
Introduction

There are significant concerns that outbreaks of respiratory syncytial virus (RSV) and influenza this winter could be up to twice that of a normal year and it is highly likely that this will overlap with another peak in SARS CoV-2 infections. Added to this, easing of restrictions has led to a summer surge of infections, typically seen in the winter, such as RSV, bronchiolitis, parainfluenza, and rhinovirus.

These respiratory infections, acting synergistically with SARS-CoV-2, can result in increased disease severity. Emerging data suggests that influenza A can cause increased susceptibility to SARS-CoV-2 with more severe disease from COVID-19. Wider circulation of respiratory viruses in the community could theoretically lead to the emergence of new variants of SARS CoV-2. Recent modelling predicts that even if mortality is less severe than last winter, the significant rise in these infections will increase the burden on the NHS, both in its ability to deliver services and support its staff who are already under extreme pressure.

What does this mean to Trusts/Boards in general?

The NHS is already under pressure and is less likely to cope with extra winter health challenges than in previous years. Before the pandemic, winter bed occupancy in the NHS regularly exceeded 95%. This year the NHS will also be operating with a reduced number of beds because of infection control measures. The Academy of Medical Sciences (AMS) report highlights a shortfall of 84,000 staff across the NHS adding to the physical and emotional stress on those currently in post.

Most Trusts/Boards predict a 5-10% general bed and 20% to 30% ITU bed occupancy due to a combination of patients with COVID-19 and other respiratory illnesses, which will affect elective surgery and ITU capacity. It is also possible that geographical variation, where vaccine penetration is lower, will see a greater impact on bed occupancy.

More specifically, the report identifies:

A growing backlog of care: Many more elective procedures cancelled. Winter pressures will increase the backlog.

Increase in patients waiting more than a year: Despite the progress against these targets, the total waiting list currently sits at a record high 5.45 million-

Emergency department waits will rise Dramatic increase in long waits. The number of patients waiting over 12 hours in corridor trolley beds for admission has increased to 2,215, compared to 1,289 in June and 452 in July 2019.

Mixed cancer waiting time performance: The proportion of patients seen rapidly remains lower than expected, (93% target) for patients to be seen by a specialist within two weeks of an urgent GP referral (unmet since May 2020).

The AMS acknowledges the desire for return to 'normality', balanced with the need to sustain efforts to limit the transmission and impacts of Coronavirus, particularly for the most vulnerable, for the longer term. To prepare for the winter period and beyond, the AMS suggests the following priorities:

- Maximise the speed and uptake of COVID-19 vaccination in all eligible age groups, prepare for third doses of vaccine against COVID-19 in priority groups and vaccination against influenza.
- Increase the ability of people with COVID-19 to self-isolate through financial and other support, with a particular focus on those in areas of persistent transmission and in the lowest socio-economic groups.

- Boost capacity in the NHS (staff and beds) to build resilience against future outbreaks of COVID-19 and other infectious diseases, including through improving infection prevention and control (IPC), increasing vaccination and testing capacity for COVID-19 and influenza, adequately resourcing primary care, and reducing the backlog of non-COVID-19 care.
- Provide clear guidance about environmental and behavioural precautions (such as the use of face coverings, ventilation, and physical distancing) that individuals and organisations can take to protect themselves and others, especially those who are most vulnerable from infection.

What does this mean for donation and transplantation for winter and beyond?

The start of the coronavirus pandemic in 2020 was challenging for all transplant centres. The concern was about risk of transmission of SARS-CoV-2 through donated organs, increased risk of COVID-19 infection in newly transplanted recipients and the safety of living donors. Consequently, (and in combination with the need to redeploy staff and lack of access to ITU resources), many centres initially closed to transplantation, depending upon local/regional considerations such as community prevalence of the virus, hospital admissions and limitations within individual Trusts/Boards. As the pandemic progressed, most units across the UK were able to develop pathways to mitigate the risk and safely transplant patients. This was nuanced by organ type and source of organs (i.e., living, or deceased donor). During the early part of the first wave in 2020, liver and heart transplantation were restricted to highly urgent cases, lung, and pancreas (including islet) transplantation was almost completely restricted and Kidney transplantation was considered on a case-by-case basis from both living and deceased donors. Some units (particularly kidney and pancreas) closed due to caseload pressure, concerns from the Trust/Board management about safety for transplant recipients and living donors and re-deployment of staff from transplantation to ITU and other critical care environments. Transplant wards were converted in to COVID-19 wards, delayed the return to business as usual after the first wave.

Over the course of 2020-21, the greater risk of mortality associated with the risk of contracting COVID-19 in open, centre-based haemodialysis units became clear with increased deaths on the Kidney waiting list. The balance of risk between perceived peri and post-operative transplant risks vs risks of continued dialysis was tipped in favour of renal transplantation. This, together with the overwhelming wish of patients and the willingness of living donors, when surveyed, to continue with donation and transplantation during the height of the pandemic allayed fears of Trust/Board management teams. In addition, the success of the UK vaccination programme has added further protection for transplant recipients and living donors.

