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## Patient safety strategy for Rehabilitation Medicine

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### Context

Rehabilitation care pathways provide specialist assessment, intervention and support for people with complex disabilities in different settings. This includes inpatient and community settings. Some of the components of the rehabilitation pathway are provided by the independent sector organisations.

Rehabilitation services manage a wide spectrum of conditions including brain injury, spinal cord injury, musculoskeletal conditions and prosthetics. The complexity of the client group poses unique patient safety challenges.

Patients with complex rehabilitation needs typically experience numerous transitions in their care pathway, as they progress from acute care through inpatient rehabilitation and onwards into community-based rehabilitation. Failure to transfer the necessary information about their individual needs for rehabilitation and how these will be met at each stage of care poses the risk that their needs will go unidentified and they will be unable to access the services they need to support their recovery. Systems are required both to track individual patients down the rehabilitation pathway and to quantify any shortfalls in service provision for future service planning.

Following severe illness or injury, some patients have a prolonged stay in hospital. Due to the national shortfall in inpatient specialist rehabilitation capacity to meet the demand, they are often managed on general wards while waiting for a specialist rehabilitation bed - sometimes for weeks or months. These wards are ill-equipped to manage complex physical disability and patients are at risk of developing contractures, pressure sores etc. which can impact negatively on their longer term outcomes. Patients are also at higher risk of developing antibiotic resistant bacterial infections and colonisation due to injudicious use of antibiotics. This can have significant long term, negative impact on their ability to access the rehabilitation services they require.

The COVID-19 pandemic has served to highlight the need for community rehabilitation services. Patients can present with wide-ranging impairments requiring coordinated input from many different agencies, and failure to provide this increases the risk of avoidable long-term disability and its unwanted consequences.

Patients with cognitive impairment (eg following acquired brain injury) may lack the mental capacity to make decisions about their own care and treatment.

- Some may have reduced awareness of their limitations making them vulnerable and unable to maintain their own safety. They may be able to make simple decisions, but not more complex ones – or require additional support. Patients should be empowered to participate in and contribute to initiatives that are designed to keep them safe.
- Others have no awareness at all requiring all decisions to be made for them, including serious treatment decisions such as continuing / withdrawing life-sustaining treatment. In circumstances such as these, it is essential to ensure that the principles of the Mental Capacity Act 2005 are followed. Staff should be aware of their responsibility at all times to manage incapacitous patients on the basis of their best interests and in line with their likely wishes.

## Key patient safety issues and strategic objectives:

### 1. System neglect of severely disabled patients

<b>Problem:</b>	The general shortage specialist rehabilitation services, both in hospital and in the community means that patients are often managed in the settings that cannot meet their needs due to low staffing levels or lack of experience in managing complex disability.
<b>Risks of harm</b>	Failure to provide specialist rehabilitation in a timely fashion results in poorer outcomes including avoidable disability and complications (see no 3 below), inability to return to work, increased dependency on benefits etc.
<b>Opportunities</b>	<p>The COVID-19 pandemic has increased awareness of the need for rehabilitation both in hospital and the community.</p> <ul style="list-style-type: none"> <li>• The NCASRI audit of specialist rehabilitation following major trauma highlighted a national shortage of rehabilitation beds – 330 beds for trauma cases alone(1)</li> <li>• The NICE guidelines for Long COVID(2) and the BSRM’s Rehabilitation in the wake of COVID-19(3) highlight the need for rehabilitation services in the community.</li> </ul>
<b>Strategy / plans</b>	<ul style="list-style-type: none"> <li>• To continue to lobby at local and national level for increased rehabilitation services at the heart of every service network so that patients can be managed in settings that meet their needs and protect them from harm.</li> <li>• To establish clear referral pathways, in-reach and out-reach services etc.</li> </ul>

