

COVID-19 Evidence Alert - 17 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 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.

Residential settings

Earlier searches identified a wave of papers on the impact of the pandemic in care homes. There have been fewer papers on the impact in other residential facilities. Two papers identified this week focus on the management of the outbreak in homeless shelters – the papers are from Canada and the US but some of the learning may be transferable to an NHS context. The European Centre for Disease Control and Prevention has also issued guidance for detention centres.

Guidance

[Guidance on infection prevention and control of COVID-19 in migrant and refugee reception and detention centres in the EU/EEA and the UK \(15/6/20\)](#) European Centre for Disease Prevention and Control. Migrant and refugee reception and detention centres should be given priority for testing, due to the risk of rapid spread of SARS-CoV-2 in these settings. All individuals with COVID-19 compatible symptoms should be tested on arrival, and possible, probable or confirmed COVID-19 cases not needing hospitalisation should be isolated or separated from others in the premises. Contact tracing should occur for all cases identified as positive. Asymptomatic new arrivals can also be considered for testing to reduce the risk of introduction of cases in reception and detention centres; however, a negative test does not exclude the possibility of the person becoming infectious in the next 14 days.

Emerging evidence

[Pandemic Planning in Homeless Shelters: A pilot study of a COVID-19 testing and support program to mitigate the risk of COVID-19 outbreaks in congregate settings.](#) O'Shea T et al, *Clinical Infectious Diseases*, <https://doi.org/10.1093/cid/ciaa743>. Results emphasize the importance of taking a proactive, aggressive approach to outbreak mitigation in high risk settings. While there has certainly been some random chance, the authors postulate that four factors have been particularly important in increasing chances of success: 1. Increased capacity of shelter space by opening surge shelters and hotel rooms, allowing for more effective physical distancing in congregate shelters; 2. Access to rapid assessment and testing on site when symptomatic residents or staff are identified through active screening; 3. Restructuring of physical spaces to accommodate isolation of residents with confirmed COVID-19 and those awaiting test results; and 4. Rapid turnaround of test results through collaboration with our regional laboratory program allowing triage of individuals into isolation spaces without exceeding available capacity.

[Addressing COVID-19 Among People Experiencing Homelessness: Description, Adaptation, and Early Findings of a Multiagency Response in Boston.](#) Baggett TP et al, *Public Health Reports*, <https://doi.org/10.1177/0033354920936227>. In March 2020, Boston Health Care for the Homeless Program, in partnership with city and state public health agencies, municipal leaders, and homeless service providers, developed and implemented a citywide COVID-19 care model for this vulnerable population. Components included symptom screening at shelter front doors, expedited testing at pop-up sites, isolation and management venues for symptomatic people under investigation and for people with confirmed disease, quarantine venues for asymptomatic exposed people, and contact investigation and tracing. During the first 6 weeks of operation, 429 of 1297 (33.1%) tested people were positive for COVID-19; of these, 395 people were experiencing homelessness at the time of testing, representing about 10% of the homeless adult population in Boston. Universal testing, as resources permit, is a focal point of ongoing efforts to mitigate the effect of COVID-19 on this vulnerable group of people.

Impacts of lifting restrictions

Analysis from the European Centre for Disease Prevention and Control compares the risks of Covid-19 across Europe. Papers evaluating the impact of non-pharmaceutical interventions are emerging, sharing findings on the impact of lockdown and other interventions. A commentary on the “false dichotomy” of public health and economic considerations is also included.

Emerging evidence

[Coronavirus disease 2019 \(COVID-19\) in the EU/EEA and the UK – tenth update.](#) 11/6/20. **European Centre for Disease Prevention and Control.** An analysis of the risk of COVID-19 for the general population and those with risk factors for severe disease, according to the current state of knowledge on the virus and associated disease and in light of the current stage of epidemic stage in the EU/EEA and the UK. These risks are analysed in conjunction with the likelihood of a rise in COVID-19 incidence in the coming weeks as a consequence of lifting stricter community-level physical distancing measures in the EU/EEA and the UK.

