Covid-19 has shone a bright light on the impressive work of NHS intensive care units (ICUs) around the UK. Now, as the first patients who have had the new virus and spent days ventilated in ICUs are discharged, the Chartered Society of Physiotherapy predicts a “tsunami of rehabilitation needs.”

Already there are question marks about whether appropriate rehabilitation—physical, cognitive, and psychological—will be available for the huge numbers of people who will need to deal with the enormous impact of a stay in critical care.

Rehabilitation after a heart attack, trauma, or stroke has well established pathways. But rehabilitation for many of the thousands of people who spend time in intensive care every year is not automatic—despite severe muscle wastage and deconditioning, sleep disorders and severe fatigue, memory problems, anxiety, depression, and post-traumatic stress disorder. These “general” ICU patients may be the sickest people in the country, but once they leave they may be getting the least support.

Lack of clarity and consistency of access

In 2017 the National Institute for Health and Care Excellence set out quality standards for adults after critical illness, which were welcomed by specialists. However, it remains hard to say how many people who need this kind of rehabilitation receive it, as there are no consistently collected standardised data. In England, Wales, and Northern Ireland some 224,748 admissions were made to 263 NHS adult critical care units in 2018-19. Experts suggest that two thirds of such patients would need some kind of rehabilitation.

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One area where data are collected is pulmonary rehabilitation for people with chronic obstructive pulmonary disease (COPD), which is offered to only 13% of eligible patients despite good evidence. There is also regional variability: five hyperacute regional inpatient specialist rehabilitation units take patients directly from the ICU, and some individual trusts have developed excellent services for early post-ICU outpatient rehabilitation.

Elsewhere it is patchy, sometimes simply consisting of a nurse doing a one-off telephone follow-up. The biggest barrier is variability in funding despite evidence of cost effectiveness.

Rehabilitation in sharp focus with covid-19

Covid-19 has forced NHS England and individual trusts to think about rehabilitation with some urgency. Karen Middleton, chief executive of the Chartered Society of Physiotherapy, says, “Rightly, so far, the focus has been saving lives—but, as the first wave of patients begin to recover, the scale of the next phase is becoming clear.”

Patients with the virus seem to be ventilated for far longer than the average ICU patient, causing higher levels of deconditioning, and there are more of them at any one time. Evidence from China shows that covid-19 patients have neurological as well as respiratory after effects, so recovery will be longer and more complex. The UK government predicts that 45% of patients will need some form of low level medical or social input for recovery and that 4% will require more focused, ongoing intense rehabilitation in a bedded setting. Lynne Turner-Stokes, consultant in rehabilitation medicine, says, “We need all of those different levels of service. And, importantly, we need them to be joined up.”

Carl Waldmann started introducing rehabilitation after ICU 28 years ago, soon after he started as a consultant at the Royal Berkshire Hospital in Reading (box 1). He says that, as ICU demand has tripled, we will see a corresponding bulge in the need for rehabilitation. “It shouldn’t have taken a pandemic,” he says, “but I think it will make people realise the problems you may have after a period in intensive care, and the vital need for rehabilitation.”

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Covid recovery plans and prescriptions

Both the Intensive Care Society (ICS) and the British Society for Rehabilitation Medicine have been working with NHS England to urgently develop soon-to-be-released covid-19 recovery plans. Zudin Puthucheary, honorary consultant in intensive care at the Royal London Hospital and senior lecturer at Queen Mary University of London, is leading from the ICS side. He says that the push on rehabilitation for covid-19 patients will be an “opportunity to improve care for all our ICU patients.”

At Northwick Park Hospital in northwest London, the 24 bed regional hyperacute rehabilitation unit has not yet seen many covid-19 patients. Instead it has taken in more non-covid patients than it sees patients who have been treated in other hospitals and referred by GPs. Waldmann says, “GPs are slowly coming on board. At first, they didn’t feel it was necessary. Now they actually refer patients that have not had follow-up at other hospitals to our hospital.”

He explains, “Our total budget for critical care would probably be something like £3m. You’re looking at a minute fraction of that—something like £100 000—depending on the numbers of patients.”

Such is the success of this service, as well as seeing its own former ICU patients it sees patients who have been treated in other hospitals and referred by GPs. Waldmann says, “GPs are slowly coming on board. At first, they didn’t feel it was necessary. Now they actually refer patients that have not had follow-up at other hospitals to our hospital.”

Melanie Gager, ICU nurse consultant, is adamant that covid-19 patients should benefit too. “Offering rehab is not an option—it is a necessity,” she says. “It will be challenging and require increased resources, but these patients must be given the right to rehab.”

Psychological support and GP awareness

Early indications suggest that covid-19 patients will need even more psychological support than typical ICU patients because of higher levels of “survivors’ guilt” and post-traumatic stress disorder.

At the Royal Berkshire, Waldmann’s colleague Melanie Gager, a nurse consultant specialising in intensive care, says, “They’re waking up seeing other people dying in front of them, knowing that they’re all in there for exactly the same reason.” And there is “no escape” when they leave hospital, she adds, because of the endless media coverage. This leads them to asking, “Why me?” which, while also seen in sepsis patients, is not typical of the cohort.

The Chartered Society of Physiotherapy is concerned that the focus will inevitably be on providing sufficient rehabilitation to move people along the pathway but that, when people go home, it will be an “out of sight, out of mind issue.” GPs therefore need to be aware of the huge impact of ICU and rehabilitation needs. Before covid-19, the average GP would see somebody who had been in an ICU once every two to three years. “This is an area that’s completely outside GPs’ experience,” says Chris Danbury, consultant in anaesthetics and intensive care medicine at the Royal Berkshire.

Ron Daniels, intensive care consultant and executive director of the UK Sepsis Trust, says that discharge documentation letters need to be very explicit and clear, “to communicate that we expect there will be longstanding physical, psychological, and cognitive problems that the patient will need support and attention for.”

Louise Worrall, inpatient physiotherapist lead at Milton Keynes University Hospitals Trust, says that rehabilitation must be given to justify the original treatment (box 2). She asks, “Why invest so much ICU time and resources to save a life, to then leave a patient with debilitating symptoms and a feeling of floundering with no idea what to do to make anything better? We have to rehabilitate these patients to optimise recovery as much as possible, return them to the wider society, and, you could argue, justify the huge resource given to them in ICU.”

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1 Parker A, Sricharanhali T, Needham DM. Early rehabilitation in the intensive care unit: preventing physical and mental health impairments. Curr Phys Med Rehabil Rep...


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