The Strategy Unit
At NHS Midlands and Lancashire Commissioning Support Unit

# COVID-19 Evidence Alert - 12 June 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 update is intended to provide a brief update on the evidence base since the scan e.g. new areas of focus; changes in recommendations; consistency with earlier evidence.

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').

Here you will also find details of the evidence that has been used to inform this weekly update.

*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.*

## Analytical Collaboration for COVID-19

The Strategy Unit is one of five organisations (the Health Foundation; King's Fund; Nuffield Trust; and two specialist NHS analytical teams, Imperial College Health Partners and the Strategy Unit) collaborating to provide analytical support to the health and care system to help in the fight against COVID-19. Through the collaboration, the organisations are 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. The collaboration has just published the following briefings:

- **Are some countries better at caring for their ICU patients than others?**
- **International comparisons of COVID-19 death data**

## Residential settings

Our searches in the last week have identified several commentaries on the implications for residential facilities, in particular, about monitoring and strategies for testing and delivery of non-Covid care. The emphasis still seems to be on care homes; however, there is a new paper, from the US, sharing the experience of a coordinated approach to manage infection risk in residential facilities for people with learning disabilities.

**Emerging evidence**

- **Supporting individuals with intellectual and developmental disability during the first 100 days of the COVID-19 outbreak in the USA** **Mills WR et al, Journal of Intellectual Disability Research** (3/6/20). This paper describes a coordinated approach to infection control, case identification and cohorting, and the use of real-time data analysis, described as be enablers of optimal, coordinated outbreak response.

**Commentaries**

- **The Importance of Long-term Care Populations in Models of COVID-19** Pillemer K et al, JAMA (5/6/20).
- **High impact of COVID-19 in long-term care facilities, suggestion for monitoring in the EU/EEA, May 2020** ECDC Public Health Emergency Team et al, Eurosurveillance (4/6/20)
- **Commentary: COVID in care homes—challenges and dilemmas in healthcare delivery** (13/5/20) Gordon et al, Age and Ageing, afaa113 (13/5/20)
- **COVID-19 testing and patients in mental health facilities** Benson NM et al, The Lancet Psychiatry, June 2020 (11/5/20)

**Useful resources**

- **Working in care homes during Covid-19: new training resource** The Royal Pharmaceutical Society has published a training resource to support pharmacists and pharmacy technicians newly deployed to care home settings during the COVID-19 pandemic to deliver safe and effective patient care with confidence.

## Impacts of lifting restrictions

Since our initial rapid scan on 14th May and last week's alert, there has been updated guidance on the use of masks. There is further emerging evidence on the efficacy of lockdown measures and effects of non-pharmaceutical interventions with projections of impact, including the recently published Lancet modelling study projected burden of clinical cases and deaths due to COVID-19 in the UK by December 2021, consistently recommending 'intensive interventions' and 'extreme measures' for the remainder of the year. Further studies and WHO recommendations strongly emphasising the vital role of contact tracing / case finding in containment.

**Guidance**

**Advice on the use of masks in the context of COVID-19** This document, from WHO, provides advice on the use of masks in communities, during home care, and in health care settings in areas that have reported cases of COVID-19. It is intended for individuals in the community, public health and infection prevention and control (IPC) professionals, health care managers, health care workers (HCWs), and community health workers. This updated version includes a section on Advice to decision makers on the use of masks for healthy people in community settings.

**Policies on facemasks** https://analysis.covid19healthsystem.org/index.php/2020/05/22/what-are-the-policies-on-wearing-facemasks-in-public-places/

**Emerging evidence**

**Effects of non-pharmaceutical interventions on COVID-19 cases, deaths, and demand for hospital services in the UK: a modelling study** **Davies NG et al. The Lancet Public Health, (2/6/20)** A stochastic age-structured transmission model to explore a range of intervention scenarios, aggregated to 186 county-level administrative units in England, Wales, Scotland, and Northern Ireland. The four base interventions modelled were school closures, physical distancing, shielding of people aged 70 years or older, and self-isolation of symptomatic cases. Findings projected a median unmitigated burden of 23 million (95% prediction interval 13–30) clinical cases and 350 000 deaths (170 000–480000) due to COVID-19 in the UK by December, 2021. The four base interventions were each likely to decrease R0, but not sufficiently to prevent ICU demand from exceeding health service capacity. The combined intervention was more effective at reducing R0, but only lockdown periods were sufficient to bring R0 near or below 1; the most stringent lockdown scenario resulted in a projected 120000 cases (46 000–700 000) and 50000 deaths (9300–160 000). Intensive interventions with lockdown periods would need to be in place for a large proportion of the coming year to prevent health-care demand exceeding availability.

**The Efficacy of Lockdown Against COVID-19: A Cross-Country Panel Analysis** **Alfano V and Ercolano S, Applied Health Economics and Health Policy (3/6/20)** This paper assesses the effect of lockdown measures (or the lack of such measures) on the numbers of new infections. Given this policy's expected change in effectiveness over time, we also measure the effect of having a lockdown implemented over a given number of days (from 7 to 20 days). With reference to the European case, efficiency begins approximately 3 weeks after the lockdown and continues to reduce the number of COVID-19 infections up to 20 days later.

**Linking Key Intervention Timings to Rapid Declining Effective Reproduction Number to Quantify Lessons Against COVID-19** **Peng Z, Song W, Ding Z, et al. [published online ahead of print, 4/6/20]. Front Med. 2020;1-7. doi:10.1007/s11684-020-0788-3**

In this study, the efficiency of prevention and control measures in China, Italy, Iran, South Korea, and Japan was assessed, and the COVID-19 epidemic tendency among these countries was compared.

**COVID-19 Mortality Rates in the European Union, Switzerland, and the UK: Effect of Timeliness, Lockdown Rigidity, and Population Density** **Gerli AG, Centanni S, Miozzo MR, et al. [published online ahead of print, 2020 Jun 2]. Minerva Med. 2020;10.23736/S0026-4806.20.06702-6.** This study identified a homogeneous distribution of deaths and found a median of 24 days after lockdown adoption to reach the maximum daily deaths. Strikingly, cumulative deaths up to April 25th, 2020 observed in Europe separated countries in three waves, according to the time lockdown measures were adopted following the onset of the outbreak: after a week, within a week, or even prior to the outbreak (r2=0.876). In contrast, no correlation neither with lockdown rigidity nor population density were observed.

**Novel approaches to estimate compliance with lockdown measures in the COVID-19 pandemic** **Sheikh A et al., Journal of Global Health, 10 (1), 010348 (2/5/20)** A summary of three key approaches that are currently being used to help estimate compliance with lockdowns in the context of the COVID-19 pandemic: GPS data provided by mobile phone carriers; GPS data provided by other technology companies; traffic congestion and public transport usage.

**Report 26 Reduction in mobility and COVID-19 transmission** **Nouvellet P et al., Imperial College COVID-19 response team (8/6/20)** Mobility data represent an important proxy measure of social distancing. This paper presents a framework to infer the relationship between mobility and the key measure of population-level disease transmission, the reproduction number (R). The framework is applied to 53 countries with sustained SARS-CoV-2 transmission based on two distinct country-specific automated measures of human mobility, Apple and Google mobility data. Overall, strong population-wide social-distancing measures are effective to control COVID-19; however gradual easing of restrictions must be accompanied by alternative interventions, such as efficient contact tracing, to ensure control.

**Estimates of the ongoing need for social distancing and control measures post-"lockdown" from trajectories of COVID-19 cases and mortality** **Lonergan M and Chalmers JD, European Respiratory Journal, 55 (6) (1/6/20)** 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 21st May 2020, and were sufficient for analysis in 89 countries. Intermittent lockdown has been proposed as a means of controlling the outbreak while allowing periods of increase 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

**Effects of the COVID-19 Pandemic and Nationwide Lockdown on Trust, Attitudes Toward Government, and Well-Being** **Sibley CG et al., American Psychologist, Advance online publication. http://dx.doi.org/10.1037/amp0000662** This study describes the immediate effects of the COVID-19 pandemic and nationwide lockdown on levels of institutional trust and attitudes toward the nation and government and health and well-being in New Zealand, with implications for other nations. Our results suggest that a strong national response to COVID-19 may bolster national attachment and increase trust in the bodies determining and enforcing lockdown guidelines. Against a backdrop of general resilience, small increases in psychological distress serve as a warning about potential psychological consequences of lockdown and isolation.

