Early COVID- 19 experiences - District General Hospital

Thank you very much to our colleagues at University Hospitals Birmingham and Guy's and St Thomas' Hospital for sharing their early COVID-19 experiences with us. Your early insights have been incredibly useful in our conversations around treatment planning; they have influenced our prioritisation of training and have been key guidance in our workforce planning discussions.

Planning and preparation

Unlike some of our colleagues elsewhere in the country, we have been in the very fortunate position that we have had some time to prepare our staff for the 'tsunami' that is inevitably coming our way. We found ourselves in the same position that David described in his reflection, hoping that we'd over prepared and that our efforts would be for nothing. Over the last week an entire floor of the hospital has become a COVID-19 area and our ICCU has expanded to stage 2 out of 7 of its surge plan. We normally operate a small, 13 bedded mixed HDU and ICU facility and our surge plan increases that capacity to approximately 65 beds as it currently stands, although this is under constant review, with a view to add even more.

In our organisation, we usually operate an on call physiotherapy service at weekends and this includes cover over the respiratory wards and on ICCU. Building and maintaining the number of on call staff has been a priority for our organisation over the last two years and we have trained all of our staff to be able to safely utilise all respiratory treatment options on ICCU, regardless of banding or previous ability. This has left us in a really healthy position from a staffing perspective and has meant we have a large pool of ICCU familiar physiotherapists that have some previous experience in treating ventilated, paralysed and proned patients.

Because of this, we decided to focus our efforts initially on the up-skilling of outpatient physiotherapists and physiotherapists which usually work in other specialities. We agreed locally that we wanted to keep this training simple and easy to digest in order to keep anxieties low amongst the workforce. We designed a training package for nurses and physiotherapists called 'COVID-19 respiratory assessment and treatment' which we are delivering in tandem with the ICCU nursing education team. This has now been running for two full weeks.

We have asked that these physiotherapists are able to deliver basic deep breathing exercises and provide mobility assessments and treatment to patients.

We devised a system where we have an on call trained 'triage' physiotherapist who the up skilled staff can contact for support if the patient meets a list of pre-determined criteria. Each level in our

hospital has also been allocated a therapy team leader or a deputy team leader who is respiratory physiotherapy trained.

It is fair to say that frustrations from our on call team have been high and there have been some very emotive conversations. Mainly this has been around staff moving from one clinical area to another and when this will happen, which is not a very easy question to answer. Clear communication has been key and we have been using Zoom or Microsoft teams to hold weekly meetings for the on call team, we have then been recording these meetings and posting them in an on call WhatsApp group for those that have missed them. Simple efforts such as these seem to have made a difference to individual anxieties.

We are currently putting together electronic training resources for our on call staff and utilising training resources which are already available through Twitter, the ACPRC website and elsewhere. Electronic training is unusual for our staff as we are very lucky to be able to offer mainly face to face and bedside training in a smaller organisation. There have been different challenges with communication and decision making depending on the clinical area, the following sections discuss both the clinical and logistical key points from an ICCU and ward based perspective.

ICCU

Initially, we refrained from assessing all of our COVID patients based on national guidance that routine physiotherapy is not beneficial and patients are non-productive. This has felt unnatural after all of the preparation, but after reading other reflections, we knew that our time would come and we would be needed for these patients eventually.

In the very early days we overcame a challenge which was related to an on-call physiotherapy referral for a self-ventilating patient with no COVID -19 symptoms, who had routinely been screened and full precautionary PPE was being utilised. This made clinical reasoning around the use of our normal positive pressure therapies difficult and highlighted from the very beginning the importance of having a united decision from a medical and therapy perspective but also the kind of challenges we would be facing as time progressed.

Typically patients present as young and healthy with an ARDS picture. Relatively high oxygen requirements and levels of PEEP are common, some require paralysing agents and most have minimal secretions and reasonable air entry. Treatments of neuromuscular facilitation, manual techniques and suction have proved to be of little benefit and prophylactic ventilator hyperinflations have been avoided; consequently, we have not been reviewing all patients daily and have moved to reviews up to 72 hours apart, something which is not routine practice in our organisation.

By day 7-10 it has become apparent that sputum retention is an issue for some patients. Prescription of mucolytics and treatment with positioning, ventilator hyperinflations, vibrations and manually assisted cough alongside suction has all been beneficial. As patients approach this time frame we have utilised screening by a physiotherapist in order to assess for suitability.

Like everywhere else, the main challenges have been sedation related. As per usual practice, an early reduction of sedatives was initially utilised and we found that this caused cardiovascular instability even in patients that were very stable. Consequently, sedation holds now occur only when minimal ventilatory support is achieved. We have noticed a high level of agitation in this patient group when sedation is withdrawn so some of our routine practices with regards to sedation withdrawal have changed to avoid self-extubation. Even in patients with minimal ventilator requirements, desaturation seems significant on basic intervention (such as positional changes) and this has made decision making about extubation challenging. Paralysis is a big cause for concern and there is an on-going discussion about the suitability of stopping this intermittently (where possible) to allow for more effective physiotherapy.

