RAPCI) project is examining the changing demands on GP practices across Bristol, North Somerset and South Gloucestershire during the COVID-19 pandemic. It will investigate common challenges and innovative solutions that practices have devised to cope. This fourth summary report presents qualitative findings from 22 interviews held with GPs and managers from 20 GP practices between 3 and 29 July 2020 and quantitative data extracted from the patient record. We found that practices are still coping well. Practices are still coping well with an average score of 8/10. The increase in fatigue, reported in RAPCI report 3, continues for some participants, particularly GPs who

are finding total telephone triage a strain. This is exacerbated, in some practices, by a perceived "backlash" against general practice, from a minority of patients, due to changes in working practices and pay rises across the public sector which exclude nurses. Increased complexity, including more mental health problems, is making many consultations more difficult to deal with over phone/ video. GPs are still struggling with a lack of support from secondary care and mental health services. The Advice and Guidance service is not always aware of what investigations GPs can access. Practices are keen to keep some benefits of new ways of working and avoid a return to unfiltered demand but are finding it a challenge to implement the right system to do this. Practices are variously: introducing online triage to manage demand, new appointment slots and timed telephone appointments, encouraging greater receptionist triage. Practices are continuing to improve remote management to manage down face-to-face contact, e.g. self-service station for chronic conditions, encourage patients to self-management, use of Florey surveys to stratify patients. Nurses have found remote management for chronic conditions monitoring particularly useful. GPs are lowering their risk threshold for seeing patients face-to-face when the cases are complex and some are finding it difficult to establish a threshold for this."

The impacts of COVID-19 on Health Visiting in England: First results. Conti G & Dow A, UCL. (published online 29/7/20). "The COVID-19 pandemic, NHS England's prioritisation of community health services (19 March to 3 June) and the government-imposed lockdown have placed significant pressures on the health visiting workforce and the services it provides, at a time when public health is already under strain from years of repeated budget cuts. A large number of health visitors across England were also redeployed out of their teams to support the COVID-19 workforce. Health visitors help children get the best possible start in life by providing a universal service to all families that does not discriminate, and additional support proportionate to need, to prevent and reduce health inequalities. Our first findings provide concerning evidence on the impacts of COVID-19, lockdown restrictions and redeployment on the ability of health visitors to deliver these benefits for young children and families."

Counselling and psychotherapy post-COVID-19. Vostanis P & Bell CA. Couns Psychother Res, 20:389–393. "We consider how the prolonged, complex and uncertain aftermath of the COVID-19 crisis will present challenges and opportunities for counselling and psychotherapy. Increased mental strain on populations, individuals and professionals is likely to be compounded by further constraints in therapeutic resources. Nevertheless, emerging needs and priorities will offer ground for systems thinking in linking the application of a range of therapeutic frameworks, theories to address global challenges, integration of counselling and psychotherapy into new sectors, service models for the most vulnerable, use of digital approaches, support mechanisms for professionals and interdisciplinary research."

The challenges and experiences of psychotherapists working remotely during the coronavirus* pandemic. McBeath MG et al., Couns Psychother Res. 2020;20:394–405. "The experiences and challenges of psychotherapists working remotely during the coronavirus pandemic were explored using a mixed-methods approach. An online survey completed by 335 psychotherapists produced both quantitative and qualitative data with the latter being subject to a reflexive thematic analysis. Large numbers of therapists were using video-link platforms and the telephone to conduct client sessions. A majority of therapists felt challenged by remote working, with reduced interpersonal cues, feelings of isolation and fatigue, and technical issues frequently cited concerns. At the same time, most therapists considered that remote working had been

effective and that clients were comfortable with the process. Two-thirds of therapists indicated that remote working would now become core business for them. The great majority of therapists thought that remote working skills should be part of formal therapy trainings."

Social care

Data-informed recommendations for services providers working with vulnerable children and families during the COVID-19 pandemic. Wilke NG et al., Child Abuse and Neglect, https://doi.org/10.1016/j.chiabu.2020.104642. "Representatives from 87 non-government organizations (NGOs) providing a variety of direct services (i.e. residential care, family preservation, foster care, etc.) to 454,637 vulnerable children and families in 43 countries completed a brief online survey. Using a mixed methods design, results examined 1) ways in which children and families have been directly impacted by COVID-19, 2) the impact of the pandemic on services provided by NGOs, 3) government responses and gaps in services for this population during the pandemic, and 4) strategies that have been effective in filling these gaps. Data revealed that the pandemic and restrictive measures were associated with increased risk factors for vulnerable children and families, including not having access to vital services. The NGOs experienced government restrictions, decreased financial support, and inability to adequately provide services. Increased communication and supportive activities had a positive impact on both NGO staff and the families they serve. Based on the findings, ten recommendations were made for service providers working with vulnerable children and families during the COVID-19 pandemic."