**Social network-based distancing strategies to flatten the COVID-19 curve in a post-lockdown world** Block P et al., Nature Human Behaviour, https://doi.org/10.1038/s41562-020-0898-6 (4/6/20) As the pressure increases throughout a pandemic to ease stringent lockdown measures, to relieve social, psychological and economic burdens, this paper aims to provide insights about three strategies: seeking similarity; strengthening interactions within communities; and repeated interaction with the same people to create bubbles.

**Global supply-chain effects of COVID-19 control measures** **Guan D et al, Nature Human Behaviour** https://doi.org/10.1038/s41562-020-0896-8. This study suggests that economic losses will be minimized by stricter initial lockdowns, provided that such strictness reduces the duration of the measures. Indeed, emerging results of related research seems to support exactly this relationship. However, modelling of recovery scenarios suggests that an extended period of some restrictions (for example, 20% reductions in labour and transportation capacity in the new normal scenario) is nonetheless economically preferable to a more rapid return to pre-pandemic activities followed by another round of global lockdowns.

**The impact of school reopening on the spread of COVID-19 in England (preprint)** **Keeling MJ et al. (5/6/20)** This study concludes that any reopening of schools will result in increased mixing and infection amongst children and the wider population, although the opening of schools alone is unlikely to push the value of R above one. However, impacts of other recent relaxations of lockdown measures are yet to be quantified, suggesting some regions may be closer to the critical threshold that would lead to a growth in cases. Given the uncertainties, in part due to limited data on COVID-19 in children, school reopening should be carefully monitored. Ultimately, the decision about reopening classrooms is a difficult trade-off between increased epidemiological consequences and the emotional, educational and developmental needs of children.

### Commentaries

**Active case finding with case management: the key to tackling the COVID-19 pandemic** Li Z et al, The Lancet (4/6/20)

**Should governments continue lockdown to slow the spread of covid-19?** Melnick ER and Ioaniddis JPA, BMJ, 369 (3/6/20)

**Covid-19: Push to reopen schools risks new wave of infections, says Independent SAGE** Wise J, BMJ, 369 (28/5/20)

**How measures for isolation, quarantine, and contact tracing differ among countries** COVID-19 Health System Response Monitor (19/5/20)

**Age, death risk, and the design of an exit strategy: a guide for policymakers and for citizens who want to stay alive** Oswald AJ and Powdthavee N, Institute of Labor Economics (May 2020)

### Useful resources

**COVID-19: nowcast and forecast. Paul Birrell, Joshua Blake, Edwin van Leeuwen, Joint PHE Modelling Cell, MRC Biostatistics Unit COVID-19 Working Group, and Daniela De Angelis. 2020-06-05** Real-time tracking of an epidemic, as data accumulate over time, is an essential component of a public health response to a new outbreak. A team of statistical modellers at the MRC Biostatistics Unit (BSU), University of Cambridge, are working with Public Health England (PHE) to provide regular now-casts and forecasts of COVID-19 infections and deaths. This information feeds directly to the SAGE sub-group, Scientific Pandemic Influenza sub-group on Modelling (SPI-M), and to regional PHE teams.

## Long term rehabilitation needs

As the pandemic progresses and more knowledge emerges about the medium to long term impacts for COVID-19 survivors, there are more findings emerging from small cohort studies. Whilst caution should be exercised, as sample sizes are small and papers often not peer reviewed, such findings can give an insight into potential implications for health services. NHS England has issued guidance on aftercare needs of COVID patients, addressing physical, cognitive and psychological needs. This is consistent with findings from a systematic review, exploring longer term impairments in MERS and SARS patients, suggesting that if COVID-19 patients follow a similar course, impairments could include pulmonary dysfunction, reduced exercise tolerance, and psychological problems. A small study from UCL London suggests that delirium in older COVID patients may be associated with functional impairment in the medium term.

**Guidance**

**After-care needs of inpatients recovering from COVID-19** **NHS England (5/6/20)**
This guidance supports primary care and community health services to meet the immediate and longer-term care needs of patients discharged following an acute episode of COVID-19, by describing the typical expected health care needs of these patients, post-discharge.

**Rapid reviews**

**Psychiatric and neuropsychiatric presentations associated with severe coronavirus infections: a systematic review and meta-analysis with comparison to the COVID-19 pandemic** **Rogers JPR et al The Lancet Psychiatry (18/5/20)** A systematic review of 72 studies, to assess the psychiatric and neuropsychiatric presentations of SARS, MERS, and COVID-19. In the longer term, the data from SARS and MERS suggest that the prevalence of depression, anxiety, post-traumatic stress disorder, and fatigue might be high, but as yet data on these diagnoses in patients with COVID-19 are preliminary or unpublished. In patients with severe illness requiring ICU admission, neurocognitive impairment might be a feature. Given that a very large number of individuals will be infected with SARS-CoV-2, the immediate impact on mental health could be considerable. An acute rise in cases of delirium will probably prolong hospital stay; there is also some preliminary evidence that delirium was associated with raised mortality in MERS. There is a risk of common mental illnesses in patients with disease that require hospital admission, which might be compounded by the effects of social isolation. Given this psychiatric morbidity and high frequency of persistent fatigue, some patients might have difficulty in returning to their previous employment, at least in the short term, although physical—as well as mental—recovery is intrinsic to such a broad functional outcome.

**Emerging evidence**

**Meeting the Transitional Care Needs of Older Adults with COVID-19** **Naylor MD et al. Journal of Aging and Social Policy (31/5/20)** Increased understanding of the unique challenges facing older adults hospitalized with COVID-19 who transition to home is required. In the meantime, components of the evidence-based Transitional Care Model provide a framework for undertaking more immediate holistic responses to meeting the needs of this population.

**Functional and cognitive outcomes after COVID-19 delirium (preprint)** **Mcloughlin BC et al (9/6/20)** A point-prevalence study in a cohort of COVID-19 inpatients at University College Hospital, London. Findings indicate that delirium is common, yet under-recognised. Delirium is associated with functional impairments in the medium-term.

**Correlation between immune response and self-reported depression during convalescence from COVID-19** **Yuan B et al. Brain, Behavior and Immunity (25/5/20)** This study, involving 96 patients, found that self-reported depression occurred at an early stage in convalescent COVID-19 patients, and changes in immune function were apparent during short-term follow-up of these patients after discharge. Appropriate psychological interventions are necessary, and changes in immune function should be emphasized during long-term follow up of these patients .

**Characteristics of Children With Reactivation of SARS-CoV-2 Infection After Hospital Discharge** **Zhao W et al. Clinical Pediatrics (28/5/30)** A small retrospective cohort study (15 patients) which showed a high reactivation rate in the testing of SARS-CoV-2, and those who experienced viral reactivation tended to be older, have lower lymphocyte, higher neutrophil levels, and initial negative chest CT images, and undergo fewer tests for SARS-CoV-2. The differences found between those who experienced reactivation and those who did not may have been related to their immunological features and sampling error.

**Learning from previous pandemics and major incidents**

**Long-term clinical outcomes in survivors of severe acute respiratory syndrome (SARS) and middle east respiratory syndrome (MERS) coronavirus outbreaks after hospitalisation or ICU admission: a systematic review and meta-analysis** **. Ahmed H et al., Journal of Rehabilitation Medicine, 52 (5)** This systematic review of 28 studies collates the long-term (> 3 month) complications following SARS and MERS in patients who required hospitalization or ICU stay. Health related quality of life (HRQoL), measured using SF-36, was considerably reduced in survivors at 6 months post-infection, and showed only slight improvement beyond 6 months. HRQoL of survivors remained below that of the normal population and of those with chronic conditions. The key areas of impairments identified were pulmonary dysfunction, reduced exercise tolerance, and psychological problems. At this stage it is not possible to conclude whether the long-term outcomes identified in SARS and MERS patients will also occur in COVID-19 survivors. However, as SARS and MERS belong to the same family of virus as COVID-19, and the clinical features are similar, clinicians should anticipate a similar range of long-term outcomes in survivors of COVID-19 following hospitalization and ICU admission.

**Useful resources**

**COVID-19 Physiotherapy Rehabilitation Guide (NHS net access)**
The physiotherapy teams at the Leeds Teaching Hospitals NHS Trust have produced a physiotherapy guide for the rehabilitation of people suffering from and recovering from COVID-19.

## Screening and testing

Searches in the last week have identified new guidance from UNICEF on the implications of digital contact tracing. There is a new rapid review comparing policies on testing and tracing, including lessons from Taiwan. There is increased interest in the scaling up of testing, including a paper from

the Francis Crick Institute on a possible model. Papers are emerging on policies and practice for testing patients prior to procedures and healthcare workers to prevent infection spread in hospitals and other healthcare sites. The Health Foundation shares findings from a survey on public attitudes towards tracing apps which highlights notable challenges for implementation. Issues regarding the implementation and ethics of policies are also addressed in several commentaries.

