The Strategy Unit
At NHS Midlands and Lancashire Commissioning Support Unit

COVID-19 Evidence Alert – 9th July 2020

Welcome

COVID-19 Evidence alert is a weekly update highlighting emerging evidence on the following key topics identified as useful in supporting Covid recovery planning:

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

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

The evidence scans and corresponding evidence trackers can be found here: https://www.strategyunitwm.nhs.uk/covid19-and-coronavirus (see 'Evidence - Helping you to keep up to date').

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

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

Analytical Collaboration for COVID-19

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

- **How has lockdown affected general practice and where do we go from here?** Spencer J & Oung C. Nuffield Trust. (published online 8/7/20).

Residential settings

Commentary from the collaboration

Staffing issues in care homes have contributed to COVID-19 infections amongst residents. The Health Foundation. (published online 3/7/20).

Strengthening social care analytics in the wake of COVID-19: initial findings. Nicholas L, Naylor A & Steventon A. The Health Foundation. (published online 2/7/20).

Leading in isolation during COVID-19. Flatley L. The King's Fund. (published online 2/7/20).

Guidance

Infection prevention and control and surveillance for coronavirus disease (COVID-19) in prisons in EU/EEA countries and the UK. ECDC Technical Report. (published online 3/7/20).

Rapid reviews

Best practices for personal care workers providing home care in the context of COVID-19. **Navarro P. Newfoundland & Labrador Centre for Applied Health Research.** "We identified 18 guidance documents from national and sub-national governments and public health agencies. While these documents differ in terms of the comprehensiveness of included guidelines for home care workers, they largely agree in terms of included practices, with core elements that include: infection prevention and control (IPC), personal protective equipment (PPE), screening (staff and patient/clients), and environmental cleaning and disinfection. We did not find any research publications or expert opinion that directly addresses best practices for personal care workers providing home care in the context of COVID-19. We did find some study protocols for future or ongoing research projects (not included below), which suggests that it may be reasonable to anticipate future research publications on this topic. We have included one Cochrane Rapid Review that addresses hospital healthcare workers' adherence to IPC measures in an effort to provide some insights about potential barriers and facilitators to effective implementation."

Emerging evidence

COVID-19: Care Homes in England. Heneghan C & Oke J. Oxford CEBM. (updated 7/7/20). "Data from care homes shows that 6,608 out of 15,507 care homes (42.6%) in England have confirmed or suspected outbreaks of COVID reported upto the week commencing the 22nd of June. Week ending 29th June: The South East has the highest number of COVID outbreaks (1,238); the North East has the highest proportion 54%)."

Impact of coronavirus in care homes in England: 26 May to 19 June 2020. Tinsley B. Office for National Statistics. "Between 26 May and 20 June 2020, as part of the Vivaldi project, 9,081 care homes in England (all with responsibility for providing dementia care or care for older residents (65 years and over)) were surveyed to collect information on their staff, residents and each setting to help understand the impact of the coronavirus (COVID-19) in these care homes and inform the public health response; 5,126 (56%) care homes responded to the survey. Findings also include some common factors in care homes with higher levels of infection amongst staff. These include prevalence of infection in residents (although this is weaker than the effect of staff infection on residents), some care home practices (such as more frequent use of bank or agency nurses or carers, and care homes employing staff who work across multiple sites) and some regional differences (such as higher infection levels within care homes in the North East and Yorkshire and the Humber). However regional differences may be affected by different patterns of testing in staff and residents over time."

The Human Rights of Older People during Covid-19: Social Wellbeing and Access to Care and Support for Older People in the United Kingdom. Wyllie A. University of Essex. "To date, the vast majority of Covid-19 deaths have been those over the age of 65. The vulnerability of older people to the impacts of Covid-19 were recognised early and have featured prominently in policy discussions and decision-making of governments around the world. While the risks posed by Covid-19 to the health and wellbeing of older people are significant, the impact of policies introduced in

response to the public health crisis raise several critical human rights issues. This article addresses two broad areas of concern regarding the rights of older people which have emerged in the United Kingdom as a consequence of Covid-19. Firstly, this article discusses the risks posed by the suspension of several Local Authority duties under the Care Act, and proposes amendments aimed at ensuring the rights of people in need of care and support are maintained during this period. Secondly, the social wellbeing of older people is discussed with reference to Article 8 of the European Convention on Human Rights, which establishes the right to respect for private and family life. For older adults living the in the community, it is argued that Article 8 imposes a positive obligation on Local Authorities to identify and support those older adults experiencing significant isolation or loneliness as a consequence of measures introduced in response Covid-19. In care home environments, Article 8 is considered with reference to the suspension of care home visitation rights, which is argued to be a disproportional and overly restrictive measure which imperils the rights and social wellbeing of older people. "

COVID-19 and people experiencing homelessness: challenges and mitigation strategies. Perri M et al, CMAJ, 192 (26) E716-E719. "Individuals experiencing homelessness are at increased risk of infection with severe acute respiratory syndrome coronavirus 2 owing to their lack of safe housing and are also at higher risk of severe coronavirus disease 2019 (COVID-19), given the high prevalence of risk factors in homeless populations. People experiencing homelessness often find it difficult to adhere to public health directives such as physical distancing, isolation and quarantine because of shelter conditions and other challenges. Several cities and regions have taken measures to provide spaces for people experiencing homelessness, to ensure physical distancing, isolation or quarantine; however, service providers must focus on building relationships and rapport, and take a trauma-informed approach to care, to persuade individuals to follow advice. Closure of regular services may put people experiencing homelessness at risk of other harms, such as those related to unsafe substance use and intimate partner violence. The COVID-19 pandemic has highlighted the importance of housing as a social determinant of health and raises the question of whether current approaches to addressing homelessness should be re-evaluated."

Commentaries

COVID-19 and residential aged care in Australia. Ibrahim JE, Aus J Adv Nurse, 37(3). (published online 18/6/20).

A call to protect patients, correctional staff and healthcare professionals in jails and prisons during the COVID-19 pandemic. Oladeru OT et al., Health and Justice, 8(17). (published online 2/7/20).

Impacts of lifting restrictions

Commentary from the collaboration

Learning from lockdown. How can we build a healthier future post-COVID-19. Bibby J & Leavey C. The Health Foundation. (published online 7/7/20).

Rapid reviews

How might the mental wellbeing of older people living in the community be supported when shielding and social distancing has been recommended for an extended period of time? **Public Health Wales Observatory Evidence Service. "**Four systematic reviews were identified from a search of the literature conducted in June 2019. Most provided data from qualitative research and captured the perceptions of older people on quality of life, meaningful occupations and experience of technology."

Emerging evidence

Coronavirus and the social impacts on Great Britain: 3 July 2020. **Office for National Statistics.** "Almost 8 in 10 working adults (78%) said they had either worked at home or travelled to work this week, a similar level to last week (77%). Nearly half of working adults (49%) said they had travelled to work at some point in the past seven days, up from 44% last week and 41% the previous week. Working adults continue to move away from exclusively working at home, which has dropped to 29%, from 33% last week. Over 4 in 10 adults (43%) who have left their homes this week have worn a face covering to prevent the spread of the coronavirus (COVID-19), a similar level to the past two weeks. Of those adults who had used public transport in the past seven days, 86% had worn a face covering while doing so across all of Great Britain, while 91% had in England. The proportion of adults saying their well-being has been affected (45%) was broadly the same as last week, although fewer are reporting issues that may be associated with lockdown restrictions, such as feeling bored, spending time alone or finding working from home difficult. 1 in 20 adults (5%) reported that they found it difficult or very difficult to pay usual household bills prior to the coronavirus pandemic; since the pandemic, this has risen to over 1 in 10 (11%) adults."