Secondary care

Waiting for myomectomy during the COVID-19 pandemic: The vicious cycle of psychological and physical trauma associated with increased wait times. Strong SM et al., Obstetrics and Gynaecology, DOI: 10.1002/ijgo.13340. "The impact of delayed surgical intervention for women with fibroids due to the COVID-19 pandemic and the resulting adverse effects on their mental and physical health. Fibroids are the most common benign tumor of the female reproductive tract. Elective services have been suspended due to the COVID-19 pandemic, resulting in a backlog of patients awaiting surgery. When the curve was flattened in the UK, the second phase of the National Health Service's plan to tackle the pandemic was announced with the reintroduction of elective surgery."

COVID-19 and ENT SLT services, workforce and research in the UK: A discussion paper. Patterson JM et al., International Journal of Language and Communication Disorders, https://doi.org/10.1111/1460-6984.12565. "AIMS: To discuss the threats and opportunities from the COVID-19 pandemic for SLTs in ENT/laryngology with specific reference to clinical practice, workforce and research leadership. METHODS & PROCEDURES: The relevant sections of the World Health Organisation's (WHO) health systems building blocks framework (2007) were used to structure the study. Expert agreement was determined by an iterative process of multiple-group discussions, the use of all recent relevant policy documentation, and other literature and shared documentation/writing. The final paper was verified and agreed by all authors. MAIN CONTRIBUTION: The main threats to ENT/laryngology SLT clinical services include increased patient complexity related to COVID-19 voice and airway problems, delayed HNC diagnosis, reduced access to instrumental procedures and inequitable care provision. The main clinical opportunities include the potential for new modes of service delivery and collaborations, and harnessing SLT expertise in

non-instrumental assessment. There are several workforce issues, including redeployment (and impact on current services), training implications and psychological impact on staff. Workforce opportunities exist for service innovation and potential extended ENT/SLT practice roles. Research is threatened by a reduction in immediate funding calls and high competition. Current research is affected by very limited access to participants and the ability to conduct face-to-face and instrumental assessments. However, research opportunities may result in greater collaboration, and changes in service delivery necessitate robust investigation and evaluation. A new national set of research priorities is likely to emerge. CONCLUSIONS & IMPLICATIONS: The immediate impact of the pandemic has resulted in major disruption to all aspects of clinical delivery, workforce and research for ENT/laryngology SLT. It is unclear when any of these areas will resume operations and whether permanent changes to clinical practice, professional remits and research priorities will follow. However, significant opportunity exists in the post-COVID era to re-evaluate current practice, embrace opportunities and evaluate new ways of working. What this paper adds What is already known on the subject ENT/laryngology SLTs manage patients with a range of conditions, including voice disorders, airway problems and HNCs. The diverse scope of clinical practice involves highly specialized assessment and treatment practices in patients in high-risk categories. A large majority of active research projects in this field are patient focused and involve instrumental assessment. The COVID-19 pandemic has created both opportunities and threats for ENT SLT clinical services, workforce and research. What this paper adds to existing knowledge This study provides a discussion of the threats and opportunities from the COVID-19 pandemic for ENT/laryngology SLT with specific reference to clinical practice, workforce and research leadership. What are the potential or actual clinical implications of this work? The COVID-19 pandemic has resulted in major disruption to all aspects of clinical delivery, workforce and research for ENT/laryngology SLT. Changes to clinical practice, professional remits and research priorities are of indeterminant duration at this time, and some components could be permanent. Significant clinical practice, workforce and research opportunities may exist in the post-COVID era."

Tertiary care

Transplantation during the COVID-19 pandemic: nothing noble is accomplished without danger. Spoletini G et al., BMC Gastroenterol 20(259). DOI: 10.1186/s12876-020-01401-0. "The global health crisis due to the fast spread of coronavirus disease (COVID-19) has caused major disruption in all aspects of healthcare. Transplantation is one of the most affected sectors, as it relies on a variety of services that have been drastically occupied to treat patients affected by COVID-19. With this report from two transplant centers in Italy, we aim to reflect on resource organization, organ allocation, virus testing and transplant service provision during the course of the pandemic and to provide actionable information highlighting advantages and drawbacks. To what extent can we preserve the noble purpose of transplantation in times of increased danger? Strategies to minimize risk exposure to the transplant population and health- workers include systematic virus screening, protection devices, social distancing and reduction of patients visits to the transplant center. While resources for the transplant activity are inevitably reduced, new dilemmas arise to the transplant community: further optimization of time constraints during organ retrievals and implantation, less organs and blood products donated, limited space in the intensive care unit and the duty to maintain safety and outcomes."