**Guidance**

**Digital contact tracing and surveillance during COVID-19. General and child-specific ethical issues** UNICEF (June 2020)

**Rapid Reviews**

**A rapid systematic review and case study on test, contact tracing, testing, and isolation policies for Covid19 prevention and control (preprint)** **Chung SC et al (7/6/20)**. A rapid review of 30 studies on the efficacy and policy of contact tracing, testing, and isolation (TTI) in Covid-19 prevention and control, including a case study based on policy and procedures in Taiwan.

**Emerging evidence**

**The Health Foundation Covid-19 survey**. **Ipsos Mori (May 2020)**. This report contains polling data from Ipsos MORI that reveals the UK public's awareness of and attitudes towards the planned smartphone app. It warns that the government's delayed contact-tracing app has the potential to exacerbate existing health inequalities, leaving some people at greater risk of Covid-19 than others.

**Active case finding with case management: the key to tackling the COVID-19 pandemic** **Li Z et al, The Lancet** This policy article describes risk-based lifting of restrictions, which were used to contain the coronavirus in China, and planned pathways towards long-term prevention and control of COVID-19, including active case finding and case management.

**Universal screening for SARS-CoV-2 in asymptomatic obstetric patients in Tokyo, Japan** **Ochiai, D et al. International Journal of Gynecology and Obstetrics** (4/6/20) A retrospective review of universal testing in obstetric patients during April which found a 4% prevalence in asymptomatic patients.

**Scalable and Resilient SARS-CoV-2 testing in an Academic Centre (preprint)** **Aitken J et al. (9/6/20)** This paper from the Francis Crick Institute describes a roadmap instructing how a research institute can be repurposed in the midst of this crisis, in collaboration with partner hospitals and an established diagnostic laboratory, harnessing existing expertise in virus handling, robotics, PCR, and data science to derive a rapid, high throughput diagnostic testing pipeline for detecting SARS-CoV-2 in patients with suspected COVID-19. This strategy facilitates the remote reporting of thousands of samples a day with a turnaround time of under 24 hours, universally applicable to laboratories worldwide.

**CoVID-19 in Singapore: Impact of Contact Tracing and Self-awareness on Healthcare Demand (preprint)** **Huang Q et al (5/6/20)** Singapore's experiences suggest that close contact tracing and self-awareness combined together may achieve effective control of the epidemic spreading when the number of infected cases is low and that contact tracing and self-awareness must be enhanced as much as possible when lockdown comes to an end.

**Point-of-Care Diagnostic Tests for Detecting SARS-CoV-2 Antibodies: A Systematic Review and Meta-Analysis of Real-World Data** **Ricco M et al, Journal of Clinical Medicine, 9 (5). 1515.** A review of 10 studies to explore the feasibility of rapid diagnostic tests in the management of the COVID-19 outbreak. Conclusions: (1) rapid diagnostic tests for COVID-19 are necessary, but should be adequately sensitive and specific; (2) few studies have been carried out to date; (3) the studies included are characterized by low numbers and low sample power, and (4) in light of these results, the use of available tests is currently questionable for clinical purposes and cannot substitute other more reliable molecular tests, such as assays based on RT-PCR

**Symptom-based screening for COVID-19 in health care workers: The importance of fever** **Yombi JC et al. Journal of Hospital Infection, 105, 428-9 (22/5/20)** An assessment of the impact of using fever as a predictor for positivity of SARS-CoV-2 reverse transcription polymerase chain reaction (RT-PCR). Results show that fever has a positive impact on the yield of RT-PCR for SARS-CoV-2. However, a proportion of COVID-19-positive cases, even when symptoms are combined, will be missed if fever is required as a criterion for testing.

**Commentaries**

**COVID-19 and risks to the supply and quality of tests, drugs, and vaccines**, Newton PN et al, Lancet Glob Health, 2020 Jun;8(6):e754-e755.

**Identifying and Interrupting Superspreading Events—Implications for Control of Severe Acute Respiratory Syndrome Coronavirus 2**. Frieden and Lea, Emerg Infect Dis. 2020 Jun; 26(6): 1059–1066. doi: 10.3201/eid2606.200495

**The case for routine screening for SARS-CoV-2 before surgery** Tenenbein P et al, Canadian Journal of Anesthesia (3/6/20)

**The right to know: ethical implications of antibody testing for healthcare workers and overlooked societal implications** Vakharia, K, Journal of Medical Ethics (3/6/20)

**COVID-19 Pandemic: What Can the West Learn From the East?** Shokhooi M et al, International Journal of Health Policy Management (31/5/20)

**How accurate is self-testing?** Brooks M, New Scientist (16/5/20)

**COVID-19 testing and patients in mental health facilities** Benson NM et al, The Lancet Psychiatry, June 2020 (11/5/20)

## Broader impacts on health outcomes

Since our *initial rapid scan on 29th May*, more evidence has emerged on the wider adverse impacts of COVID-19 in the general population, older adults, children and young people, healthcare workers and those with pre-existing conditions and chronic illness. However, fewer studies were identified with relevance to the broader impacts of COVID-19 upon long-term conditions.

The evidence base is largely concentrated towards the broader impacts of COVID-19 upon mental health and wellbeing outcomes. It is also consistent with the findings of previous evidence, indicating higher levels of depressive, post-traumatic, anxiety and insomnia symptoms as an indirect result of COVID-19. Social isolation and loneliness appear to be prominent risk factors for adverse

mental health outcomes in context to COVID-19, particularly for children and young people, and older adults. Some studies also highlight that adverse impacts upon mental health outcomes may arise in relation to the wider economic and financial consequences of COVID-19. A limited number of qualitative studies have emerged on the experiences of older adults and the impact of restriction measures upon physical activity; as well as the experience of those caring for individuals with COVID-19.

Increasingly, guidance, emerging evidence and commentaries consider what provision might be necessary to mitigate the short and long-term mental health impacts of COVID-19 on multiple population groups. Particularly for high risk groups such as front-line healthcare workers. While sources highlight a need for early intervention, this is caveated with consideration for limiting the harms and unintended consequences which may arise from inappropriate provision.

**Commentary from the collaborative**

**Deaths from Covid-19 (coronavirus): how are they counted and what do they show?**
**Raleigh V. The King's Fund. (13/5/20).**

**Nuffield Trust response to ONS analysis of non-Covid-19 death registrations. The Nuffield Trust. (5/6/20)**

**Guidance**

**Enhancing mental health resilience and anticipating treatment provisions of mental health conditions for frontline Healthcare workers involved in caring for patients during the COVID-19 Pandemic - A call for action. Kullu C et al NHS Clinical Leaders Network (17/5/20)**

**Responding to stress experienced by hospital staff working with Covid-19: guidance for planning early interventions. King's Fund & COVID Trauma Response Working Group Rapid Guidance (7/4/20).**

**COVID-19 and violence against women. What the health sector/system can do. WHO and HRP. (7/4/20)**

**Rapid Reviews**

**Mental Health Awareness Week: The impact of coronavirus on health and social care workers. Macdonald M. House of Commons Library. (18/5/20).** This rapid review looks at evidence from previous pandemics and disasters, as well as emerging COVID-19 evidence to examine the impact of the pandemic on health and social care staff, with a particular focus on who is most at risk, and what measures have been implemented to support staff.

**Supporting community recovery and resilience in response to the COVID-19 pandemic – a rapid review of evidence. Harkins, C. Glasgow Centre for Population Health (May 2020).** This rapid review looks at what could be done to build community resilience and support recovery to mitigate the broader impacts of COVID-19. Outlining a) vulnerable communities and population sub-groups who may have experienced unintended consequences of lockdown policy; b) mental health and psychological impact of COVID and how these might be mitigated; and, c) exploring community recovery and future resilience.

**Rapid Systematic Review: The Impact of Social Isolation and Loneliness on the Mental Health of Children and Adolescents in the Context of COVID-19. Loades ME et al. Journal of the American Academy of Child & Adolescent Psychiatry. (28/5/20).** This pre-print outlines a rapid systematic review of available evidence on the impact of social isolation and loneliness on child and adolescent mental health. Suggesting that this population are more likely to experience high rates of depression and anxiety during and after periods of enforced isolation.

**COVID-19 pandemic and mental health consequences: Systematic review of the current evidence. Vindegaard N & Benros ME. Brain, Behavior, and Immunity. (30/5/20).** This systematic review looked at 43 studies on adverse mental health outcomes in context to the COVID-19 pandemic. This looked broadly at the indirect effect of the pandemic in those with pre-existing psychiatric disorders, medical healthcare workers and the general public.