The passage of time during the UK Covid-19 lockdown. **Ogden RS. PLosOne, doi: 10.1371/journal.pone.0235871.** "In March 2020, in response to the Covid-19 pandemic, the UK Government imposed social and physical distancing measures on the population. These lockdown measures caused significant changes to all aspects of daily life. The current study examined how the passage of time was distorted during the lockdown period. Using an online questionnaire, day and week passage of time judgments were collected. In addition, measures of affect, task load and satisfaction with current levels of social interaction were taken. The results show that over 80% of participants experienced distortion to the passage of time during lockdown in comparison with normal. The passage of time during the day was predicted by age, stress, task load and satisfaction with current levels of social interaction. A slowing of the passage of time was associated with increasing age, increasing stress, reduced task load and reduced satisfaction with current levels of social interaction. Only age and satisfaction with current levels of social interaction predicted passage of time across a week. Again, increasing age and reduced satisfaction with levels of social interaction were associated with a slowing of the passage of time. These findings demonstrate that significant changes to daily life have a significant impact on our experience of time, with younger, more socially satisfied people more likely to experience time as passing more quickly during the lockdown."

Covid-19: Back to School, Rebuilding a Better Future for All Children. **Defeyter et al., (preprint).** "This paper provides a summary of the key academic papers for the following areas: learning loss and academic attainment; EdTech interventions and home schooling; physical activity, food insecurity and obesity; and mental health and wellbeing. For each area, the findings from peer-reviewed academic papers are summarised and discussed in terms of relevance to the current Covid-

19 pandemic. The latter half of the paper provides, for each area, a range of research informed short-, mid-and long-term school based strategies, policies and interventions to advise the UK government for pupils returning to school. The early adoption of these proposals will support teachers, parents and children and provide positive messaging to pupils and hence, increase public confidence. Finally, the authors appeal to the concept of human capital, and discuss how schools provide an excellent platform to narrow mid-to-long term health and educational inequalities. The suggestions in this paper converge with action at the international level; with many key agencies (UNESCO, UNICEF, World Bank and World Food Programme) making the case for the key role of school food in supporting the back to school movement."

Appealing to economic (vs. health) risk may be more effective to fight COVID-19: A multilevel analysis in 24 countries. Nisa CF et al., PsyArXiv. "This paper examines whether compliance with COVID-19 mitigation measures is motivated by wanting to save lives or save the economy (or both), and which implications this carries to fight the pandemic. National representative samples were collected from 24 countries (N=25,435). The main predictors were (i) perceived risk to contract coronavirus, (ii) perceived risk to suffer economic losses due to coronavirus, and (iii) their interaction effect. Individual and country-level variables were added as covariates in multilevel regression models. We examined compliance with various preventive health behaviors and support for strict containment policies. Results show that perceived economic risk consistently predicted mitigation behavior and policy support - and its effects were positive. Perceived health risk had mixed effects. Only two significant interactions between health and economic risk were identified – both positive. These results do not corroborate the view that people engage in health versus economy zero-sum thinking in the fight against COVID-19."

Mapping public health responses with attitude networks: the emergence of opinion-based groups in the UK's early COVID-19 response phase. Maher PJ et al, British Journal of Social Psychology, https://doi.org/10.1111/bjso.12396. Partisan patterns of compliance with public health measures are a feature of early COVID-19 responses. In many cases, these differences in behaviour relate to pre-existing group identities. However, in times of rapid societal change, novel opinion-based groups can emerge and provide a new basis for partisan identification and divergent collective behaviour. Here, we use network methods to map the emergence of opposing opinion-based groups and assess their implications for public health behaviour. In a longitudinal study, we tracked public health attitudes and self-reported behaviour in a sample of UK participants over four time points. Network visualisation reveal a rift in attitudinal alignment over time and the genesis of two distinct groups characterised by trust, or distrust, in science (Study 1a; N = 253). These groups also diverge in public health behaviour. In a brief follow-up study (N = 206), we find that this opinion polarization partially reflects underlying societal divides. We discuss implications for opinion-based group research and public health campaigns.

Commentaries

Early lessons from a second COVID-19 lockdown in Leicester, UK. Nazareth J et al., Lancet (e-pub), doi: 10.1016/S0140-6736(20)31490-2. (published online (1/7/20).

Reopening Colleges and Universities During the COVID-19 Pandemic. Wrighton MS & Lawrence SJ. Annals of Internal Medicine. Doi: 10.7326/M20-4752. (published online 2/7/20).

Reopening US Schools in the Era of COVID-19: Practical Guidance From Other Nations. Das LT et al. JAMA Health Forum. (published online 30/6/20).

Why Scotland's slow and steady approach to covid-19 is working. Sridhar D and Chen A, BMJ, 370, m2669.

Meat plants—a new front line in the covid-19 pandemic. Middleton J et al, BMJ, 370, m2716.

Long term rehabilitation needs

Guidance

The Stanford Hall consensus statement for post-COVID-19 rehabilitation. Barker-Davies RM et al., British Journal of Sports Medicine.

After-care needs of inpatients recovering from COVID-19. NHS England.

Rapid reviews

What is the psychological impact of COVID-19 on patients recovering from the disease who need rehabilitation? Reynolds J & Leen B. HSE Library. "There is limited data on the psychological impact of COVID-19 on patients recovering from the disease 2. Available studies so far list reduced sleep quality, depression, anxiety and post-traumatic stress disorder (PTSD) as the main symptoms1, 3-12. Evidence from previous SARS and MERS epidemics support this pattern 20-26, as do studies looking at survivors of critical illness 27-31. Follow-up data in these patient groups reported symptoms of anxiety, depression, and PTSD ranging from 15% to 44%17. One recent multi-centre Chinese study found self-reported PTSD symptoms in 96% of recovered COVID-19 patients3. Data from the SARS outbreak show that stress and other psychiatric symptoms persisted long term 21, 22. In COVID-19, a small number of randomised controlled trials have been undertaken on: an internet-based intervention for depression and anxiety 10; progressive muscle relaxation for anxiety and sleep quality 8; and effects of respiratory rehabilitation on psychological function in elderly patients 9. These studies showed positive results but patient numbers were small and benefits were mild. Surveillance for psychopathology will be important in the recovery and rehabilitation phases. Recommendations are to anticipate a high prevalence of depression, anxiety, and PTSD symptoms, and to provide comprehensive and timely management. Particular consideration is required for those with pre-morbid psychiatric illness, healthcare workers13, and those who have been treated in Intensive Care."