During both the first and second wave of the pandemic, the transplant community showed outstanding resilience and willingness to support each other. Clinical networks such as the Pan London Collaborative (PLC), the Northern collaborative and Coventry Oxford Network (COxNet) for kidney transplantation were established, together with new initiatives such as a UK 'high urgent' liver transplant waiting list to ensure that patients in need of a liver transplant were appropriately prioritised across all units. Liver centres also 'shared' wait-listed patients where appropriate and ensured ITU bed availability through the ITU network leads, with NHSE support. As a result, all centres had the opportunity to come back 'on-line'.

The very successful UK vaccination programme, clear guidance, and support from the NHSBT clinical team and British Transplantation Society (BTS) and the leadership from the Advisory Group Chairs, supported the excellent work done by local teams and enabled all units to remain open and transplanting during the latter waves of the pandemic. However, living donor kidney transplantation sustained a 59% fall in activity in 2020/21 and has recovered more slowly than deceased donor kidney

transplantation. The restoration of the UK Living Kidney Sharing Scheme from April 2021 has made a slow but steady recovery during the current year.

As a community, it is critical that we maintain this momentum through the next phase of the pandemic, as winter pressures become a reality. We need to be cognisant of issues within the wider NHS whilst keeping transplantation uppermost on the agenda in every Trust/Board, ensuring it remains an essential service, as we approach the next phase of the pandemic.

The following recommendations may help you secure the support of your Trust/Board Executive to continue to deliver transplantation in the face of competing winter pressures and COVID-19. These measures will help to improve the resilience of the multi-disciplinary workforce, preserve the infrastructure that supports transplantation services and save and improve lives for patients waiting for a transplant.

We recommend:

- 1. Actively plan together with the Trust/Board Executive and commissioners, to maintain all transplant services through future surges.**

Previous surges of the pandemic showed that complete closure/suspension of programmes is difficult to reverse and slows recovery. Centres are encouraged to revisit previous contingency plans. Even at a reduced rate of activity, maintaining the service is the preferred option to maximise access to transplantation for patients during and post pandemic surges. During engagement with executive teams, you should highlight the resource inefficiencies of delaying transplantation including the impact on ITU/Wards length of stay and costs of prolonged inferior alternative treatments such as dialysis

- 2. Multi-disciplinary teams (MDTs) providing transplant services are exempt from redeployment**

This includes colleagues involved in pre-transplant and living donor, assessment pathways, post-operative and follow-up care for both recipient and living donor. With improved protection from severe disease through vaccination, patients admitted due to COVID-19 in the next phase of the pandemic are likely to be less dependent on critical care and/or specialist intervention (e.g., management of acute kidney injury). Together, these factors should reduce the requirement for organ specific specialists to be redeployed into critical care areas.

- 3. Transplant programmes aim to remain operational**

In line with agreed Federation of Surgical Specialty Associations (FSSA) P1a priority for deceased donor transplantation during any further surges of the pandemic: including theatre access, diagnostic services, and inpatient bed capacity. Living donor transplantation, with FSSA P2 priority, is given appropriate consideration (i.e., the recipient's opportunity to be transplanted) alongside other competing surgical priorities and is not delayed/de-prioritised because donor nephrectomy is viewed in isolation as non-urgent activity. This is particularly important to maintain a UK-wide service to support the UK Living Kidney Sharing Scheme (UKLKSS). Given the anticipated decrease in severe disease, it is realistic to assume that the requirement to commandeer clinical areas to increase critical care capacity (e.g., theatres, recovery areas and wards) will be significantly reduced, despite winter pressures.

- 4. Engage with ITU networks**

Lack of sufficient beds and qualified staff to manage patients to the same safety standards as pre-COVID-19 has been a huge challenge for ITUs throughout the pandemic. As a temporary measure, in

the height of the first and second wave, staff-support was generated for critical care largely from theatre-staff. This additional resource is no longer available to the majority of the ITUs in the UK. This means that in the continuing phase of the pandemic, superimposed on the anticipated winter flu season and with a need to continue elective surgical activity, the greatest challenge to critical care provision is likely to arise from adequate staffing.

The transplantation community can help by identifying patient sub-groups and using operative interventions and peri-operative optimisation to enable post-operative patients to be cared for at lower dependency levels (level 2 or High Dependency Unit (HDU) or level1+ enhanced care). This will be key in enabling greater numbers of transplants as well as other priority 1 and 2 cases to proceed (Level 2 patients are nursed 2 patients to 1 qualified critical care nurse, enhanced care areas at a ratio of 4:1). In addition, high quality pre-assessment and pre-optimisation of recipients and optimal matching of recipient to donor organ, will be beneficial to aid patient flow while maintaining patient safety.