**Emerging Evidence**

**Mental health - *General public***

**Psychological health during the coronavirus disease 2019 pandemic outbreak. Mukhtar S. (21/5/20) Int J Soc Psychiatry.** This review article sought to evaluate previous pandemic outbreaks to understand adverse impacts on psychological health, crisis intervention, and mental health management plans. Findings highlight substantial evidence of negative impacts on psychological health in both affected individuals and the general population (including indirect psychosocial stressors such as stigma and xenophobia), in context to a high need for proactive psychological intervention.

**Psychological Outcomes Associated with Stay-at-Home Orders and the Perceived Impact of COVID-19 on Daily Life. Tull MT et al. (12/5/20).** This cross-sectional study examined the relationship between physical/social distancing interventions (including the perceived impact of COVID-19 on daily life) and psychological outcomes in a nationwide US community sample (n=500). Findings show that distancing interventions were associated with higher levels of health anxiety, financial worry and loneliness, whereas the perceived impact of COVID-19 on daily life was negatively associated with loneliness.

**COVID-19-Related Economic Anxiety Is As High as Health Anxiety: Findings from the USA, the UK, and Israel. Bareket-Bojmel L, Shahar G, Margalit M. Int J Cognitive Therapy. Doi: 10.1007/s41811-020-00078-3. (29/5/20).** This international (USA, UK, Israel) cross-sectional study examines associations between economic anxiety related to COVID-19 and three other forms of anxiety (health-related; daily routine change anxiety; social isolation anxiety). It was found that within all 3 countries, levels of economic and health anxiety were equivalent to one another and were more prevalent than anxiety from daily routine changes, and social isolation.

**The COVID-19 Pandemic, Financial Inequality and Mental Health. Kousoulis A et al Mental Health Foundation (05/20).** This briefing from the 'Coronavirus: mental health in the pandemic' study outlines the relationship between employment, mental health and financial inequalities; with a specific focus on the relationship between financial inequality and mental health during COVID-19. This also reports on survey findings and a citizens' jury panel regarding employment and financial worries, with recommendations to address financial inequality.

**Mental health in the UK during the COVID-19 pandemic: early observations. Jia R, Ayling K, Chalder T et al. medRxiv (19/5/20).** This pre-print reports on findings from a community cohort study (n=3,097) conducted via online survey. Findings include that around 50% described themselves as key-workers, and that mean scores for depression, anxiety and stress significantly exceeded population level norms, with younger people and women being at particular risk.

**Mental Health Impact of COVID-19: A global study of risk and resilience factors. Plomecka MB et al. MedRxiv (09/05/20).** This pre-print study screened 13,332 individuals for psychological symptoms related to COVID-19 from March 29th to April 14th 2020; notable risks included female gender, pre-existing psychiatric diagnosis and prior exposure to psychological trauma. Protective factors included: optimism, ability to hare concerns with friends and family (as usual), positive outlooks about the impact of COVID-19 and daily exercise.

**How an Epidemic Outbreak Impacts Happiness: Factors that Worsen (vs. Protect) Emotional Well-being during the Coronavirus Pandemic Yang H and Ma J Psychiatry Research (30/4/20)**. This article reports findings from two large-scale national surveys in China, conducted immediately prior to the COVID-19 outbreak (n=11,131) and during containment (n=3,000). Factors associated with higher likelihood of disease exposure and perceived severity of harm (e.g. age group) exacerbated impact of the outbreak on emotional well-being.

**Initial research findings on the impact of COVID-19 on the well-being of young people aged 13 to 24 in the UK. Levita L, University of Sheffield, Department of Psychology (07/5/20).** This study reports initial survey findings from research being conducted by the COVID-19 Psychological Research Consortium, including around 2,000 UK citizens stratified by household income, sex and age. This examined the impact of COVID-19 on 13-24 year olds, in terms of their physical and mental health, and family relationships.

**Emerging Adults and COVID-19: The Role of Individualism-Collectivism on Perceived Risks and Psychological Maladjustment. Germani A, Buratta L, Delvecchio E et al. Int. J. Environ. Res. Public Health, *17*(10), 349 (17/5/20)**. This online survey study of 1,183 Italian young adults showed high levels of worry and concern for relatives and family members in this population, followed by more general worries. State anxiety and stress scores also exceeded clinical cut-offs. While collectivist cultural orientation was associated with a higher perceived infection risk, it also predicted lower levels of maladjustment.

**COVID-19-related anxiety predicts somatic symptoms in the UK population. Shevlin M et al. (27/5/20). British Journal of Health Psychology**. This brief report used data from a large representative sample of UK adults (n=2,025), highlighting significant associations between moderate to high anxiety levels associated with COVID-19, and general somatic symptoms (gastrointestinal and fatigue symptoms).

***Pre-existing conditions***

**Impact of COVID-19 on children and young people's mental health: results of survey with parents and carers. Youngminds (14/5/20).** This briefing reports on survey findings drawn from around 1,800 parents and carers of children and young people with existing mental health needs. Findings highlighted high levels of parental concern for the long-term impact of COVID-19 on child mental health.

**Psychological distress in patients with serious mental illness during the COVID-19 outbreak and one-month mass quarantine in Italy. Iasevoli F et al. Psychological Medicine. (16/5/20**). This article reports on an observational case-control analysis of 205 patients with serious mental illness, 51 of their first degree relative and 205 non-psychiatric subjects from 13 to 17th April (~1 month into lockdown). Specifically, this examined the impact of mass quarantine on perceived stress, and mental health symptoms in this group (including depression, anxiety and psychosis symptoms).

**Mental Health - *Healthcare workers***

**Supporting Hospital Staff During COVID-19: Early Interventions. Billings J et al. Occupational medicine. (25/5/20).** In context to increased risk of adverse mental health outcomes for healthcare workers during COVID-19, this editorial outlines possible forms of early intervention to mitigate this risk for hospital staff. This also includes guidance on unintended consequences and harms that may arise from provision of inappropriate mental health support (for example, provision of non-specific training programmes e.g. 'mental strength training').

**Mental Health Outcomes Among Frontline and Second-Line Health Care Workers During the Coronavirus Disease 2019 (COVID-19) Pandemic in Italy. Rossi R et al. JAMA Network Open. (28/5/20).** This cross-sectional web-based study investigated adverse mental health outcomes (PTSD, depression, anxiety, insomnia) and associated risk factors among Healthcare workers in Italy. Findings include that half of HCWs (49.38%) reported experiencing post-traumatic stress symptoms. Also, younger age and female sex were significantly associated with higher levels of all adverse outcomes, other than insomnia.

**The prevalence and influencing factors in anxiety in medical workers fighting COVID-19 in China: a cross-sectional survey. Liu CY et al. Epidemiol Infect. (20/5/20)** This cross-sectional study aimed to identify determinants of medical worker(n=850) anxiety during COVID-19. Several variables were associated with higher levels of anxiety symptoms: participants who had direct clinical contact with infected patients, those who worked or resided in the worst affected areas (inc. Hubei province) and those who were suspected cases experienced.

**A qualitative study on the psychological experience of caregivers of COVID-19 patients. Sun N et al. Am J Infect Control. (08/4/20**). This qualitative study investigated the psychological experiences of 20 nurses caring for COVID019 patients. Findings were summarised into 4 themes: 1) negative emotions in early stages (fatigue, discomfort, helplessness) due to high intensity work. 2) coping styles: psychological and life adjustment, altruistic acts, team support and rational cognition. 3) growth under pressure, including increased affection and self-reflection. 4) positive emotions occurring simultaneous to negative emotions.

**Public health**

***Lifestyle-factors***

**Effects of COVID-19 home confinement on physical activity and eating behaviour Preliminary results of the ECLB-COVID19 international online-survey. Ammar A et al. MedRxiv. (8/5/20).** This source outlines preliminary results (n=1047) from an international survey on physical activity and nutrition. Findings include that home confinement negatively impacted all

levels of exercise intensity (vigorous, moderate, walking, overall); daily sitting time increased by 3 hours to 8 hours per day; eating patterns (type of food, binge eating, snacking between meals) were also negatively impacted.

**COVID-19 pandemic: Impact caused by school closure and national lockdown on pediatric visits and admissions for viral and non-viral infections, a time series analysis. Angoulvant F et al. Clinical Infectious Diseases. (3/6/20).** This manuscript reports findings from a time-series analysis of 871,543 paediatric emergency visits. Findings include that COVID-19 lockdown and school closures were associated with significant reductions in transmission of infectious disease (common cold, gastroenteritis, bronchiolitis, acute otitis) via airborne and faecal-oral vectors.