[COVID-19: implementing sustainable low cost physical distancing and enhanced hygiene.](#)

Dalton CB et al, *Medical Journal of Australia*, 212(10): 443–446.e1 SARS-CoV-2 continues to disseminate globally and there are likely to be recurrent waves of infection into the foreseeable future. The authors argue that low cost interventions, although formulated at an earlier stage of the epidemic, have increasing relevance. They will protect against the emerging concern for pre-symptomatic transmission and their optimisation will better enable the more restrictive and economically damaging constraints to be relaxed.

[Estimating the effects of non-pharmaceutical interventions on COVID-19 in Europe.](#)

Flaxman S et al, *Nature (preprint)*, <https://doi.org/10.1038/s41586-020-2405-7>. A study of the impact of major interventions across 11 European countries for the period from the start of COVID-19 until the 4th of May 2020 when lockdowns started to be lifted. The model calculates backwards from observed deaths to estimate transmission that occurred several weeks prior, allowing for the time lag between infection and death. Results show that major non-pharmaceutical interventions and lockdown in particular have had a large effect on reducing transmission. Continued intervention should be considered to keep transmission of SARS-CoV-2 under control.

[The effect of large-scale anti-contagion policies on the COVID-19 pandemic.](#)

Hsiang S et al, *Nature (preprint)*, <https://doi.org/10.1038/s41586-020-2404-8>. The authors estimate that across these six countries, interventions prevented or delayed on the order of 62 million confirmed cases, corresponding to averting roughly 530 million total infections. These findings may help inform whether or when these policies should be deployed, intensified, or lifted, and they can support decision-making in the other 180+ countries where COVID-19 has been reported.

Commentaries

[Bridging a false dichotomy in the COVID-19 response: a public health approach to the 'lockdown' debate.](#) Prasad V et al., *BMJ Global Health*, <http://dx.doi.org/10.1136/bmjgh-2020-002909>.

Long term rehabilitation needs

As the pandemic progresses, more knowledge emerges about the medium to long term impacts for COVID-19 survivors. 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. A paper from Italy shares the experience of setting up a rehabilitation facility and a related paper suggests that the resourcing of Covid rehabilitation may need multidisciplinary involvement and may be resource-intensive. Principles for reconfiguring services are discussed in a paper exploring the components of an approach to manage Covid rehabilitation alongside restarting other services.

Emerging evidence

[COVID-19 rehabilitation units are twice as expensive as regular rehabilitation units.](#)

Iannaccone S et al., *Journal of Rehabilitation Medicine (prepress)*, (10/6/20)

DOI: **10.2340/16501977-2704**. The aim of this study is to describe the organizational needs and operational costs of such a unit, by comparing its activity, organization, and costs with 2 other functional rehabilitation units, in San Raffaele Hospital, Milan, Italy. The COVID-19 Rehabilitation Unit was twice as expensive as the 2 other units studied. World health systems are organizing to

respond to the pandemic by implementing acute intensive care and sub-intensive care units. This study shows that COVID-19 rehabilitation units must be organized following specific clinical and organizational needs.

[Role of rehabilitation department for adult covid-19 patients: the experience of the San Raffaele Hospital of Milan \(preproof\)](https://doi.org/10.1016/j.apmr.2020.05.015). Archives of Physical Medicine and Rehabilitation,

<https://doi.org/10.1016/j.apmr.2020.05.015>. This communication reports the experience of the San Raffaele Hospital of Milan (Italy) and recommends the set-up of specialized clinical pathways for the rehabilitation of COVID-19 patients. According to this new organization, patients were admitted first to acute care COVID-19 units, and then to COVID-19 rehabilitation units, post-COVID-19 rehabilitation units and/or quarantine/observation units. After hospital discharge, telemedicine was used to follow-up with patients at home. Such clinical pathways should each involve dedicated multidisciplinary teams composed of pulmonologists, psychiatrists, neurologists, cardiologists, physiotherapists, neuropsychologists, occupational therapists, speech therapists and nutritionists.