The intensive care team needs to assess whether or not the **enhanced care areas** of individual Trusts/Boards may already have, or be planning to develop, an appropriately skilled nursing, AHP and medical workforce to accommodate a wide range of post-operative patients. This could include some of the more unfit kidney transplant recipients, who are not suitable for immediate post-operative transfer to a transplant ward (e.g., those with obstructive sleep apnoea already established on home CPAP machines), fitter pancreas transplant patients, as well as patients who have undergone liver resection, laparotomy, and other major surgical procedures, that might otherwise occupy the higher staffed premium beds in critical care.

ITU networks in your region may, through collaboration and in consultation with NHS England/commissioners, ensure beds remain a priority for Liver, Pancreas and Cardiothoracic transplants, (as per the second wave), protecting transplant centres from accepting 'decompression' transfers, where possible.

5. Maintain staff Resilience

Staff ability to cope with, adjust to and recover from adversity, while at the same time learning and growing from the experience is essential. This allows some people to survive and bounce back from life's challenges stronger than before. Taking the time to recognise colleague's achievements is good way to boost morale and can improve team resilience. Taking the time to say, "Well done", or just saying a friendly thank you or hello can make all the difference. Some level of stress has always been associated with the physical and emotional demands of being a healthcare worker. Covid-19 has certainly added to this. The need to wear PPE, take on potentially new and unfamiliar duties, and care for patients and families who are not allowed to see each other when contact is most needed, can have a negative impact on an individual's mental health and wellbeing. Trusts/Boards should be looking at ways to increase workforce capacity so that there are more people available at critical times, as well as looking at how they can use the skills, experience, and knowledge of all bank staff in the right places to further build resilience across the NHS.

Supporting resilience: We also know that important factors influencing resilience include feeling valued, supported, and working as part of a team. Having "the basics" in place e.g., a proper induction, welcome to a new Trust/Board, routes for additional support, as well as a simple thank you for a job well done, are all important to support resilience. In addition, looking to provide more career development opportunities, so Bank staff can continue to learn new skills and progress in their career. When we are better prepared, with better planning, people feel more confident in their abilities at work. Covid-19 has meant that we all had to react quickly. Assessing the transformation that has already taken place and make further improvements, can build a more resilient workforce for the future.

Useful resources:

www.nhsprofessionals.nhs.uk/Health-and-Wellbeing

www.mind.org.uk

Specific Points of Consideration

1. Units should consider working with partners (sharing patients) outside the region to overcome local pressures.
2. The UKLKSS schedule should continue, with centres responsibly considering realistic numbers of suitable donors and recipients entered into the scheme.
3. Advisory Group chairs to help develop local solutions now and centre leads to engage in a dialogue with their Trusts/Boards to understand what contingency plans are needed.
4. Units to develop a roadmap of what could happen - motivated by AG chairs, with NHSBT support to facilitate. Identify key areas of influence such as a standardised assessment recipient processes
5. Obtain NHSE/Commissioner support early to facilitate collaboration and maintaining programmes as has been shown with the paediatric dialysis capacity shortfall and ITU bed support
6. SARS-CoV-2 vaccination has proven efficacy in reducing the risk of severe disease and death but may not necessarily prevent infection. As restrictions are fully removed and schools re-open, there is a higher risk of clinical members contracting infection and having to self-isolate and hence un-planned, short notice absence. Advance contingency planning for team resilience, especially small teams (<5 members), is advised, to ensure service continuity.

In conclusion

Delaying or preventing organ transplantation is unlikely to release resources and paradoxically exacerbate existing constraints or un-mask new constraints. For example: delaying heart or liver transplantation is likely to result in longer length of stay for wait-listed patients in ITU beds and with disease progression increase dependency. On the other hand, early transplantation is likely to require a few days in ITU but rapid recovery and patient discharge releasing resources. During 2020-21, loss of normal deceased and living donor paediatric kidney transplant activity has resulted in a national shortage of paediatric dialysis capacity resulting in patients and families having to travel further afield. Health and quality of life benefit aside, delays to adult kidney transplantation means patients will spend longer on dialysis and is significantly cost inefficient with average dialysis cost of £29k pa compared to £8k pa after first year for a transplant patient.

Supporting documents:

1. COVID-19: Preparing for the future- looking ahead to winter 2021/22 and beyond 15 July 2021 Academy of Medical Sciences, 15 July 2021 access here: <https://acmedsci.ac.uk/publications>
2. 2021/22 priorities and operational planning guidance: October 2021 to March 2022, NHS England <https://www.england.nhs.uk/wp-content/uploads/2021/09/C1400-2122-priorities-and-operational-planning-guidance-oct21-march21.pdf>
3. Third phase of NHS response to COVID-19, NHS England, July 2020 <https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/07/Phase-3-letter-July-31-2020.pdf>
4. The latest Clinical Guide to Surgical Prioritisation During the Coronavirus Pandemic can be accessed here: https://fssa.org.uk/covid-19_documents.aspx