**Changes in Gambling Behavior during the COVID-19 Pandemic—A Web Survey Study in Sweden. Håkansson A. Int. J. Environ. Res. Public Health. (3/6/20).** This general population survey study examined changes in gambling behaviour in context to COVID-19. While a minority (4%) report increased gambling, sub-groups whose gambling increased in response to cancelled sports betting events had considerably higher rates of gambling problems and changes in alcohol consumption.

***Vulnerable/at-risk groups***

**Is social connectedness a risk factor for the spreading of COVID-19 among older adults? The Italian paradox. Liotta G et al. PLOS One. (21/5/20).** This research article analysed population data on several key variables (% of infected patients aged>80 years; nursing home bed availability; COVID-19 incidence rate; and epidemic maturity) to assess the hypothesis that extensive intergenerational contact is a determinant of pandemic severity. The authors report that the pandemic was more severe in regions with higher family fragmentation and higher availability of residential health care.

**Impact of Home Quarantine on Physical Activity among Older Adults Living at Home During the COVID-19 Pandemic: Qualitative Interview Study Goethals L et al. JMIR Aging (7/5/20).** This qualitative survey study looked at how restriction measures may have impacted physical activity levels. This involved thematic analysis of interviews with professionals, and older adults participating in a physical activity programme. Findings highlight a need to help older adults to stay physically active, safely, in limited space; the authors report that national policy may be essential to this.

**CQC publishes data on deaths of people with a learning disability. Care Quality Commission. (2/6/20- updated 8/6/20).** This article highlights findings from an analysis of ONS deaths data, (inclusive of all deaths reported by registered providers of learning disability and/or autism care to CQC between April 10th and May 15th). Key findings include a 134% increase in the number of death notifications this year (2019 deaths=165; 2020 deaths=386). In 2020, 206 of these resulted from suspected/confirmed COVID-19, whereas 180 were non-COVID related.

***Long term conditions***

**31 days of COVID-19—cardiac events during restriction of public life—a comparative study. Rattka M et al. Clinical Research in Cardiology. (03/6/20).** This comparative study examines the impact of COVID-19 and measures of social restriction upon levels of hospital admissions due to

acute cardiac events (March 21st to April 20th 2020). Cardiac event admissions reduced by 22% compared to previous years (n=94 compared to n=120).

**The Unexpected Risks of COVID-19 on Asthma Control in Children**. **Oreskovic NM et al The Journal of Allergy and Clinical Immunology: In Practice. (01/6/20)**. This paper reviews how asthma management is impacted by changes in transportation and travel, school attendance, physical activity, time spent indoors and changes to healthcare delivery arising from COVID-19.

**Adverse effects of COVID-19 related lockdown on pain, physical activity and psychological wellbeing in people with chronic pain (preprint). Fallon N et al. MedRxiv. (05/6/20).** This pre-print investigated the impact of UK lockdown restrictions upon individuals with chronic pain (n=431), compared to a health control group (n=88) via an online survey. It was found that those with chronic pain perceived an increase in pain severity compared to pre-lockdown; the authors conclude that remote pain management reduction and increasing physical activity may mitigate adverse effects.

**Learning from previous pandemics and major incidents**

**A rapid review of economic policy and social protection responses to health and economic crises and their effects on children: Lessons for the COVID-19 pandemic response. Tirivayi N et al. UNICEF. (02/6/20).** This rapid review was undertaken to inform public policy regarding the COVID-19 pandemic through assessing past economic and social policy responses to health and economic crises, focusing on impacts on children and families in particular. Findings are summarised in the form of key lessons for the COVID-19 pandemic response, drawn from economic policy and social protection responses of previous crises.

**Commentary**

***Mental health***

**Suicide risk and prevention during the COVID-19 pandemic** Gunnell D et al, Lancet Psychiatry, June 2020

**Global mental health and COVID-19**. Kola L. The Lancet. (02/6/20) doi: 10.1016/S2215-0366(20)30235-2

**Three steps to flatten the mental health need curve amid the COVID-19 pandemic.** Marques L, Bartuska AD, Cohen JN et al. (05/20) Anxiety and Depression Association of America.

**Burnout in the age of COVID-19.** Launer J. Postgraduate Medical Journal. 96(1136). Doi: 10.1136/postgradmedj-2020-137980

**Psychological health during the coronavirus disease 2019 pandemic outbreak** Mukhtar S, International Journal of Social Psychiatry (21/5/20)

***Public health***

**Gambling during the COVID-19 crisis - A cause for concern?** Håkansson A, Fernández-Aranda F, Menchón J et al. (03/5/20)

**The rise and rise of interpersonal violence – an unintended impact of the COVID-19 response on families.** WHO regional office for Europe. (03/6/20).

**Home Is Not Always a Haven: The Domestic Violence Crisis Amid the COVID-19 Pandemic.** Kofman Y, Garfin DR. (01/6/20)Psychological Trauma: Theory, Research, Practice, and Policy.

**What impacts are emerging from Covid-19 for urban futures?** Dixon T. Oxford CEBM (08/6/20)

**COVID-19 and the 'old-fashioned' idea of neighbourhoods.** Canelas P, Baptista I. Oxford CEBM. (08/6/20)

**Useful resources**

**Mitigating the psychological effects of social isolation during the covid-19 pandemic. Razai MS, Oakenshott P, Kankam H et al. BMJ (21/5/20).** This clinical 'practice pointer' article provides tips, tools and recommendations for mitigating the adverse psychological impacts of social isolation and loneliness in primary care and community settings. This includes validated screening tools for loneliness and depression, WHO guidance for those in isolation, guidance and other useful resources on using social prescribing and remote consultations to mitigate psychological harm.

**Reviews available** via http://cash.libraryservices.nhs.uk/subject-a-z/m/mental-health-services/ (under resources and links)

- Covid-19 mental health and inequality
- Covid-19: Evidence based approaches to recovery from mental health disorders
- Covid-19: Interventions that will mitigate the impact of COVID-19 on mental health
- Covid-19: Mechanisms for monitoring local populations mental health needs v2
- Covid-19: Understanding changes in mental health and emotional wellbeing due to covid19 v3.1

## Impact on non-Covid care

The evidence base continues to emerge since our initial rapid scan on 29 May. Evidence spans the extent of the impact of covid on non-covid services e.g. number of operations cancelled, the challenges to the management of non-covid patients / services during this time, and solutions for delivering non-covid care during the pandemic. Key updates include:

- New themes emerging in primary care include the use of social prescribing to help reduce additional GP workload and support vulnerable patients during this time. Extended members of the primary care team such as social prescribers and pharmacists may need to consider virtual models of care.
- International research shows that telemedicine and triaging are the mitigation strategies most often used to overcome disruptions to care for people with long-term conditions. Rehabilitation has been shown to be the most commonly disrupted service which will potentially lead to consequences in the future.
- The emerging evidence continues to report on telehealth solutions for outpatient care to minimise reduction to services. Examples span urology, orthopaedics, dermatology, neurology, ophthalmology, and palliative care and hospice services.
- Various surveys have been conducted to explore the impact on orthopaedic surgery; substantial disruptions to orthopaedic have been reported in numerous countries.

Decreases in renal transplantation in the UK has also been reported as a concern with more active patients now on the kidney-alone waiting list. This will result in additional patients on dialysis who would otherwise have been transplanted.

- A UK study reports delays in cancer surgery are likely to cause a significant number of attributable deaths per year in England.

**Commentary from the collaborative**

**Here to stay? How the NHS will have to learn to live with coronavirus**. Edwards, N, Nuffield Trust (2/6/20)

**What has been the impact of Covid-19 on urgent and emergency care across England? A Q&A** Morris J (29/5/20)

**Three key quality considerations for remote consultations** Horton T and Jones B (4/6/20)

**Guidance**

**Maintaining essential health services: operational guidance for the COVID-19 context** WHO (updated 1/6/20)

**COVID-19 restoration of community health services for children and young people: second phase of NHS response** NHS England (3/6/20)

**Rapid Reviews**

***Primary care***

**Social prescribing could empower patients to address non-medical problems in their lives** NIHR School for Primary Care Research (19/5/20). Many GP practices are exploring social prescribing, which is a way of linking patients to sources of support in the local community. Social prescribing addresses non-medical needs such as loneliness and financial difficulties. The COVID-19 crisis is likely to lead to more patients reporting financial challenges, mental health problems and isolation. Good connections between primary care staff and link workers may be particularly necessary to help reduce additional GP workload and support vulnerable patients during this time. Research is needed into virtual social prescribing services and the circumstances in which they work best.