[Rehabilitation after COVID-19: an evidence-based approach](https://doi.org/10.7861/clinmed.2020-0353). Wade DT. Clinical Medicine

[Journal](https://doi.org/10.7861/clinmed.2020-0353), DOI: **<https://doi.org/10.7861/clinmed.2020-0353>**. After severe COVID-19 disease, many patients will experience a variety of problems with normal functioning and will require rehabilitation services to overcome these problems. The principles of and evidence on rehabilitation will allow an effective response. These include a simple screening process; use of a multi-disciplinary expert team; four evidence-based classes of intervention (exercise, practice, psychosocial support, and education particularly about self-management); and a range of tailored interventions for other problems. The large number of COVID-19 patients needing rehabilitation coupled with the backlog remaining from the crisis will challenge existing services. The principles underpinning vital service reconfigurations needed are discussed.

Commentaries

[Long term complications and rehabilitation of COVID-19 patients](#). Dasgupta A et al, J Pak Med Assoc 70 (5 suppl 3), S131-5.

Screening and testing

New guidance has been published from the Royal College of Pathologists, UNICEF and the European Centre for Disease Prevention and Control. A rapid review, from Canada, explores the use of voluntary smartphone apps for contact tracing. As health services restart, there is emerging evidence on the approaches to testing and screening of patients and workforce alongside commentaries debating current approaches. A reference to a useful resource, simulating different testing scenarios is also included.

Guidance

[COVID-19 testing: a national strategy](#). The Royal College of Pathologists, June 2020. This document sets out a vision for a future strategy with which clinical, scientific and policy stakeholders, including patient advocacy groups, can align. It forms the basis for a roadmap to delivery. It applies equally to all settings in which care is delivered, across all the population and all age groups. Due to the emerging situation, the strategy for testing will be iterative. There is a lack of

data and questions remain about the virus and our immune response to it. This strategy will therefore evolve as evidence emerges

[Digital contact tracing and surveillance during COVID-19. General and child-specific ethical issues](#) UNICEF (June 2020) This working paper explores the implications for privacy as the linking of datasets increases the likelihood that children will be identifiable and consequently, the opportunities for (sensitive) data profiling.

[Guidance on infection prevention and control of COVID-19 in migrant and refugee reception and detention centres in the EU/EEA and the UK \(15/6/20\)](#) European Centre for Disease Prevention and Control. Migrant and refugee reception and detention centres should be given priority for testing, due to the risk of rapid spread of SARS-CoV-2 in these settings. All individuals with COVID-19 compatible symptoms should be tested on arrival, and possible, probable or confirmed COVID-19 cases not needing hospitalisation should be isolated or separated from others in the premises. Contact tracing should occur for all cases identified as positive. Asymptomatic new arrivals can also be considered for testing to reduce the risk of introduction of cases in reception and detention centres; however, a negative test does not exclude the possibility of the person becoming infectious in the next 14 days.

Rapid Reviews

[Voluntary Smartphone Apps for COVID-19 Contact Tracing](#). Newfoundland and Labrador Centre for Applied Health Research (12/6/20) The first section of this report provides information about smartphone apps for contact tracing. The second section of this report contains links to nine guidance documents, one preprint systematic review, two systematic reviews that are currently in progress, four other evidence reviews, six expert opinion pieces, fifteen primary research studies, and eleven news articles.

Emerging evidence

[Universal Testing for COVID-19 in Essential Orthopaedic Surgery Reveals a High Percentage of Asymptomatic Infections](#). Gruskay JA et al, *Journal of Bone and Joint Surgery (American)*, DOI: 10.2106/JBJS.20.01053. A protocol for universal testing of all orthopaedic surgery admissions at 1 hospital in New York City during a 3-week period revealed a high rate of COVID-19 infections. Importantly, the majority of these patients were asymptomatic. Using chest radiography did not significantly improve the negative predictive value of screening. These results have important implications as hospitals anticipate the resumption of elective surgical procedures.