Emerging evidence

The emerging spectrum of COVID-19 neurology: clinical, radiological and laboratory findings. Paterson RW et al., Brain, awaa240. Doi: 10.1093/brain/awaa240. "Preliminary clinical data indicate that severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection is associated with neurological and neuropsychiatric illness. Responding to this, a weekly virtual coronavirus disease 19 (COVID-19) neurology multi-disciplinary meeting was established at the National Hospital, Queen Square, in early March 2020 in order to discuss and begin to understand neurological presentations in patients with suspected COVID-19-related neurological disorders. Detailed clinical and paraclinical data were collected from cases where the diagnosis of COVID-19 was confirmed through RNA PCR, or where the diagnosis was probable/possible according to World

Health Organization criteria. Of 43 patients, 29 were SARS-CoV-2 PCR positive and definite, eight probable and six possible. Five major categories emerged: (i) encephalopathies (n = 10) with delirium/psychosis and no distinct MRI or CSF abnormalities, and with 9/10 making a full or partial recovery with supportive care only; (ii) inflammatory CNS syndromes (n = 12) including encephalitis (n = 2, para- or post-infectious), acute disseminated encephalomyelitis (n = 9), with haemorrhage in five, necrosis in one, and myelitis in two, and isolated myelitis (n = 1). Of these, 10 were treated with corticosteroids, and three of these patients also received intravenous immunoglobulin; one made a full recovery, 10 of 12 made a partial recovery, and one patient died; (iii) ischaemic strokes (n = 8) associated with a pro-thrombotic state (four with pulmonary thromboembolism), one of whom died; (iv) peripheral neurological disorders (n = 8), seven with Guillain-Barré syndrome, one with brachial plexopathy, six of eight making a partial and ongoing recovery; and (v) five patients with miscellaneous central disorders who did not fit these categories. SARS-CoV-2 infection is associated with a wide spectrum of neurological syndromes affecting the whole neuraxis, including the cerebral vasculature and, in some cases, responding to immunotherapies. The high incidence of acute disseminated encephalomyelitis, particularly with haemorrhagic change, is striking. This complication was not related to the severity of the respiratory COVID-19 disease. Early recognition, investigation and management of COVID-19-related neurological disease is challenging. Further clinical, neuroradiological, biomarker and neuropathological studies are essential to determine the underlying pathobiological mechanisms, which will guide treatment. Longitudinal follow-up studies will be necessary to ascertain the long-term neurological and neuropsychological consequences of this pandemic"

The most cited and co-cited COVID-19 articles: Knowledge base for rehabilitation team members. Rafet I. IOS Press. Doi: 10.3233/WOR-203193. "BACKGROUND: The COVID-19 outbreak pandemic is a situation without a tested action plan. Rehabilitation team members have been called for duty with new responsibilities in addition to their conventional roles in the healthcare system. The infectious disease specialists are updating the knowledge base in limited time in clinical settings. The number of articles in PubMed grows at an increasing rate. METHODS: Citation and co-citation network analysis methods were used to identify core articles and knowledge base. RESULTS: COVID-19 terms query retrieved 15,387 articles in PubMed. These articles formed a citation network with 6,778 articles and 25,163 PMC-PubMed citations. The main article cluster in the co-citation network consists of 2,811 articles and 78,844 co-citations. CONCLUSIONS: The number of COVID-19 articles in PubMed is increasing at a very high rate. Citation and co-citation network analysis are advantageous techniques to identify knowledge base in a scientific discipline. These techniques may help rehabilitation specialists to identify core articles efficiently."

Commentaries

Bilateral lower limb weakness: a cerebrovascular consequence of covid-19 or a complication associated with it? Morjaria JB et al., Internal and Emergency Medicine. Internal and Emergency Medicine, Doi:10.1007/s11739-020-02418-9. (published online 22/6/20).

Screening and testing

Commentary from the collaboration

Chart of the week: The knowns and unknowns of NHS Test and Trace. Palmer B. The Nuffield Trust. (published online 7/7/20).

Emerging evidence

Rapid Risk Assessment: Resurgence of reported cases of COVID 19 in the EU/EEA, the UK and EU candidate and potential candidate countries. European Centre for Disease Prevention and Control. "Since 31 December 2019 and as of 30 June 2020, 10 273 001 cases of coronavirus disease 2019 (COVID-19) have been reported worldwide, including 505 295 deaths. EU/EEA countries and the UK have reported 1 556 709 cases (15 % of all cases), including 176 800 deaths (35% of all deaths), while EU" candidate and potential candidate countries reported 229 112 cases (2% of all cases), including 5 988 deaths (1% of all deaths). The COVID-19 pandemic is posing an unprecedented threat to EU/EEA countries and the UK as well as countries worldwide, many of which have been experiencing widespread transmission of the virus in the community for several months. There is still community transmission reported in most EU/EEA countries, the UK and EU candidate and potential candidate countries. Additionally, some countries are reporting a resurgence of observed cases or large localised outbreaks. The reasons behind this apparent increase in the number or resurgence of cases observed in these countries vary. The increase in the number of cases may reflect changes in case ascertainment (e.g. increasing testing, changes in the case definition) that does not necessarily indicate increased rates of transmission, or may reflect genuine increases in transmission (e.g. associated with the easing of non-pharmaceutical interventions (NPI), large localised outbreaks), or may be due to importation of cases. Some of the observed increases, particularly in countries with a small population, are associated with just a few additional new cases. Therefore, information must be interpreted with caution."

Optimising benefits of testing key workers for infection with SARS-CoV-2: A mathematical modelling analysis. Sandmann FG et al., Clinical Infectious Diseases, ciaa901. "Internationally, key workers such as healthcare staff are advised to stay at home if they or household members experience coronavirus disease 2019 (COVID-19)-like symptoms. This potentially isolates / quarantines many staff without SARS-CoV-2, whilst not preventing transmission from staff with asymptomatic infection. We explored the impact of testing staff on absence durations from work and transmission risks to others.We used a decision-analytic model for 1,000 key workers to compare the baseline strategy of (S0) no RT-PCR testing of workers to testing workers (S1) with COVID-19-like symptoms in isolation, (S2) without COVID-19-like symptoms but in household-quarantine, and (S3) all staff. We explored confirmatory re-testing scenarios of repeating all initial tests, initially-positive tests, initially-negative tests; or no re-testing. We varied all parameters, including the infection rate (0.1%-20%), proportion asymptomatic (10%-80%), sensitivity (60%-95%), and specificity (90%-100%). Testing all staff (S3) changes the risk of workplace transmission by -56.9 to +1.0 workers per 1,000 tests (with reductions throughout at RT-PCR sensitivity of ≥65%), and absences by -0.5 to +3.6 days per test but at heightened testing needs of 989.6-1995.9 tests per 1,000 workers. Testing workers in household-quarantine (S2) reduces absences the most by 3.0-6.9 days per test (at 47.0-210.4 tests per 1,000 workers), while increasing risk of workplace transmission by 0.02-49.5 infected workers per 1,000 tests (which can be minimised when re-testing initially-negative tests). Based on optimising absence durations or transmission risk our modelling suggests testing staff in household-quarantine or all staff, depending on infection levels and testing capacities."

COVID-19 antibody testing and 'immunity certification': a discussion paper. Mills P. Nuffield Council on Bioethics. "In the absence of an effective treatment or vaccine, the response to the current COVID-19 pandemic has focussed on non-pharmaceutical interventions (NPIs) to minimise transmission of the SARS-CoV-2 virus among the general population. In many countries, including those of the UK, this has included general restrictions on movement and association ('lockdown').[1] Alongside the direct impact of COVID-19, these restrictions are having a substantial impact on people's physical and mental health, social wellbeing, and economic activity.[2] Many advanced economies are expected to enter recession in 2020.3 Governments are therefore exploring options for controlled relaxation of emergency restrictions to enable businesses and services to resume some activities while continuing to protect public health. An effective approach will involve a combination of adjusted measures that responds to the changing situation rather than a single solution. This background paper describes the legal, social, and biomedical context of measures that would selectively modify restrictions on individuals who have a low risk of infection and transmission of SARS-CoV-2 ('immunity certification'). This briefing draws on discussion of testing, immunity, and solidarity at an online meeting of experts, hosted by the Nuffield Council on Bioethics on 24 April 2020. It also draws on earlier in-depth inquiries conducted by the Council, and reports published by the Council."