Patient experiences of fertility clinic closure during the COVID-19 pandemic: appraisals, coping and emotions. Boivin J et al., Human Reproduction, DOI: 10.1093/humrep/deaa218.

"Most patients (81.6%, n = 367) had tests or treatments postponed, with these being self (41.3%, n = 186) or publicly (46.4%, n = 209) funded. Patients appraised fertility clinic closure as having potential for a more negative than positive impact on their lives, and to be very or extremely uncontrollable and stressful ($p \leq .001$). Most reported a slight to moderate ability to cope with closure. Data saturation was achieved with all open-text questions, with 33 broad themes identified and four meta-themes linked to components of the cognitive stress and coping theory. First, participants understood clinic closure was precautionary due to unknown effects of COVID-19 but some felt clinic closure was unfair relative to advice about getting pregnant given to the public. Second, closure was appraised as a threat to attainability of the parenthood goal largely due to uncertainty of the situation (e.g. re-opening, effect of delay) and intensification of pre-existing hardships of fertility problems (e.g. long time waiting for treatment, history of failed treatment). Third, closure taxed personal coping resources but most were able to cope using thought-management (e.g. distraction, focusing on positives), getting mentally and physically fit for next treatments, strengthening their social network, and keeping up-to-date. Finally, participants reported more negative than positive emotions ($p \leq .001$) and almost all participants reported stress, worry and frustration at the situation, while some expressed anger and resentment at the unfairness of the situation. Overall, 11.9% were not at all able to cope, with reports of intense feelings of hopelessness and deteriorating wellbeing and mental health."

Cancer care

The impact of coronavirus disease 2019 on head and neck cancer services: a UK tertiary centre study. Taylor R et al., Journal of Laryngology and Otology, August 2020, 1-8. "This is a retrospective review of all cases referred for suspected head and neck cancer to our institution in January and April 2020. There was a 55 per cent decrease in referrals but diagnostic yield rose from 2.9 per cent in January to 8.06 per cent in April. In both months, 100 per cent of patients met the 31- and 62-day targets, with similar 14-day wait time success (97.83 per cent for January vs 98.33 per cent for April[Q1]). Referrals for laryngopharyngeal reflux rose from 27.5 per cent to 41.9 per cent. Referrals for those aged over 60 years fell from 42 per cent to 26 per cent. It is suggested that further research be conducted into the reasons why fewer patients were referred, particularly elderly patients, and why laryngopharyngeal reflux is so prevalent in fast-track referrals."

Effects of the COVID-19 Pandemic on Cancer-Related Patient Encounters. London JW et al., JCO Clinical Cancer Informatics no. 4, 657-665. DOI: 10.1200/CCI.20.00068. "We used the TriNetX platform to analyze 20 health care institutions that have relevant, up-to-date encounter data. Using this COVID and Cancer Research Network (CCRN), we compared cancer cohorts identified by querying encounter data pre-COVID (January 2019-April 2019) and current (January 2020-April 2020). Cohorts were generated for all patients with neoplasms (malignant, benign, in situ, and of unspecified behavior), with new incidence neoplasms (first encounter), with exclusively malignant neoplasms, and with new incidence malignant neoplasms. Data from a UK institution were similarly analyzed. Additional analyses were performed on patients with selected cancers, as well as on those having had cancer screening. Clear trends were identified that suggest a significant decline in all current cohorts explored, with April 2020 displaying the largest decrease in the number of patients with cancer having encounters. Of the cancer types analyzed, lung, colorectal, and hematologic cancer cohorts exhibited smaller decreases in size in April 2020 versus 2019 (−39.1%, −39.9%, −39.1%, respectively) compared with cohort size decreases for breast cancer, prostate cancer, and melanoma (−47.7%, −49.1%, −51.8%, respectively). In addition, cancer screenings declined drastically, with breast cancer screenings dropping by −89.2% and colorectal cancer screenings by

−84.5%. Trends seen in the CCRN clearly suggest a significant decrease in all cancer-related patient encounters as a result of the pandemic. The steep decreases in cancer screening and patients with a new incidence of cancer suggest the possibility of a future increase in patients with later-stage cancer being seen initially as well as an increased demand for cancer screening procedures as delayed tests are rescheduled."