[Assessing the spreading potential of an undetected case of COVID-19 in orthopaedic surgery](#). Schneider KN et al., *Archives of Orthopaedic and Trauma Surgery*, <https://doi.org/10.1007/s00402-020-03516-1>. The case of a 64-year-old male patient who was referred with a periprosthetic shoulder infection, kept under routine preemptive MDRO isolation and tested SARS-CoV-2 positive 7 days after admission. The study aims to investigate the spread potential to HCW of SARS-CoV-2 originating from a previously undetected case, where contact precautions and infection control measures for MDRO prevention were established.

Commentaries

[COVID-19 diagnostics in context](#) Weissleder R et al, Science Translational Medicine, 03 Jun 2020: Vol. 12, Issue 546, eabc1931

[Too slow and fundamentally flawed: why test and trace is a weak and inequitable defence against covid-19.](#) Vize R, BMJ (11/6/20) 2020;369:m2246.

Useful resources

[Simulator of economic savings or losses with different COVID-19 testing scenarios](#)

University of Porto

Broader impacts on health outcomes

There is continued concern of the impact of the pandemic and restrictions on mental health, both in the general public and for those with pre-existing conditions. A new rapid review explores the impact on older people who are shielding for extended periods. Findings on the impact on existing service users suggests a growing concern for increased inequalities. Commentaries on the risks to mental health and of domestic violence are included. We have also identified a paper, from New Zealand, which explores the impact on incidence of accidents in children during lockdown.

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?](#) **Rapid summary for Public Health Wales Evidence Service (June 2020).** 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

Mental health - General public

[The mental health effects of the first two months of lockdown and social distancing during the Covid-19 pandemic in the UK.](#) Banks J and Xu X. Institute for Fiscal Studies. Mental health in the UK worsened substantially as a result of the Covid-19 pandemic – by 8.1% on average and by much more for young adults and for women which are groups that already had lower levels of mental health before Covid-19. Hence inequalities in mental health have been increased by the pandemic. Even larger average effects are observed for measures of mental health that capture the number problems reported or the fraction of the population reporting any frequent or severe problems, which more than doubled for some groups such as young women. It is important to control for pre-existing recent trends in mental health when attempting to understand and isolate the effects of Covid-19.

Pre-existing conditions

[The Psychological Impact of Preexisting Mental and Physical Health Conditions During the COVID-19 Pandemic.](#) Alonzi S et al, *Psychological Trauma*, Advance online publication.

<http://dx.doi.org/10.1037/tra0000840>. For both depression and anxiety, nonbinary participants reported the highest levels, followed by female participants. For health status, those with both mental and physical health conditions reported the highest anxiety and depression, followed by those with mental health conditions, physical health conditions, and no health conditions. These findings call for resources to be directed toward individuals who fall into groups reporting greater emotional distress, so that clinicians can intervene as early as possible to prevent mental health decline.

[Impact of the COVID-19 pandemic on patients with pre-existing anxiety disorders attending secondary care.](#) Plunkett R et al, *Irish Journal of Psychological Medicine*, June 2020, 1-

24. Semi-structured interviews were conducted with 30 individuals attending the Galway-Roscommon Mental Health Services with an ICD-10 diagnosis of an anxiety disorder to determine the impact of the Covid-19 restrictions on anxiety and mood symptoms, social and occupational functioning and quality of life.

Public health

[Reduction of Childhood Trauma during the Covid-19 Level 4 Lockdown in New Zealand.](#)

Hamill JK and Sawyer MC, *ANZ Journal of Surgery*, <https://doi.org/10.1111/ans.16108>. The authors interrogated the childrens' trauma registry for name, age, aetiology, place of injury, hospital transfer, diagnosis, injury severity score, and major trauma (defined as injury severity score > 15, admission to intensive care or trauma related death) for admissions from 00:00 hours on 26th March 2020 until 23:59 hours on 27th April 2020, the period of the lockdown, and compared these to the same date range from the years 2016 - 2019. Statistical analysis was performed in generalised linear models in R.