Social Distancing 2.0 with Privacy-Preserving Contact Tracing to Avoid a Second Wave of COVID-19. Ho YC et al., ArXiv. (preprint). "How to avoid a second wave of COVID-19 after reopening the economy is a pressing question. The extremely high basic reproductive number R 0 (5.7 to 6.4, shown in new studies) of SARS-CoV-2 further complicates the challenge. Here we assess effects of Social distancing 2.0, i.e. proximity alert (to maintain inter-personal distance) plus privacy-preserving contact tracing. To solve the dual task, we develop an open source mobile app. The app uses a Bluetooth-based, decentralized contact tracing platform over which the anonymous user ID cannot be linked by the government or a third party. Modelling results show that a 50% adoption rate of Social distancing 2.0, with privacy-preserving contact tracing, would suffice to decrease the R 0 to less than 1 and prevent the resurgence of COVID-19 epidemic."

COVID-19, digital privacy, and the social limits on data-focused public health responses. Fahey RA & Hino A. Int J inf Manage, 1, 102181. Doi: 10.1016/j.ijinfomgt.2020.102181. "The implementation of digital contact tracing applications around the world to help reduce the spread of the COVID-19 pandemic represents one of the most ambitious uses of massive-scale citizen data ever attempted. There is major divergence among nations, however, between a "privacy-first" approach which protects citizens' data at the cost of extremely limited access for public health authorities and researchers, and a "data-first" approach which stores large amounts of data which, while of immeasurable value to epidemiologists and other researchers, may significantly intrude upon citizens' privacy. The lack of a consensus on privacy protection in the contact tracing process creates risks of non-compliance or deliberate obfuscation from citizens who fear revealing private aspects of their lives – a factor greatly exacerbated by recent major scandals over online privacy and the illicit use of citizens' digital information, which have heightened public consciousness of these issues and created significant new challenges for any collection of large-scale public data. While digital contact tracing for COVID-19 remains in its infancy, the lack of consensus around best practices for its implementation and for reassuring citizens of the protection of their privacy may already have impeded its capacity to contribute to the pandemic response."

Efficacy of contact tracing for the containment of the 2019 novel coronavirus (COVID-19).
Keeling MJ et al., J Epidemiol Community Health. "Objective: Contact tracing is a central public health response to infectious disease outbreaks, especially in the early stages of an outbreak when specific treatments are limited. Importation of novel coronavirus (COVID-19) from China and elsewhere into the UK highlights the need to understand the impact of contact tracing as a control measure. Design: Detailed survey information on social encounters from over 5800 respondents is coupled to predictive models of contact tracing and control. This is used to investigate the likely efficacy of contact tracing and the distribution of secondary cases that may go untraced. Results: Taking recent estimates for COVID-19 transmission we predict that under effective contact tracing less than 1 in 6 cases will generate any subsequent untraced infections, although this comes at a high logistical burden with an average of 36 individuals traced per case. Changes to the definition of a close contact can reduce this burden, but with increased risk of untraced cases; we find that tracing using a contact definition requiring more than 4 hours of contact is unlikely to control spread. Conclusions: The current contact tracing strategy within the UK is likely to identify a sufficient proportion of infected individuals such that subsequent spread could be prevented, although the ultimate success will depend on the rapid detection of cases and isolation of contacts. Given the burden of tracing a large number of contacts to find new cases, there is the potential the system could be overwhelmed if imports of infection occur at a rapid rate."

Stemming the Flow: How Much Can the Australian Smartphone App Help to Control COVID-19? Currie DJ et al., Public Health Res Pract, 30(2), 3022009. "Methods: To define the pandemic context and specify model-building parameters, we searched for literature on COVID-19, its epidemiology in Australia, case finding processes, and factors that might affect community acceptance of the COVIDSafe smartphone app for contact tracing. We then developed a system dynamics model of COVID-19 based on a modified susceptible-exposed-infected-recovered compartmental model structure, using initial pandemic data and published information on virus behaviour to determine parameter values. We applied the model to examine factors influencing the projected trends: the extent of viral testing, community participation in social distancing, and the level of uptake of the COVIDSafe app. Results: Modelling suggests that a second COVID-19 wave will occur if social distancing declines (i.e. if the average number of contacts made by each individual each day increases) and the rate of testing declines. The timing and size of the second wave will depend on the rate of decrease in social distancing and the decline in testing rates. At the app uptake level of approximately 27% (current at 20 May 2020), with a monthly 50% reduction in social distancing (i.e. the average number of contacts per day doubling every 30 days until they reach pre-social distancing rates) and a 5% decline in testing, the app would reduce the projected total number of new cases during April-December 2020 by one-quarter. If uptake reaches the possible maximum of 61%, the reduction could be more than half. Conclusions: Maintenance of a large-scale testing regimen for COVID-19 and widespread community practice of social distancing are vital. The COVIDSafe smartphone app has the potential to be an important adjunct to testing and social distancing. Depending on the level of community uptake of the app, it could have a significant mitigating effect on a second wave of COVID-19 in Australia.

Commentaries

Lessons from Leicester: a covid-19 testing system that's not fit for purpose. Gill M et al, BMJ, 370, m2690. (published online 7/7/20)

Antibody testing for coronavirus disease 2019: not ready for prime time. Duong YT et al, BMJ, 370, m2655. (published online 3/7/20).

Getting back on track: control of covid-19 outbreaks in the community. Roderick et al. BMJ, 369:m2484. (published online 25/6/20).

Has Sweden's controversial covid-19 strategy been successful? Habib H. BMJ, 369:m2376. (published online 12/6/20).

Getting it right in the pandemic. Loder E. BMJ, 370:m2637. (published online 2/7/20)

Point-of-Care Diagnostic Services as an Integral Part of Health Services during the Novel Coronavirus 2019 Era. Mashamba-Thompson TP & Drain PK. MDPI. (published online 3/7/20).

Broader impacts on health outcomes

Commentary from the collaboration

Mental health care in the time of Covid-19. Gilburt H. The King's Fund. (published online 3/7/20).

Addressing race inequalities in the NHS needs engagement, commitment and a plan. Murray R. The King's Fund. (published online 1/7/20).

Emerging evidence on health inequalities and COVID-19: June 2020. Marshall L & Abbs I. The Health Foundation. (published online 3/7/20).

Rapid reviews

Public health

Beyond COVID-19: A Whole of Health Look at Impacts During the Pandemic Response. Chi YL et al., Center for Global Development. "Substantial evidence has emerged relating to the potential magnitude of the indirect health effects of the coronavirus pandemic. We know, from previous crises and outbreaks (e.g., the Ebola outbreak), that indirect health effects are significant and could outweigh the direct toll from the disease itself. This paper provides an overview of the lessons learned from previous outbreaks and economic crises in relation to indirect health effects as well as a framework for adopting a whole of health approach to the COVID response. This framework articulates indirect health impacts around four distinct but interrelated sets of impacts: economic, environmental, health systems, and social/behavioural. We apply this framework to discuss what is known already on the indirect health impacts of COVID-19. Given the rapidly changing nature of the outbreak and the constant publication of new evidence, this paper summarizes our current best knowledge and understanding, adopting a horizontal view to contextualise COVID-19 within the health system, and the whole economy."