**Barriers to conducting deprescribing in the elderly population amid the COVID-19 pandemic** Elbeddini A et al, Research in Social and Administrative Pharmacy (29/5/20). There were several barriers to conducting deprescribing prior to COVID-19,but the pandemic has led to additional challenges that further impede the momentum of deprescribing initiatives. Challenges of conducting deprescribing virtually in the elderly population include, but are not limited, to their inability to use technology, lack of literacy, lack of assistance from others, greater propensity for withdrawal effects, and in-creased risk of severe consequences, if hospitalized. Virtual care is the future of healthcare and in order to retain the benefits of deprescribing, additional initiatives should be in place to address the challenges that elderly patients may experience in accessing deprescribing virtually.

***Long Term Conditions Management***

**Challenges in the management of older patients with acute coronary syndromes in the COVID-19 pandemic** Rowland B and Kunadian V BMJ Heart (22/5/20). Older patients with comorbidities such as cardiovascular disease (CVD), in particular IHD, diabetes and hypertension, seem to be at the highest risk of mortality following COVID-19 infection. The evidence is sparse on the optimal care of older patients with ACS with lack of robust randomised controlled trials. In this setting, with the serious threat imposed by the COVID-19 pandemic in the context of rapidly evolving knowledge with much unknown, it is important to weigh the risks and benefits of treatment strategies offered to older patients. In cases where risks outweigh the benefits, it might not be an unreasonable option to treat such patients with a conservative or a palliative approach.

***Elective care***

**International guidelines and recommendations for surgery during Covid-19 pandemic: A Systematic Review** Moletta L et al, International Journal of Surgery (23/5/20). There is a lack of evidence-based literature providing clinical and organizational guidelines for the management of a general surgery department during the COVID-19 epidemic. This review aimed to review the available recommendations published by general Surgery Societies and Health Institutions and evaluate the underlying Literature. Prioritization among oncologic cases represents a difficult task: clinicians have to balance a possible delay in cancer diagnosis or treatment against the risk for a potential COVID-19 exposure.

**Cancer Services**

**Interventional oncology at the time of COVID-19 pandemic: Problems and solutions** Denys A et al, Diagn Interv Imaging (23/4/20). This review discuss the changes that need to be done for the organization, safety, and patient management in interventional oncology. Official recommendations of different international societies, as well as reflections on local solutions found in different expert large-volume centers have been used to inform discussion.

***End of Life Services***

**The Role and Response of Palliative Care and Hospice Services in Epidemics and Pandemics: A Rapid Review to Inform Practice During the COVID-19 Pandemic.** Etikind S et al. Global Health (27/3/20). Cases of coronavirus disease 2019 (COVID-19) are escalating rapidly across the globe, with the mortality risk being especially high among those with existing illness and multimorbidity. This study aimed to synthesize evidence for the role and response of palliative care and hospice teams to viral epidemics/pandemics and inform the COVID-19 pandemic response. The review concludes that hospice and palliative services have an essential role in the response to COVID-19 by responding rapidly and flexibly; ensuring protocols for symptom management are available, and training nonspecialists in their use; being involved in triage; considering shifting resources into the community; considering redeploying volunteers to provide psychosocial and bereavement care; facilitating camaraderie among staff and adopting measures to deal with stress; using technology to communicate with patients and carers; and adopting standardized data collection systems to inform operational changes and improve care.

**Can video consultations replace face-to-face interviews? Palliative medicine and the Covid-19 pandemic: rapid review** Sutherland AE et al, BMJ Supportive & Palliative Care (26/5/20). The rapid

literature review aims to identify the highest currently available level of evidence to inform using video consultations in palliative care. The review found that the global evidence appears to support video consultations as an effective, accessible, acceptable and cost-effective method of service delivery. Organisations must ensure software is simple, effective, reliable and safe, with the highest level of security for confidentiality.

**Emerging evidence**

***Long Term Conditions Management***

**Understanding Society Working Paper Series 2020-11: Briefing note COVID-19 survey: Health and Caring** Benzeval M et al, Institute for Social and Economic Research (9/6/20). The Understanding Society COVID-19 study is a monthly survey on the experiences and reactions of the UK population to the COVID-19 pandemic. This report contains findings from the Wave 1 survey, that covered a broad topic on the 'use of health services for long-term health conditions'.

**Preliminary results: Rapid assessment of service delivery for noncommunicable disease (NCDs) during the COVID-19 pandemic** WHO NCD Department (29/5/20). WHO conducted a rapid assessment survey of service delivery for NCDs during the COVID-19 pandemic among 194 Ministries of Health. Responses were received from 155 Ministries (80%). The more severe the transmission phase of the COVID-19 pandemic, the more NCD services are disrupted. The top reasons for service disruption include: cancellation of elective care; closure of population-level screening programmes; public transport lockdowns hindering access to the health facilities; NCD related clinical staff deployed to provide COVID-19 relief; and closure of outpatient disease specific consultation clinics. Telemedicine and triaging are the mitigation strategies most often used to overcome disruptions. Rehabilitation is the most commonly disrupted service which will potentially lead to compromised health outcomes, future increased need including longer inpatient stays, and preventable hospital admissions due to complications.

**The Australian response to the COVID-19 pandemic and diabetes - lessons learned** Andrikopoulos S and Johnson G, Diabetes Research and Clinical Practice (27/5/20). Responses to Covid have led to a significant drop in access to usual diabetes care. This article reflects on the changes that occurred in Australia. Provision of outpatient and private sector diabetes services via telehealth was encouraged and supported by expanded and new government subsidies.

***Outpatient Care***

**Rapid implementation of virtual clinics due to COVID-19: report and early evaluation of a quality improvement initiative** Gilbert AW et al, BMJ Open Quality (13/5/20). In response to the COVID-19 crisis, the Royal National Orthopaedic Hospital (RNOH) set out to increase virtual consultations from an average 7% to a target of 80% virtual consultations. 87% of consultations were delivered virtually during the first 6 weeks. Satisfaction scores were high for virtual consultations (90/100 for patients and 78/100 for clinicians); however, outside of the COVID-19 pandemic, video consultations would be preferred less than 50% of the time. Further initiatives are required to support clinically appropriate and acceptable virtual consultations beyond COVID-19.

**Departmental Experience and Lessons Learned With Accelerated Introduction of Telemedicine During the COVID-19 Crisis** Loeb AE, Rao SS et al, J Am Acad Orthop Surg (14/4/20). Experience from the US on the accelerated use of telemedicine during the COVID-19 crisis provides useful

implementation lessons. Implementation requires attention to patient triage, technological resources, credentialing, education of providers and patients, scheduling, and regulatory considerations.

**Tele-consultations and electronic medical records driven remote patient care: Responding to the COVID-19 lockdown in India** Das AV et al, Indian J Ophthalmol (25/5/20). the paper describes the experience of tele-consultations addressed at the centre of excellence of a multi-tier ophthalmology hospital network in India during the ongoing novel coronavirus (COVID-19) lockdown.7,008 tele-consultations presenting between March 23rd and April 19th 2020. 2,805 (40.02%) of these had a clinical-related query answered. Analysis of this data found that the most common advice given to the patient was related to management of medications (54.15%) followed by appointment related (17.79%). Emergency requests requiring further evaluation by an ophthalmologist accounted for a small percentage (16.36%) of patients.

**Telehealth Utilization in Response to the Novel Coronavirus (COVID-19) Pandemic in Orthopaedic Surgery** Parisien RL et al, J Am Acad Orthop Surg (7/4/20). The purpose of this investigation is to assess the current utilization of telehealth capabilities at academic orthopaedic departments in the United States and to determine how practice patterns have been directly influenced by the coronavirus disease 19 (COVID-19) pandemic. Of the 106 institutions using telehealth services, 88 (83%) cited the COVID-19 pandemic as the impetus for implementation of telehealth services.

**Teleurology in the Time of Covid-19 Pandemic: Here to Stay?** Luciani LG et al, Urology (13/4/20). The aim of this study was to assess the implementation and outcomes of telemedicine in a Department of Urology in Northern Italy during the outbreak of the Covid-19 pandemic. All the outpatient clinical activities during the 4 weeks following the national lockdown (March 9-April 3, 2020) in the Department of Urology of the Trento Province, Italy, were reviewed and categorized. Forty-five percent visits were canceled without rescheduling. Although a minimum portion of face-to-face visit (<10% 1 month after the lockdown) was preserved mostly for suspected malignancy or potentially life-threatening conditions, telemedicine proved a pragmatic approach allowing efficient screening of cases and adequate protection for patients and clinicians.