Commentary

Mental health

[Mental health effects of school closures during COVID-19.](#) Lee J. *Lancet Child Adolesc Health*. 2020 Jun; 4(6): 421.

[Social isolation and loneliness among older adults in the context of COVID-19: a global challenge.](#) Wu B, *Global Health Research and Policy*, 5, 27 (2020).

Public health

[COVID-19: a public health approach to manage domestic violence is needed](#) Chandan JS et al, *Lancet Public Health*, 5(6): e309.

Impact on non-Covid care

As lockdown restrictions ease, there are an increasing number of papers and commentaries exploring the impact on different services. We share commentaries from the Health Foundation and King's Fund, which explore perspectives of the general public and the workforce, respectively. New

guidance on restarting endoscopy services is referenced. The Royal College of Physicians has published emerging findings from a survey of the workforce. Emerging evidence on the impact on outpatient services, elective care and emergency care are included. Commentaries on primary care, long term conditions management, outpatient care, elective care, public health, mental health services and end of life care also feature.

Commentary from the collaborative

[Public perceptions of health and social care in light of COVID-19. Results from an Ipsos MORI survey commissioned by the Health Foundation.](#) Health Foundation

[Where are the patients? The factors affecting the use of emergency care during Covid-19.](#) Vaughan, L. Nuffield Trust (16/6/20)

[Learning from staff experiences of Covid-19: let the light come streaming in.](#) Bailey S and West M (9/6/20). King's Fund.

Guidance

[Restarting gastrointestinal endoscopy in the deceleration and early recovery phases of COVID-19 pandemic: Guidance from the British Society of Gastroenterology.](#) Rees CJ et al, Clinical Medicine Journal, DOI: <https://doi.org/10.7861/clinmed.2020-0296>.

Emerging evidence

[COVID-19 and the workforce – what we've learned.](#) Royal College of Physicians (8/6/20)

During the COVID-19 pandemic, the RCP has conducted four surveys of our UK members and fellows. The first three surveys took place on 1–2 April, 22–23 April and 13–14 May, with the fourth, and final survey for now, on 3–4 June.

The fourth survey asked our members to share their continuing experiences of testing, personal protective equipment, time off work, rotas, working patterns and risk assessments, along with a series of questions about the restart of the NHS.

Outpatient Care

[Radiology department preparedness for COVID-19 – experience of a central-London hospital.](#) Glover T et al, *Future Healthcare Journal*, 7 (2), 174-176. The COVID-19 pandemic has placed significant strain on healthcare systems across the world, requiring rapid adaptation and a change in approach to the delivery of healthcare services. Although not always immediately at the frontline, radiology has a key role in the effort against the SARS-CoV-2 virus. Radiology preparedness, including the development of a set of policies and procedures designed to acquire and maintain enough capacity to support the ongoing care needs of patients both with and without COVID-19, is essential in this modern-day healthcare crisis of unprecedented magnitude.

Elective Care

[Report 27 - Adapting hospital capacity to meet changing demands during the COVID-19 pandemic.](#) McCabe R et al, Imperial College, London. This report aims to calculate hospital capacity for emergency treatment of COVID-19 and other patients during the pandemic surge in

April and May 2020; to evaluate the increase in capacity achieved via five interventions (cancellation of elective surgery, field hospitals, use of private hospitals, and deployment of former and newly qualified medical staff); and to determine how to re-introduce elective surgery considering continued demand from COVID-19 patients.

[Translational simulation for rapid transformation of health services, using the example of the COVID-19 pandemic preparation.](#) Brazil V et al., *Advances in Simulation*, 5, 9. Healthcare simulation has significant potential for helping health services to deal with the COVID-19 pandemic. Rapid changes to care pathways and processes needed for protection of staff and patients may be facilitated by a translational simulation approach—diagnosing changes needed, developing and testing new processes and then embedding new systems and teamwork through training. However, there are also practical constraints on running in situ simulations during a pandemic—the need for physical distancing, rigorous infection control for manikins and training equipment and awareness of heightened anxiety among simulation participants. A description of an institution’s simulation strategy for COVID-19 preparation and reflect on the lessons learned—for simulation programs and for health services seeking to utilise translational simulation during and beyond the COVID-19 pandemic.