Mental health- Healthcare workers

What psychological supports are required to assist health workers during the COVID-19 pandemic? Clark H, Ryan P & Leen B. HSE Library. "The psychological needs of health workers may be very different to those of the general public: through their work roles, HCWs are exposed to

specific risks and stress-generating scenarios not experienced by other sectors or the general public. The risk to the mental health of health workers in the current pandemic has been clearly identified in the literature[13, 17]; several studies have identified those groups that might be at particular risk such as female[29, 34], younger staff members[32] and those working directly with suspected or confirmed COVID-19 patients[34, 35]. Some studies have also suggested that HCWs with less clinical experience, including final year students fast-tracked into service during the pandemic, may also be at greater risk of developing mental health problems[36, 50]; while another study suggests the contrary ¾ that greater experience brings with it a greater acknowledgement of the severity of the disease and, therefore, an increased risk of anxiety and stress[36]. While most of the literature concurs that those on the frontline in direct contact with COVID-19 patients experience the greatest levels of stress and anxiety, several studies have demonstrated that non-frontline HCWs including non-clinical staff are also in need of psychological support[20, 37, 54, 61]. Among the main risk factors for stress and anxiety are shortage of PPE and other vital equipment[12, 21, 22, 39]; concerns about family members[12, 22, 32]; physical deprivation such as lack of food and rest[9]; poor sleep quality[57, 59, 60, 65]; too much or too little information[22]; bereavement[12]; stigma[25]; and moral or psychological injury[20, 58]. Although there is a paucity of evidence concerning psychological interventions in the current crisis[62], more studies are beginning to emerge which identify possible strategies for alleviating the psychological distress in the short and longer term. Many harness technology[10, 15, 27, 28, 45, 56, 66]; others emphasise the need to encourage self-care[9, 32, 62].Mindfulness and resilience training feature in some studies [30, 40, 47]; and the provision of emotional support,[19] brief interventions [43] and Psychological First Aid [24] are other strategies discussed. A note of caution is sounded by some authors who argue that resilience is not the responsibility of the individual but of the organisation[39, 48]. The importance of social support from the rest of the team [39] and support from management[26] is also emphasised, as well as the need for preventive measures such as regular screening[42, 51] and the development of an organisational strategy[56, 64].It is also noted by some authors that the issue of stigma surrounding mental health is an issue that may prevent HCWs from seeking help[18, 23, 30]. Perhaps the current crisis and its impact on the mental health of HCWs can be most succinctly summarised in the words of Shanafelt et al[49] who state that the concerns of HCWs "can be organized into 5 requests to their organization: hear me, protect me, prepare me, support me, and care for me."

Psychological interventions to foster resilience in healthcare professionals. Kunzler AM et al., Cochrane Systematic Review. Doi: 10.1002/14651858.CD012527.pub2. "We included 44 RCTs (high-income countries: 36). Thirty-nine studies solely focused on healthcare professionals (6892 participants), including both healthcare staff delivering direct medical care and allied healthcare staff. Four studies investigated mixed samples (1000 participants) with healthcare professionals and participants working outside of the healthcare sector, and one study evaluated training for emergency personnel in general population volunteers (82 participants). The included studies were mainly conducted in a hospital setting and included physicians, nurses and different hospital personnel (37/44 studies). For healthcare professionals, there is very-low certainty evidence that, compared to control, resilience training may result in higher levels of resilience, lower levels of depression, stress or stress perception, and higher levels of certain resilience factors at post-intervention. The paucity of medium- or long-term data, heterogeneous interventions and restricted geographical distribution limit the generalisability of our results. Conclusions should therefore be drawn cautiously. The findings suggest positive effects of resilience training for healthcare professionals, but the evidence is very uncertain. There is a clear need for high-quality replications and improved study designs."

What is effective to support the mental wellbeing of healthcare staff during times of extreme pressure / crisis? (such as that expected to be experienced during the current COVID-19 pandemic). Public Health Wales Observatory. "One systematic review and six guidelines were identified from a search of the literature. Recommendations from these sources included: 1. Regular communication and accurate updates to staff; 2. Encourage supportive peer and team relationships; 3. Normalise psychological responses; 4. Psychological first aid and other education or training; 5. Ensure staff are aware of psychological and wellbeing services available and how to access them."

Emerging Evidence

Public health

Worldwide Effect of COVID-19 on Physical Activity: A Descriptive Study. Tison GH et al., Annals of Internal Medicine. "A total of 19 144 639 daily step count measurements were provided by 455 404 unique users from 187 unique countries during the study period; 92% of smartphones were Apple, and 8% were Android. Worldwide, within 10 days of the pandemic declaration, there was a 5.5% decrease in mean steps (287 steps), and within 30 days, there was a 27.3% decrease in mean steps (1432 steps). There was wide regional variation in average step count change and in the timing and rate of that change (Figures 1 and 2). For example, Italy declared a nationwide lockdown on 9 March 2020 and exhibited a 48.7% maximal decrease, whereas Sweden, to date, has primarily advocated for social distancing and limitations on gatherings and showed a 6.9% maximal decrease. Samples from countries such as Italy and Iran, which had earlier regional COVID-19 outbreaks, exhibited earlier step count decreases from their relative baselines. Samples from different countries varied widely in the number of days after pandemic declaration that a 15% step count decrease was seen: Italy (5 days), Spain (9 days), France (12 days), India (14 days), the United States (15 days), the United Kingdom (17 days), Australia (19 days), and Japan (24 days). Step count trends in samples from U.S. cities exhibited similarities, although there was wide international variability".

Mental health - General public

Prevalence and predictors of general psychiatric disorders and loneliness during COVID-19 in the United Kingdom. Li LZ & Wang S, Psychiatry Research, 291. "Despite ample research on the prevalence of specific psychiatric disorders during COVID-19, we know little about the broader psychological impact of the pandemic on a wider population. The study investigates the prevalence and predictors of general psychiatric disorders measured by the 12-item General Health Questionnaire (GHQ-12) and frequency of loneliness during COVID-19 in the United Kingdom, a country heavily hit by the pandemic. We analyzed 15,530 respondents of the first large-scale, nationally representative survey of COVID-19 in a developed country, the first wave of Understanding Society COVID-19 Study. Results show that 29.2% of the respondents score 4 or more, the caseness threshold, on the general psychiatric disorder measure, and 35.86% of the respondents sometimes or often feel lonely. Regression analyses show that those who have or had COVID-19-related symptoms are more likely to develop general psychiatric disorders and are lonelier. Women and young people have higher risks of general psychiatric disorders and loneliness, while having a job and living with a partner are protective factors. This study showcases the psychological impact, including general psychiatric disorders and loneliness, of broader members of the society during COVID-19 and the underlying social inequalities."

The mental health emergency. How has the coronavirus pandemic impacted our mental health? Mind, London. More than half of adults and over two thirds of young people said that their mental health has gotten worse during the period of lockdown restrictions, from early April to mid-May. Restrictions on seeing people, being able to go outside and worries about the health of family and friends are the key factors driving poor mental health. Boredom is also a major problem for young people. Loneliness has been a key contributor to poor mental health. Feelings of loneliness have made nearly two thirds of people's mental health worse during the past month, with 18–24 year olds the most likely to see loneliness affect their mental health. Many people do not feel entitled to seek help, and have difficulty accessing it when they do. 1 in 3 adults and more than 1 in 4 young people did not access support during lockdown because they did not think that they deserved support. A quarter of adults and young people who tried to access support were unable to do so. Not feeling comfortable using phone/video call technology has been one of the main barriers to accessing support.