**A reflection on an adapted approach from face-to-face to telephone consultations in our Urology outpatient department during the COVID-19 pandemic – a pathway for change to future practice?** Patel S and Douglas-Moore J, BJUI (29/5/20). This article reflects on the changes in the Urology department at University Hospitals of Leicester in response to the Covid-19 pandemic. From March 2020 outpatient appointments where changed from face-to-face to telephone led consultations. An early review of this service was performed to ensure its sustainability during the unknown duration of the current crisis and to establish its potential utility when normal services resume in the future. Results show patient satisfaction of 93% with 83% happy to have telephone follow-up in the future and a clinician satisfaction of 82% in adequacy of the telephone consultation in making a clinical decision.

**A targeted response to the COVID-19 pandemic: analysing effectiveness of remote consultations for triage and management of routine dermatology referrals** Corden E et al, CED (16/5/20). This study used data from the UK national electronic booking system (ESR) to identify routinely referred patients to dermatology services whose appointments were cancelled, between the dates of 23rd March to 30th April 2020. 816 patients were identified. This patient worklist was divided between 15 clinicians (consultants, associate specialists and registrars) working in the

department, including those shielding/working from home. Referral letters were reviewed and patients were contacted via telephone or video calling (Attend Anywhere). The overall feedback from clinicians was positive as it was felt a large proportion of referrals were pragmatically, safely and effectively managed through remote consulting.

**UK neurology response to the COVID-19 crisis** Association of British Neurologists, Clinical Medicine (3/5/20). COVID-19 has led to seismic changes in neurological practice in a matter of weeks. The Association of British Neurologists has supported neurology specialists and patients during this rapid reorganisation and its attendant challenges. This article sets out the work done so far, recognising that as the situation continues to evolve and accelerate, we must remain in response mode, adjusting advice when necessary. At the same time, an eye to the future is needed to maintain critical non-COVID services and build on the accelerated innovation seen in recent weeks.

***Elective Care***

**Impact of COVID-19 on Orthopaedic and Trauma Service: An Epidemiological Study** Wong H et al, The Journal of Bone and Joint Surgery (21/5/20). COVID-19 has caused substantial disruptions to orthopaedic and trauma services. The purpose of this study was to quantify its impact on surgical volume, hospitalizations, clinic appointments, and accident and emergency attendances in Hong Kong hospitals. Demand for orthopaedic care remains, despite weekly reductions of 351 orthopaedic operations, 974 hospital admissions, and 3,432 clinic attendances.

**Disruptive Effect of COVID-19 on Orthopaedic Daily Practice: A Cross-Sectional Survey** Ranuccio F et al, The Journal of Bone and Joint Surgery (19/5/20). The paper reports on a multicenter European survey that was aimed at evaluating the impact of COVID-19 on orthopaedic daily practice. One hundred and two (75%) of 136 orthopaedic surgeons throughout Europe completed the survey and were included in the analysis. The COVID-19 pandemic was present in all of the countries that took part in this survey. As in other studies, almost all of the surgeons who took part in the survey stated that their routine work had been strongly affected by the COVID-19 pandemic. More than 90% of the hospitals had scaled down or stopped outpatient clinic activity. Only 2 hospitals (1 public and 1 private) continued to perform elective surgery. One hundred (98%) of 102 participants stopped or scaled down surgical activity, performing only trauma and emergency procedures. More than 70% of the institutions (75 of 102) reduced their surgical team. Six participants reported that even urgent procedures were not being performed at their institution: with 1 participant, urgent cases were being performed at a dedicated hospital; with the other 5 participants, cases were not performed because patients refused surgery during the pandemic or because of the lack of available anesthesiologists.

**Disruption of joint arthroplasty services in Europe during the COVID-19 pandemic: an online survey within the European Hip Society (EHS) and the European Knee Associates (EKA)** Thaler M et al, Knee Surg Sports Traumatol Arthrosc (2/5/20). The aim of this study was to evaluate the impact of the coronavirus (COVID-19) pandemic on joint arthroplasty service in Europe by conducting an online survey of arthroplasty surgeons. The survey was conducted in the European Hip Society (EHS) and the European Knee Associates (EKA). Two-hundred and seventy-two surgeons (217 EHS, 55 EKA) from 40 different countries participated. The results found that during the current 2020 COVID-19 pandemic, we are experiencing a near-total shutdown of TJA. A massive cutback was observed for primary TJA and revision TJA, even in massively failed TJA with collapse, dislocation, component

failure or imminent dislocation. Only life-threatening pathologies like periprosthetic fractures and acute septic TJA are currently undergoing surgical treatment.

**Massive cutback in orthopaedic healthcare services due to the COVID-19 pandemic** Liebensteiner MC et al, Knee Surg Sports Traumatol Arthrosc (30/4/20). The aim of the study to investigate current possible cutbacks in orthopaedic healthcare in Austria, Germany, and Switzerland due to the COVID-19 pandemic. An online survey was performed of orthopaedic surgeons in the German-speaking Arthroscopy Society. Of 4234 contacted orthopaedic surgeons, 1399 responded. A drastic reduction in arthroscopic procedures like rotator cuff repair and cruciate ligament reconstruction and an almost total shutdown of elective total joint arthroplasty were reported.

**Impact of the COVID-19 pandemic on surgical services: early experiences at a nominated COVID-19 centre** McBride KE et al, ANZ J Surg (15/4/20). During the initial response in New South Wales,all patients with confirmed COVID-19 requiring hospitalization were managed at a nominated COVID-19 centre (Westmead Hospital). As the pandemic evolved and the confirmed cases increased, a second COVID-19 centre was established at Royal Prince Alfred (RPA) Hospital on 4 March 2020.As the third week of the response period at RPA comes to an end,this article aims to share the initial experience as a dedicated COVID-19 centre by describing the issues faced in providing acute and elective surgical care, the broad impacts on staff and the early strategies adopted to address these challenges.

**The impact of the COVID-19 pandemic on renal transplantation in the UK** Sharma V et al, Royal College of Physicians (25/5/20). Publicly available Renal Registry and NHS Blood and Transplant reports were analysed to model the number of missed transplant opportunities, waiting list size and change in dialysis population over a six-month period starting 5 March 2020. An estimated 1,670 kidney transplant opportunities may be lost, which will lead to 6,317 active patients on the kidney-alone waiting list, compared to 4,649 based on usual activity estimates. This will result in 1,324 additional patients on dialysis who would otherwise have been transplanted.

***Emergency Care***

**Emergency ambulance services for heart attack and stroke during UK's COVID-19 lockdown** Holmes JL et al, Lancet (23/5/20). Anecdotal reports have suggested that heart attacks and strokes have “vanished from hospitals”. Daily ambulance callouts for heart attacks and strokes are routinely recorded by ambulance crews for the West Midlands Ambulance Service University NHS Foundation Trust. Analysis of data collected between Jan 10, 2018, and April 19, 2020 found there was little evidence for such a break in either the STEMI or stroke.

**The impact of COVID-19 on heart failure hospitalization and management: report from a Heart Failure Unit in London during the peak of the pandemic** Bromage DI et al, European Journal of Heart Failure (1/6/20). This study aims to examine the impact of COVID-19 on acute heart failure (AHF) hospitalization rates, clinical characteristics and management of patients admitted to a tertiary Heart Failure Unit in London during the peak of the pandemic.Data from King's College Hospital, London, reported to the National Heart Failure Audit for England and Wales, between 2nd March – 19th April 2020 were compared both to a pre-COVID cohort and the corresponding time periods in 2017-2019 with respect to absolute hospitalization rates. Incident AHF hospitalization significantly declined at the centre during the COVID-19 pandemic, but hospitalized patients had more severe symptoms at admission. Further studies are needed to investigate whether the

incidence of AHF declined or patients did not present to hospital while the national lockdown and social distancing restrictions were in place.

**Stroke care during the Covid-19 pandemic: Experience from three large European countries** Bersano A et al, European Journal of Neurology (3/6/20). This paper reports the experience of stroke neurologists from three European countries, Italy, France and Germany, that faced the pandemic at diverse time points and with different approaches, depending on their resources and health care system organization. A marked reduction in the number of patients presenting with TIA and stroke was noted in the emergency departments of all three countries.