Initially it was decided that humidified oxygen and nebulisers were not allowed but as time goes on this is an area which has been subject to much debate. Very recently we have utilised high flow nasal cannula in a negative pressure side room with a recently extubated COVID-19 patient and it seems like these decisions are likely to be made for those patients who have a clear clinical need and where side rooms are available. This is a constant discussion with our consultant leads.

An additional challenge we face as a district general hospital is the inability to transfer patients for specialist care (such as specialist ICCU facilities). Having to care for new groups of patients when our skilled ICCU MDT is greatly diluted and it is not so easy to contact colleagues from other trusts for advice is unusual to us as we have good supporting links with our surrounding organisations.

We are already considering the impact that this volume of patients will have moving forwards. Rehabilitation and the equipment required for it is being considered and orders have been placed to ensure that we have suitable seating for this group of patients. We have no specific plans but the following considerations have already been highlighted; the impact of COVID-19 to our ICCU follow up clinic, the flow of patients with tracheostomies and the challenges that ward based therapists will face when these patients are discharged from ICCU.

Ward based

In a similar way to ICCU, we refrained from assessing COVID-19 patients for respiratory physiotherapy without a consultant referral due to reports that respiratory physiotherapy treatments were not beneficial. In the initial phases, this change in referral process was difficult because our medical and nursing colleagues were not used to it. However, our respiratory consultants were fully on board with this, wanting to limit unnecessary exposure to this patient group within the MDT. The referral process for a mobility assessment continued in a normal manner in this patient group, however, therapists were advised to be very thorough when taking referrals to avoid inappropriate referrals and blanket referral processes developing.

When first admitted to the ward, most patients are medically unstable with some not for

escalation past ward based care and a potentially poor prognosis, making them not appropriate for physical rehabilitation at this point. Usually we are also advised that chest physiotherapy is not indicated due to the patient being unproductive and having no evidence of collapse.

Treatment is currently limited to dry oxygen therapy ranging from nasal cannula to non-rebreathe masks. Humidification, nebulisers, NIV and high flow nasal cannula have all been ceased however they are under review constantly. We have very recently started to explore the option of proning self-ventilating patients and are in discussions with our respiratory consultant with regards to this, it is not something that we have put into practice at this point.

In the last week we have started to review patients who become more medically stable and are showing recovery from this acute illness. Initially it has been difficult to gauge the optimum time to start the physical recovery, weighing up the impact of increased load on the body against the risk of deconditioning. We have worked very closely with nursing colleagues to establish suitability as well as using our specialist clinical knowledge of acutely unwell patients to underpin our desicions. To date, we have not provided a physical assessment/ treatment with patients with an oxygen recruitment over 40% in a ward based area, although this is not strict criteria.

On subjective assessment patients are reporting that they feel extremely tired and complain of overwhelming global muscle soreness. At rest they do not appear to have an increased work of breathing or respiratory rate but look fatigued and sweaty. In a very similar way to reports we have read elsewhere, we are finding that movement and positional changes are causing a considerable drop in oxygen saturations and increased work of breathing alongside a dry persistent cough. Pre-oxygenation and an increase in oxygen delivery during treatment is therefore to maintain an adequate oxygen saturation. During these assessments we are also taking the opportunity to provide treatment such as ACBT, positional advice and cough etiquette education. At this point ACBT does not appear to be strongly indicated as patients are relatively unproductive, however it does allow the patients to practice breathing control and this is useful in reducing their breathlessness following exertion. Nearly all patients are objectively weak and are far from their previous level of function, needing further functional/physical rehabilitation alongside their on-going medical treatment as an inpatient.

Initial challenges on the ward have been mainly related to the dispute around appropriate PPE. We are lucky that AHPS at SFHFT have excellent relationships with our infection, prevention and control teams and they wholeheartedly accepted early ACPRC advice on what aerosol generated procedures may be involved within physiotherapy treatment. Due to nature of our input, we are often wearing full PPE including the use of an FFP3 facemask and long gowns and this has caused some animosity with our nursing colleagues as they feel extremely exposed when wearing a surgical mask. This has resulted in a lot of time spent offering justification as to why we need this level of PPE within our role and repeating this conversation many times. This can be very frustrating but we have had excellent support from therapy managers and ward leaders in tackling this issue.

We sincerely hope that all of our colleagues are safe and well and wish the same for your

families.

Leanne Horsley
Deborah Kerry
Nicola Williams
Physiotherapy team, Sherwood Forest Hospitals NHS Foundation Trust, Nottinghamshire.