Media Consumption and Mental Health during COVID-19 lockdown: A UK Cross-sectional study across England, Wales, Scotland and Northern Ireland. Neill R et al., PsyArXiv (pre-print). "As individuals adjust to new 'norms' and ways of living during the COVID-19 lockdown, there is a continuing need for up-to-date information and guidance. This has elevated the importance of media channels, such as social media and traditional media. Evidence suggests that frequent media exposure is related to a higher prevalence of mental health problems, especially anxiety and depression. The aim of this study is to determine whether COVID-19 related media consumption is associated with changes in mental health outcomes. This paper presents baseline data from the COVID-19 Psychological Wellbeing Study. The results showed a statistically significant correlation between COVID-19 media exposure and increases in anxiety (GAD-7) and depression (PHQ-9). The study suggested that media usage is statistically significantly associated with anxiety and depression on the GAD-7 and PHQ-9 scales with excessive media exposure related to higher anxiety and depression scores."

The effect of age, gender, income, work, and physical activity on mental health during coronavirus disease (COVID-19) lockdown in Austria. Pieh C et al., Journal of Psychosomatic Research, (in press), 110186. "Methods: An online survey was performed through Qualtrics® after four weeks of lockdown in Austria to recruit a representative sample regarding gender, age, education, and region. Indicators of mental health were quality of life (WHO-QOL BREF), well-being (WHO-5), depression (PHQ-9), anxiety (GAD-7), stress (PSS-10), and sleep quality (ISI). Results: In total, N = 1009 individuals were included (52.2% women). 21.1% scored above the cut off ≥10 points (PHQ-9) for moderate depressive symptoms, 18.7% scored above the cut-off ≥10 points (GAD-7) for moderate anxiety symptoms, and 15.8% above the cut-off ≥15 points (ISI) for clinical insomnia. ANOVAs, Bonferroni-corrected post-hoc tests, and t-tests showed highest mental health problems in adults under 35 years, women, people with no work, and low income (all p-values <.05).Conclusions: Depressive symptoms (21%) and anxiety symptoms (19%) are higher during COVID-19 compared to previous epidemiological data. 16% rated over the cut-off for moderate or severe clinical insomnia. The COVID-19 pandemic and lockdown seems particularly stressful for younger adults (<35 years), women, singles, people without work, and low income"

Social isolation, mental health and use of digital interventions in youth during the COVID-19 pandemic: a nationally representative survey. Rauschenberg C et al., PsyArXiv (pre-print).

”Methods: Data were collected as part of the ‘Health And Innovation During COVID-19 Survey’ —a cross-sectional panel study including a representative sample of individuals aged 16 to 25 years (N=666; Mage 21·3) (assessment period: 07.05.-16.05.2020). Data were collected on social isolation, COVID-19-related worries/anxieties, objective social risk indicators, psychological distress as well as the current use of and attitude towards digital interventions. Results: Social isolation, lack of company, worrying, and objective social risk indicators were associated with psychological distress during the COVID-19 pandemic. Dose-response relationships were found. For instance, psychological distress was progressively more likely to occur as levels of reported social isolation increased (with reporting ‘never’ as reference group: ‘very rarely’: adjusted odds ratio [aOR] 2·4,CI 1·0 – 5·7, p=0·041; ‘rarely’: aOR 3·6, CI 1·7 – 7·7, p=0·001; ‘occasionally’: aOR 8·4, CI 4·0 – 17·5, p<0·001; ‘often’: aOR 20·6, CI 9·3 – 45·7, p<0·001;’very often’: aOR 43·4, CI 14·7 – 128·2, p<0·001). There was evidence that psychological distress, and high levels of social isolation, lack of company, and worrying were associated with a positive attitude towards using digital interventions, whereas only severe levels of psychological distress and worries were associated with actual use (aOR 2·0, CI 1·3 - 3·0, p=0·001; aOR 1·6, CI 1·1 – 2·2, p=0·005, respectively).”

Healthcare workers

Impact of coronavirus 2019 (COVID-19) on training and well-being in subspecialty surgery: A national survey of cardiothoracic trainees in the United Kingdom. Caruana EJ et al., J Thorac Cardiovasc Surg. “OBJECTIVES: The coronavirus 2019 (COVID-19) pandemic has overwhelmed health care systems and disrupted routine care internationally. Health care workers face disruption to their work routines and professional development, as well as an elevated risk of infection and morbidity. We sought to establish the impact of the COVID-19 pandemic on the well-being, practice, and progression of all trainees in cardiothoracic surgery in the United Kingdom. METHODS: A 31-item questionnaire was designed, validated, and disseminated via e-mail and an instant-messaging platform. RESULTS: In total, 76 (of 118, 64%) cardiothoracic surgical trainees responded, representing all training grades and programs nationally; 48 (63%) and 24 (32%) were concerned about their physical and mental health, respectively, 25 (33%) had taken time off work due to COVID-19, 65 (86%) had treated patients with COVID-19, 36 of whom (55%) were wearing satisfactory personal protective equipment at the time, 41 (54%) remain concerned about personal protective equipment provision at their institution, 42 (55%) had been redeployed to cover other specialties, and 23 (30%) had encountered ethical dilemmas related to care of patients. There was a significant impact on time spent in outpatient clinics (44% reduction), multidisciplinary team meetings (79% reduction), and operating theaters (78% reduction). In total, 67 (88%) of respondents were concerned about the impact on their training, and 54 (71%) felt that the deviation may require an extension in their planned training time. CONCLUSIONS: The duration and impact of the current pandemic is, as yet, uncertain. Timely sharing of experiences, concerns, and expectations will inform health care and education policy and influence practice in the pandemic era and beyond.”

Pre-existing conditions

Adolescent psychiatric disorders during the COVID-19 pandemic and lockdown. Guessoum SB et al., Psychiatry Research. “The aim of this paper was to review the literature on adolescent psychiatric disorders related to the COVID-19 pandemic and lockdown. Stressful life events, extended home confinement, brutal grief, intrafamilial violence, overuse of the Internet and social media are factors that could influence the mental health of adolescents during this period. The

COVID-19 pandemic could result in increased psychiatric disorders such as Post-Traumatic Stress, Depressive, and Anxiety Disorders, as well as grief-related symptoms. Adolescents with psychiatric disorders are at risk of a break or change in their care and management; they may experience increased symptoms. The COVID-19 pandemic and lockdown may have a negative impact on the mental health of adolescents, although there is still no data on the long term impact of this crisis. Adolescents' individual, familial, and social vulnerability, as well as individual and familial coping abilities, are factors related to adolescent mental health in times of crisis. Adolescents are often vulnerable and require careful consideration by caregivers and healthcare system adaptations to allow for mental health support despite the lockdown. Research on adolescent psychiatric disorders in times of pandemics is necessary, as such a global situation could be prolonged or repeated."

Long term conditions

COVID-19 and diabetes: What have we learned so far? Taher et al., Clinical Medicine, 20(4). "COVID-19 and diabetes are both pandemics with major impacts on global public health. While the response to COVID-19 has been rapid and progressive to reduce risk of harm, the response to the diabetes pandemic has been somewhat more muted. People with diabetes have been disproportionately affected by COVID-19, with growing evidence of higher mortality and morbidity. In this article, we discuss the impact of COVID-19 on our diabetes service in an urban area in the UK. We discuss the impact on our patients and ourselves, and the possible lessons we can carry into the future."

Commentaries

Cardiovascular and immunological implications of social distancing in the context of COVID-19. D'Acquisto F & Hamilton A. Cardiovascular Research, 0, 1-3. (published online 8/7/20).

Covid-19 and alcohol: parental drinking influences the next generation. Sigman A. BMJ, 369:m2525.