Is Elective Cancer Surgery Safe During the COVID-19 Pandemic? Ji C et al., World Journal of Surgery, DOI: 10.1007/s00268-020-05720-x. "Data were collected on all patients who had an elective therapeutic cancer operation in a single large district general hospital, where standard COVID-19 precautions were in place, between 01/02/2020 and 27/4/2020, Follow-up was for a minimum of 2 weeks post-discharge. The primary outcome was the incidence of COVID-19 during the follow-up period. A total of 621 elective cancer surgeries, from a range of specialities, were performed during the study period, with 55% (n = 341) being done as day cases. None of the patients were positive for COVID-19 post-operatively using reverse transcriptase polymerase chain reaction testing. The risk of COVID-19 following elective cancer surgery in this group of high-risk patients appears to be minimal in this study. With further precautions being introduced to reduce the risk of transmission of COVID-19, an increase in the rate of elective cancer surgery should be a current priority for all hospitals where possible."

Maternity services

Moral and Mental Health Challenges Faced by Maternity Staff During the COVID-19 Pandemic. Horsch A et al., Psychological Trauma: Theory, Practice, Research and Policy, 12(S1), S141-S142. "The current COVID-19 pandemic places maternity staff at risk of engaging in clinical practice that may be in direct contravention with evidence; professional recommendations; or, more profoundly, deeply held ethical or moral beliefs and values, as services attempt to control the risk of cross-infection. Practice changes in some settings include reduction in personal contacts for tests, treatments and antenatal and postnatal care, exclusion of birth partners for labor and birth, separation of mother and baby in the immediate postnatal period, restrictions on breastfeeding, and reduced capacity for hands-on professional labor support through social distancing and use of personal protective equipment. These enforced changes may result in increasing levels of occupational moral injury that need to be addressed at both an organizational and a personal level."

Outpatient services

Managing high-acuity outpatient services during the COVID-19 pandemic: lessons from the acute diabetes foot service. Deogon GS. Future Healthcare Journal, DOI: 10.7861/fhj.2020-0054. "COVID-19 has created unprecedented challenges for healthcare services internationally. Many NHS organisations have cancelled outpatient clinics to release frontline clinical staff and minimise risk of patients contracting COVID-19. While many outpatient services manage chronic diseases, a number of services manage high-acuity patients. Delivery of these acute outpatient services during the pandemic has posed particular challenges and required significant service model reconfiguration. The acute diabetes foot clinic is an important example of such a service. We explore the important lessons learnt during the COVID-19 pandemic for managing high-acuity outpatient services through the context of the diabetic foot clinic. Learning can be divided into the following categories: remote and digital working, physical changes in service delivery, workforce challenges and post-pandemic preparedness. This learning is applicable to a wide range of high-acuity services during and following

the pandemic. It is particularly relevant as we expand outpatient care provision to avoid hospital admissions."

Mental health services

COVID-19 and acute inpatient psychiatry: the shape of things to come. Boland X & Dratcu L. International Journal of Psychiatry in Clinical Practice. DOI: 10.1080/13651501.2020.1801755. "Psychiatric services that provide acute inpatient care have to respond to the challenges brought about by the COVID-19 pandemic to consistently deliver high standards of treatment to patients and ensure the safety of staff. This can only be achieved by fostering a culture that rewards initiative and empowers inpatient teams to implement and comply with changes which everyone understands and benefits from. The experience of an inner London acute psychiatric unit has shown the value of combining proactive leadership, multidisciplinary decision making and good communication in adapting services to an everchanging environment. Practical solutions have emerged that have improved service delivery and patient care, and which will likely outlast the COVID-19 pandemic. These include changes to team work and routine, streamlining patient care with a focus on goal directed admissions, developing a healthier work environment and adopting novel technology in patient care and multidisciplinary collaboration."

Commentaries

Digital or Digitally Delivered Responses to Domestic and Intimate Partner Violence During COVID-19. Emezue C. JMIR Public Health Surveill, 6(3):e19831. DOI:10.2196/19831.

Digital public health and COVID-19. Murray CJL et al., The Lancet Public Health, DOI:10.1016/S2468-2667(20)30187-0.

Mental health services and covid-19 preparing for the rising tide, NHS Confederation.

Useful resources

Practice Examples. Public Health England. "Practice examples aim to share the learning from public health practitioners' experience of developing and implementing public health programmes and projects. They embed local, regional and national descriptions of service practice or service case studies, bringing together public health practitioners' rich sources of knowledge on evidence and intelligence."

Understanding crisis-response measures: Collective Sense-making. Burbridge I. Royal Society of Arts, 2020.

COVID-19: Why and how organisations can learn now to shape the future. Collaborate for Social Change, 2020.

Cochrane Special Collections Coronavirus (COVID-19): remote care through telehealth. Cochrane Library. (updated 10/8/20).

This update forms 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 in the response to COVID-19. For more information, visit: https://www.strategyunitwm.nhs.uk/covid19-and-coronavirus or contact our Covid Evidence team on: mlcsu.covidevidence@nhs.net