**Admission of patients with STEMI since the outbreak of the COVID-19 pandemic. A survey by the European Society of Cardiology** Pessoa-Amorim G et al, European Heart Journal - Quality of Care and Clinical Outcomes (28/5/20). This paper describes the results of an international survey conducted by the ESC probing the perception of cardiologists and cardiovascular nurses with regards to ST-elevation myocardial infarction (STEMI) admissions to their hospitals. There were 3101 responders to the questionnaire (1.7%) from 141 countries and 6 continents. Among the responders, 1800 (58.0%) were from Europe, 734 (23.7%) from Asia, 219 (7.1%) from South America, 163 (5.3%) from North America, 147 (4.7%) from Africa and 38 (1.2%) from Oceania. The responses received showed that most (~80%) health professionals felt there had been a decrease in STEMI presentations, with the large majority of survey participants reporting at least a 40% reduction. These findings were largely consistent across six continents and, although based on self-reported perceptions, they are supported by objective evidence from European and the US registries suggesting a 25% to 40% average reduction in STEMI presentations during the COVID-19 outbreak.

**The management of emergency spinal surgery during the COVID-19 pandemic in Italy** Giorgi PD et al, Bone Joint J (23/4/20). The aim of this paper is to report the early experience and an organizational protocol for emergency spinal surgery currently being used in a large metropolitan area in Italy by an integrated team of orthopaedic surgeons and neurosurgeons. The structural organization and the management protocol described allowed the team to reduce the time to surgery and ultimately hospital stay, thereby maximizing the already stretched medical resources available.

***Mental Health Services***

**The impact of Covid-19 on Mental Health Trusts in the NHS** NHS Providers (3/6/20). This briefing sets out the immediate challenges of COVID-19 for mental health trusts, how the sector has responded and what it needs to navigate this next phase.

***Cancer Services***

**Collateral damage: the impact on outcomes from cancer surgery of the COVID-19 pandemic** Sud A et al, Annals of Oncology (10/5/20). This paper explores how the progression of cancers during delay will impact on patient long-term survival. A 3-month delay to surgery across all Stage 1-3 cancers is estimated to cause >4,700 attributable deaths per year in England. The impact on life years lost of 3-6 month to surgery for Stage 1-3 disease varies widely between tumour types.

**Lessons from the coronavirus disease 2019 pandemic: Will virtual patient management reshape uro-oncology in Germany?** Rodler S et al, Eur J Cancer (20/4/20). The uro-oncology outpatient clinic at an academic institution in Germany was affected early by the outbreak owing to the widespread

infection of healthcare personnel. Subsequently, they developed a strategy to ensure the patient's safety by efforts focused on strict quarantine observation, reduction of clinic visits and implementation of virtual patient management into the workflow. This paper presents a best practice example on management of patients with metastatic genitourinary cancers during the current COVID-19 crisis.

**Impact of the COVID-19 pandemic on patients suffering from musculoskeletal tumours** Thaler M et al, International Orthopaedics (12/5/20). The aim of the current study was to evaluate the impact of the COVID-19 pandemic on musculoskeletal tumor service by conducting an online survey of physicians. The survey was conducted among the members of the ISOLS (International Society of Limb Salvage) and the EMSOS (European Musculo-Skeletal Oncology Society).One hundred forty-nine physicians from five continents completed the survey. Of the respondents, 20.1% and 20.7% stated that surgery for life-threatening sarcomas were stopped or delayed, respectively.

***Maternity Services***

**Voices from the frontline: findings from a thematic analysis of a rapid online global survey of maternal and newborn health professionals facing the COVID-19 pandemic** Semaan AT et al (11/5/20). MedRxiv preprint. This study aimed to prospectively document experiences of frontline maternal and newborn healthcare providers during the COVID-19 pandemic. A cross-sectional study via an online survey was disseminated through professional networks and social media in 12 languages. There was a widespread perception of reduced use of routine maternity care services, and of modification in care processes, some of which were not evidence-based.

**Provision of obstetrics and gynaecology services during the COVID-19 pandemic: a survey of junior doctors in the UK National Health Service** Rimmer MP and Al Wattar BH (27/5/20). This study aimed to evaluate the provision of obstetrics and gynaecology services in the UK during the acute phase of the COVID-19 pandemic. Junior doctors in obstetrics and gynaecology at Women's healthcare units in the National Health Service were interviewed by members of the UK Audit and Research in Obstetrics and Gynaecology trainees' collaborative between 28 March and 7 April 2020. Most units reduced face-to-face antenatal clinics (117/148, 79.1%) and suspended elective gynaecology services (131/148, 88.5%).

***End of Life Services***

**A Virtual Children's Hospice in Response to COVID-19: The Scottish Experience** Ellis K and Lindley LC, Journal of Pain and Symptom Management (7/5/20). This case report describes a paediatric hospice provider in Scotland and their experience implementing a telehospice program in response to COVID-19. Children's Hospices Across Scotland (CHAS) had strategically planned to implement a telehospice program, but COVID-19 accelerated the process. The organization evaluated its paediatric clinical and wrap-around hospice services and rapidly migrated them to a virtual environment. CHAS's experience highlights the planning and implementing processes of telehospice with key lessons learned, while acknowledging the challenges inherent in using technology to deliver hospice care.

**Commentaries**

***Long Term Conditions Management***

**Lockdown fears for key populations** The Lancet HIV (21/5/20)

COVID-19: Implications for the Support of People with Social Care Needs in England Comas-Herrera A et al, Journal of Aging & Social Policy (4/6/20)

***Outpatient Care***

Covid sparks boom in digital hospital outpatient appointments Rapson J, HSJ (11/5/20)

Minimizing the risk of COVID-19 among patients on dialysis Ikizler TA and Kliger AS, Nat Rev Nephrol (June 20)

***Elective care***

COVID-19: Long-term Planning for Procedure-based Specialties During Extended Mitigation and Suppression Strategies Rouillard S et al, Gastroenterology (18/5/20)

Responsible Return to Essential and Non-Essential Surgery During the COVID-19 Pandemic Poulose BK et al, Journal of Gastrointestinal Surgery (25/5/20)

Restarting Essential Surgery in the Era of COVID-19. A Cautious Data Driven Approach Based on the Literature and Local Data Fields AC et al, Annals of Surgery (22/5/20)

***Emergency care***

Laparoscopy at all costs? Not now during COVID-19 outbreak and not for acute care surgery and emergency colorectal surgery: A practical algorithm from a hub tertiary teaching hospital in Northern Lombardy, Italy Di Saverio S et al, J Trauma Acute Care Surg (June 2020)

The COVID-19 outbreak and its impact on hospitals in Italy: the model of cardiac surgery Italian Society for Cardiac Surgery Task Force on COVID-19 Pandemic, Eur J Cardiothorac Surg (17/4/20)

Management of elective aortic valve replacement over the long term in the era of COVID-19 Basman C et al, Eur J Cardiothorac Surg (17/4/20)

COVID-19 and stroke-A global World Stroke Organization perspective Markus HS and Brainin M, Int J Stroke (29/4/20)

The Effect on Trauma Care Secondary to the COVID-19 Pandemic: Collateral Damage from Diversion of Resources Haut ER et al, Annals of Surgery (22/05/20)

***Cancer services***

Provision of cancer care during the COVID-19 pandemic Spicer J et al, Nat Rev Clin Oncol (15/4/20)

The impact of COVID-19 pandemic in the colorectal cancer prevention Del Vecchio Blanco G et al, Int J Colorectal Dis (4/6/20)

Modified management mode for colorectal cancer during COVID-19 outbreak - a single-center experience Zhu D et al, Aging (5/5/20)

Elective lung cancer surgery in the COVID-19 era: how do we do it? Bilkhu R and Billè A, Tumori Journal (28/5/20)

***Mental Health Services***

How mental health services are adapting to provide care in the pandemic Wilkinson E (2/6/20)

**Mitigating the psychological effects of social isolation during the covid-19 pandemic** Razai MS et al BMJ (21/5/20)

**Addiction Psychiatry and COVID-19 - Impact on patients and service provision** Columb D et al, Irish Journal of Psychological Medicine (21/5/20)

**Challenges of virtual talking therapies for substance misuse in New Zealand during the COVID-19 pandemic: an opinion piece** Galea-Singer S et al, N Z Med J (22/5/20)

***Maternity Services***

**Moral and Mental Health Challenges Faced by Maternity Staff During the COVID-19 Pandemic** Horsch, A et al, sychological Trauma: Theory, Research, Practice, and Policy (1/6/20)

**Useful resources**

**Coronavirus (COVID-19): remote care through telehealth** Cochrane Special Collections

**Conducting in-action and after-action reviews of the public health response to COVID-19** European Centre for Disease Prevention and Control

**Video consulting in the NHS** University of Oxford