Impact on non-Covid care

Guidance

Guidance for those under 25 who provide care for someone. Department of Health & Social Care. (published online 3/7/20).

Guidance on the provision of support for medically and socially vulnerable populations in EU/EEA countries and the United Kingdom during the COVID-19 pandemic. ECDC Technical Report. (published online 3/7/20).

Investing in and building longer-term health emergency preparedness during the COVID-19 pandemic. Interim guidance for WHO Member States. WHO. (published online 6/7/20).

Resumption of laser/IPL skin services post COVID-19 lockdown—British Medical Laser Association (BMLA) guidance document. Madan V. Lasers Med Sci, doi: 10.1007/s10103-020-03086-z. (published online 27/6/20).

Rapid reviews

Primary Care

Investigating changing demands on primary care during COVID-19: Summary report 1. **Murphy M et al., Centre for Academic Primary Care, 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 first summary report presents qualitative findings from 22 interviews held with GPs and managers from 14 GP practices between 13 and 17 May 2020."

Investigating changing demands on primary care during COVID-19: Summary report 2. **Murphy M et al., Centre for Academic Primary Care, University of Bristol**." Participants reported an increase in patient demand in this period. Problems are becoming more complex as patients have been "storing up" issues, however most practices are not anticipating an influx of COVID-19 patients. Practices are still coping well with demand. The key challenge which practices are facing is establishing a "new normal". Practices are restarting routine services that have been stopped, including some chronic condition monitoring and routine minor procedures. This presents a challenge both in prioritising what needs to be done and the physical challenge of maintaining distancing and time-consuming donning of PPE. Some practices are making changes to buildings semi-permanent; GPs are adapting to managing clinical risk over the phone by doing higher levels of follow-up. GPs felt they were coping well only because they are managing a lot of demand over the telephone. There are concerns about how to manage future increased demand for face-to-face (F2F) consultations, for example if there is an increase in viral and respiratory illness as lockdown eases or over the winter. New challenges faced in this period included adjusting appointment slots to cope with rising numbers of F2F consultations. Practices are finding it challenging to manage patient expectations that services are restarting as normal, while some specialties are still not accepting referrals. Participants also reported that the current mode of operating is taking a toll on staff. Some participants are concerned that the current mode of operating is increasing health inequalities. GPs noted, particularly in more deprived areas, that many of their elderly patients were unable to use smartphones and computers to send photos or connect to a video consultation, even if they had access to them."

Emerging evidence

Primary Care

Provision of dental services at a single institution in the UK's epicentre during the COVID-19 pandemic. **Grossman S et al., British Dental Journal, 228.** "Coronavirus disease 2019 (COVID-19) has had a significant impact on dentistry in the UK due to the perceived risks associated with infection control. These concerns have led to a complete paralysis of routine dental care with provisions for emergency dental care only, which have been scarce. Considering the latter, this article presents a service evaluation of a hospital-based acute dental care service, which was rapidly adapted and enhanced to continue managing dental emergencies during the COVID-19 pandemic. The analysis is based upon the dental diagnoses, management and geography of travel of over 1,500 attending patients in a five-week period during the rise and peak of COVID-19 in the UK. In addition, we assess our dental workforce's COVID-19 sickness reporting for those providing urgent dental care within this enhanced service. The article aims to provide additional and valuable frontline clinical

information, experience and outcomes, including our categorisation of personal protective equipment used for varying face-to-face dental management during COVID-19."

Elective care

Outcome of trauma and orthopaedic surgery at a UK District General Hospital during the Covid-19 pandemic. Sobti A et al, Journal of Clinical Orthopaedics and Trauma, in press. "During the period March 1, 2020 to May 31, 2020, total of 206 patients were operated. Ninety-four fracture NOF and another one hundred twelve essential surgical procedures were performed. In the NOF cohort, there were nine patients that died. Three of them were covid-19 positive, one was not tested and the rest five were covid-19 negative. There was no mortality reported in the non NOF group. Conclusion: In our unit, during the lock down period, mortality rate in patients undergoing fracture NOF was not significantly different from a similar cohort earlier in the year and similar period last year. We have not observed any mortality, to date in the Non NOF procedures carried out."

Secondary care

The future is now: a call for action for cardiac telerehabilitation in the COVID-19 pandemic from the secondary prevention and rehabilitation section of the European Association of Preventive Cardiology. Scherrenberg M et al., Eurorpean Journal of Preventive Cardiology, Doi: 10.1177/2047487320939671. "The role of comprehensive cardiac rehabilitation is well established in the secondary prevention of cardiovascular diseases such as coronary artery disease and heart failure. Numerous trials have demonstrated both the effectiveness as well as the cost-effectiveness of comprehensive cardiac rehabilitation in improving exercise capacity and quality of life, and in reducing cardiovascular mortality and morbidity. However, the current COVID-19 pandemic has led to closure of many cardiac rehabilitation centres in Europe resulting in many eligible patients unable to participate in the optimisation of secondary prevention and physical performance. This elicits an even louder call for alternatives such as cardiac telerehabilitation to maintain the delivery of the core components of cardiac rehabilitation to cardiovascular disease patients. The present call for action paper gives an update of recent cardiac telerehabilitation studies and provides a practical guide for the setup of a comprehensive cardiac telerehabilitation intervention during the COVID-19 pandemic. This set up could also be relevant to any cardiovascular disease patient not able to visit cardiac rehabilitation centres regularly after the COVID-19 pandemic ceases"

Optimizing response in surgical systems during and after COVID-19 pandemic: Lessons from China and the UK – Perspective. Liu Z et al., Int J Surgery, 78, 156-159. "Key messages: Triage strategies to keep suspected and confirmed cases in isolation. Virtual consultations and limiting all outpatient activity. Screening asymptomatic patients with nucleic acid test, antibody testing & CT chest. Designated staff and operating areas for COVID 19 infected patients. Careful use of laparoscopy with precautions. Limited operating on cancer patients with consideration of alternatives treatment strategies. Precautions and protocol for surgical management are needed after the epidemic."

Management of hip fractures during the COVID-19 pandemic at a high-volume hip fracture unit in the United Kingdom. Malik-Tabassum K et al., J Orthop, 332-337. "This study aimed to compare the treatment pathway and 30-day outcomes of hip fracture patients admitted during the

COVID-19 pandemic with the pre-pandemic period. Three periods were retrospectively analysed: period C = 23/03/2020–11/05/2020, period A = 23/03/2018–11/05/2018, period B = 23/03/2019–11/05/2019. No statistically significant differences in time to surgery, type of treatment, complications, and mortality rates were noted. A significant reduction ($p = 0.021$) in the time to orthogeriatric assessment and length of inpatient stay ($p < 0.001$) was found in period C. Institutional adaptions to facilitate prompt treatment in hip fractures during the pandemic resulted in favourable outcomes."

Tertiary care

The impact of the COVID-19 pandemic on cardiac surgery and transplant services in Ireland's National Centre. Casey et al., Irish Journal of Medical Science. "Irish health services have been repurposed in response to the COVID-19 pandemic. Critical care services have been re-focused on the management of COVID-19 patients. This presents a major challenge for specialities such as cardiothoracic surgery that are reliant on intensive care unit (ICU) resources. A comparison was performed of cardiac surgery and transplant caseload for the first 4 months of 2019 and 2020 using data collected prospectively on a customised digital database. Cardiac surgery activity fell over the study period but was most impacted in March and April 2020. Operative activity fell to 49% of the previous years' activity for March and April 2020. Surgical acuity changed with 61% of all cases performed as inpatient transfers after cardiology admission in contrast with a 40% rate in 2019. Valve surgery continued at 89% of the expected rate; coronary artery bypass surgery was performed at 61% of the expected rate and major aortic surgery at 22%. Adult congenital heart cases were not performed in March or April 2020. One heart and one lung transplant were performed in this period. In March and April of 2020, the spread of COVID-19 and the resultant focus on its management resulted in a reduction in cardiothoracic surgery service delivery."