[An Exit Strategy for Resuming Nonemergency Neurosurgery after Severe Acute Respiratory Syndrome Coronavirus 2: A United Kingdom Perspective.](#) Hill CS et al., *World Neurosurgery* (in press), <https://doi.org/10.1016/j.wneu.2020.05.246>. The performance of nonemergency neurosurgery can start once minimum criteria have been fulfilled: 1) a structured prioritization of surgical cases; 2) virus infection incidence decreased sufficiently to release previously diverted healthcare resources; 3) adequate safety criteria met for patients and staff, including sufficient personal protective equipment and robust testing availability; and 4) maintenance of systems for rapid communication at organizational and individual levels.

Emergency Care

[Impact of COVID-19 pandemic on patients with ST-segment elevation myocardial infarction: Insights from a British cardiac center.](#) Abdelaziz HK et al, *American Heart Journal*, <https://doi.org/10.1016/j.ahj.2020.04.022>. The study demonstrated a significant delay in symptom-to-first medical contact and a higher cardiac troponin-I level on admission in patients with STEMI during the COVID-19 pandemic versus the pre-COVID era.

Commentaries

Primary care

[The primary care response to COVID-19 in England's National Health Service.](#) Majeed A et al, *Journal of the Royal Society of Medicine*, 113 issue: 6, page(s): 208-210.

Long Term Conditions Management

[Community participation is crucial in a pandemic](#) Marston C et al, *The Lancet*, 30 May-5 June; 395(10238): 1676–1678.

Outpatient Care

[COVID-19 pandemic – is virtual urology clinic the answer to keeping the cancer pathway moving?](#) Connor MJ et al, BJU International, 125 (6), E3-4.

Elective care

[Getting the NHS back on track planning for the next phase of Covid-19](#) (June 2020) NHS Confederation

[Surgery during COVID-19 crisis conditions: can we protect our ethical integrity against the odds?](#) Macleod J et al, Journal of Medical Ethics, <http://dx.doi.org/10.1136/medethics-2020-106446>.

[Waiting times rising by one week, every week](#) Findlay R, HSJ (12/6/20)

Emergency care

[Ambulance crews taking fewer patients to hospital](#) Moore A, HSJ (12/6/20)

Mental Health Services

[Shifting From Survival to Supporting Resilience in Children and Families in the COVID-19 Pandemic: Lessons for Informing U.S. Mental Health Priorities](#). Stark AM et al, Psychological Trauma, Advance online publication. <http://dx.doi.org/10.1037/tra0000781>.

End of life services

[The Crucial Role of Nurses and Social Workers in Initiating End-of-Life Communication to Reduce Overtreatment in the Midst of the COVID-19 Pandemic](#). Raftery C et al, Gerontology, <https://doi.org/10.1159/000509103>.

Public health

[Public health in the eye of the storm: what can we learn from the COVID-19 pandemic experience to strengthen public health services in Europe?](#) Azzopardi-Muscat N and Kluge HHP, European Journal of Public Health, 30 (3), 394-5.

Useful resources

[Digital technology supporting health and wellbeing during and after Covid 19](#) (Literature search from NHS Ayrshire and Arran Library Services) 10/6/20

[Support package to help manage patients with long-term conditions](#) UCLPartners has launched a package of digital resources and practical support to help primary care provide care to patients with long-term conditions.

This update forms part of a national evidence update service, provided by the Strategy Unit, as part of a collaboration to provide analytical support to the health and care system to help in the fight against COVID-19. For more information, visit:
<https://www.strategyunitwm.nhs.uk/covid19-and-coronavirus> or contact our Covid Evidence team on: mlcsu.covidevidence@nhs.net