The impact of social distancing on pediatric neurosurgical emergency referrals during the COVID-19 pandemic: a prospective observational cohort study. Dyson EW et al., Child's Nervous System. Doi: 10.1007/s00381-020-04783-4. "Overall, our data shows a small increase in the number of emergency pediatric neurosurgical referrals during the COVID-19 lockdown in the UK. A particular increase in trauma referrals was observed, although this failed to reach statistical significance, with a stable number of non-trauma referrals. One would not expect a change in human behaviour to have any impact on the true incidence of the so-called spontaneous pathology in the population; however, the proportion which presents to hospital may be affected. These data do not therefore support concerns that serious, time-critical intracranial pathology such as brain tumours and hydrocephalus are being inappropriately kept away from hospital as a result of social distancing. Social distancing has resulted in a reduction in emergency department attendances overall [3]. Our data demonstrates that this has not been accompanied by a reduction in acute neurosurgical presentations. This has important implications in planning service delivery for any future similar episodes. Whilst we did observe a trend towards more NAI cases, this was proportionate to the overall increase in trauma referrals. No individual sub-group of trauma referrals demonstrated a significant increase. An increase in any of these groups in the community cannot be excluded, and indeed is possible given that our data looks solely at inter-hospital referrals. We also observed a significant increase in the incidence of traumatic intracranial haemorrhage amongst trauma patients referred during the lockdown period. Most children referred with head trauma had haemorrhagic findings on CT scan, compared with a small minority in the pre-COVID-19 group. This raises the concern that the severity of neurological trauma sustained during the lockdown may have

been greater. Our data cannot exclude an increase in NAI which does not present to hospital and this is worthy of further research."

Emergency care

Report 29- The impact of the COVID-19 epidemic on all-cause attendances to emergency departments in two large London hospitals: an observational study. Vollmer MAC et al., MRC Centre for Global Infections Disease Analysis. "The health care system in England has been highly affected by the surge in demand due to patients afflicted by COVID-19. Yet the impact of the pandemic on the care seeking behaviour of patients and thus on Emergency department (ED) services is unknown, especially for non-COVID-19 related emergencies. In this report, we aimed to assess how the reorganisation of hospital care and admission policies to respond to the COVID-19 epidemic affected ED attendances and emergency hospital admissions. During the study period (January 1 to May 31, 2020) there was an overall decrease in ED attendances of 35% at ICHNT, of 50% across all London NHS Trusts and 53% nationally. For ICHNT, the decrease in attendances was mainly amongst those aged younger than 65 and those arriving by their own means (e.g. personal or public transport). Increasing distance (km) from postcode of residence to hospital was a significant predictor of reduced attendances, which could not be explained by weighted (for population numbers) mean index of multiple deprivation. Non-COVID emergency admissions to hospital after March 12 fell by 48% at ICHNT compared to previous years. This was seen across all disease areas, including acute coronary syndromes, stroke and cancer-related emergencies. The overall non-COVID-19 hospitalisation mortality risk did not differ (RR 1.13, 95%CI 0.94-1.37, p=0.19), also in comparison to previous years."

Cancer services

The impact of the COVID-19 pandemic on cancer deaths due to delays in diagnosis: a national population based modelling study. Maringe C et al., The Lancet Oncology (in press). "The study uses linked English National Health Services (NHS) cancer registration and hospital administrative datasets for patients aged 15-84, diagnosed between 01/01/2010 and 31/12/2010 with follow-up until 31/12/2014 for breast (n=32,583), colore2ctal (n=24,975), and oesophageal cancer (n= 6,744), and for lung cancer patients (n= 29,305) diagnosed between 01/01/2012 and 31/12/2012 with follow-up until 31/12/2015. We use a 'routes to diagnosis' framework to estimate the impact of diagnostic delay over a 12-month period from the commencement of lockdown measures, 16/03/2020. We reallocate patients who were on screening and routine referral pathways to urgent and emergency pathways, which are associated with more advanced stage of disease at diagnosis. We consider three reallocation scenarios which reflect actual changes in the diagnostic pathway being seen in the NHS, and estimate the impact on net survival at 1, 3 and 5 years to calculate the additional deaths that can be attributed to cancer, and the total years of life lost (YLL) compared to pre-pandemic figures. Across the three scenarios, compared to pre-pandemic figures, we estimate an 8-10% increase in the number of deaths due to breast cancer up to Year 5, corresponding to between 281 (266-295) and 344 (329-358) additional deaths. For colorectal cancer we estimate 1,445 (1,392-1,591) to 1,563 (1,534-1,592) additional deaths (a 15-17% increase); lung cancer 1,235 (1,220-1,254) to 1,372 (1,343- 1,401) additional deaths (5% increase) and oesophageal cancer 330 (324-335) to 342 (336-348) additional deaths (6% increase). For these four tumour types, this corresponds to a total of 3,291 to 3,620 additional deaths across the scenarios within 5 years.

The total additional years of life lost (YLL) across these cancers is estimated to be between 59,203 to 63,229 years"

Commentaries

Elective care

Managing the IVF laboratory during a pandemic: international perspectives from laboratory managers. Hickman C et al., Reproductive Bio-Medicine Online. (published online 12/5/20).

Secondary care

Providing Safe and Effective Surgical Care During the COVID-19 Outbreak in the UK – Changing Strategies. Chapman R et al., Int J Health Policy and Management, doi: 10.34172/IJHPM.2020.112. (published online 30/6/20).

Effects of COVID-19 lockdown strategies on management of atrial fibrillation. Blomstrom-Lundqvist C. European Society of Cardiology, 0,1-3. Doi: 10.1093/eurheartj/ehaa538. (published online 2/7/20).

Tertiary care

COVID-19 in a UK neurology hospital. Khoo A et al., Internal Medicine Journal. (published online 6/7/20).

Neuro-rehabilitation service during COVID-19 pandemic: Best practices from UK. Sakel M et al., JPMA, 70(5). (published online May 2020).

Cancer services

Impact of the COVID-19 pandemic on the symptomatic diagnosis of cancer: the view from primary care. Jones D et al., The Lancet Oncology, (published online 21/6/20).

Mental Health Services

Digital approaches for mental health in the age of covid-19. Chang BP et al., BMJ, 369:m2541. (published online 29/6/20).

Patient and public involvement

The I in COVID: The importance of community and patient involvement in COVID-19 research. Ratneswaren A. Clin Med. (published online 7/7/20)

Useful resources

Response to the COVID-19 Pandemic: Practical Guide to Rapidly Deploying Home Workstations to Guarantee Radiology Services During Quarantine, Social Distancing, and Stay Home Orders. Sammer MBK et al., American Journal of Raoentgenology, 1-4. DOI: 10.2214/AJR.20.23297.

The most recently released issue of the OECD's statistics news-letter features three perspectives on post- COVID-19 recovery planning, including 1) Three ways a wellbeing lens can aid COVID-19 recovery; 2) Using commercial data sources to project foreign direct investment flows during the pandemic; and, 3) communicating COVID-19: what are non-statutory organisations doing?.