### 2. Failure to identify needs for rehabilitation leads to inadequate rehabilitation

<b>Problem:</b>	Patients with complex rehabilitation needs often experience numerous transitions in their care pathway, as they progress from acute care through inpatient rehabilitation and onwards into community-based rehabilitation. Many require input from multiple agencies including health and social care
<b>Risks of harm</b>	Failure to identify and communicate rehabilitation needs results in poorly planned care. Patients ‘fall between different stools’ and miss out on the essential rehabilitation they require to support their recovery and achieve their potential for recovery, resulting in excessive dependency.
<b>Opportunities</b>	<p>The Rehabilitation Prescription (RP) is a person-centred patient-held record that sets out the individual’s requirements for ongoing rehabilitation and the plan to provide for them(4). It travels with the patient as they progress along the care pathway and is adjusted as their needs change over time. It is shared between the various professionals and agencies involved to optimise coordination and sharing of information as required to provide seamless care. It acts as a useful resource to enhance communication between different care settings. Centrally recorded data collection can be used to track patients through the system and help to ensure that they access the services the need.</p> <p>At population level, this information can be used to identify gaps in service provision. Proof of principle already exists for the benefits of the RP within the Trauma networks where use of the RP is now mandated(5).</p> <p>A recent pilot study demonstrated that this could equally be applied to patients as they transition out of intensive care(6,7)</p>
<b>Strategy / plans</b>	To continue to press for mandated implementation of the RP across a range of settings – including intensive care, neurosciences centres, acute stroke services etc.

### 3. Preventable secondary complications of severe disability.

<b>Problem:</b>	Patients with severe complex disability are at high risk of developing secondary complications such as soft tissue contractures, pressure sores, autonomic dysreflexia, heterotrophic ossification, incontinence, mood changes, behavioural problems etc. Early recognition and proactive management can help to reduce these unwanted sequelae,
<b>Risks of harm</b>	Development of these complications increases morbidity and mortality.
<b>Opportunities</b>	Condition-specific protocols and guidelines can assist in this process. Examples include those published by the Royal College of Physicians (RCP) in conjunction with the British Society of Rehabilitation Medicine (BSRM) on Spasticity(8) and Depression(9).
<b>Strategy / plans</b>	<ul style="list-style-type: none"> <li>• To continue to work with agencies such as the BSRM, RCP and other professional societies and Colleges to develop multi-professional guidance and protocols for the management and prevention of secondary complications of severe disability.</li> <li>• To ensure that such guidance is incorporated into training curricula for professionals in rehabilitation</li> </ul>

### 4. The impact of colonisation with antibiotic-resistant micro-organisms.

<b>Problem:</b>	<p>The emergence of multidrug resistant bacteria (eg Carbapenemase Producing Enterobacteriaceae (CPE), Vancomycin resistant Enterobacteriaceae (VRE)) stems mostly from the widespread inappropriate use of antibiotics. National guidelines for sepsis have reduced the threshold for prescribing antibiotics to anyone with a temperature and NEWS score over 6. Many patients with severe brain injury have autonomic dys-regulation resulting in tachycardia and pyrexia, in the absence of any infection. Patients who require prolonged hospitalisation are at particular risk. They are often exposed to repeated and unnecessary courses of broad-spectrum antibiotics leading to colonisation with resistant bacteria.</p> <p>Once colonised, patients are typically confined to a side room and have limited access to shared facilities such as a gym, hydrotherapy or group sessions. Staff who treat them must wear PPE, and they rarely see a normal face. In the community, colonised patients may be denied out-patient rehabilitation. It is extremely difficult to deliver effective and meaningful rehabilitation under these circumstances.</p>
<b>Risks of harm</b>	Infection with resistant organisms carries a higher risk of mortality. Prolonged isolation can lead to depression and de-motivation. Inability to participate in normal rehabilitation programmes will inhibit their recovery and return to independence.
<b>Opportunities</b>	Recent guidance from Public Health England (PHE) has raise awareness of the need for more judicious use of antibiotics and strict adherence to antibiotic prescription guidelines. It encourages appropriate investigation of suspected infection and, where possible restricting use of antibiotics to narrow spectrum agents only where there is proven infection and known sensitivity - unless of course the patient is so sick that emergency use of broad spectrum antibiotics is justified by the immediate risks (10).
<b>Strategy / plans</b>	To continue to work with Public Health England to publish guidance on good practice to support safe management of patients colonised with resistant bacteria in order to strike the balance between enabling them to access the rehabilitation they require whilst minimising the risk for spread to other patients (11).

## 5. Managing patients who lack capacity.

The Mental Capacity Act (MCA) 2005 sets out the provisions for providing treatment and care to patients who lack the capacity to decide for themselves. Any such treatments must be given on the basis of their best interests and in accordance with their likely wishes. The MCA also aims to balance an individual's right to make decisions for themselves with their right to be protected from harm. Where possible and appropriate, the patient him/herself should be involved in discussions about their care and take an active role in planning the measures that are put in place to help ensure their safety.

<p><b>Problem:</b></p>	<p>Deciding when and how to apply the best interest principles is not straightforward and there is often variation in the applied understanding of the MCA 2005 by health care staff.</p> <p>Decisions to apply restraint measures aimed at keeping patients safe should be as least restricting as possible Patients are sometimes inappropriately placed on Deprivation of Liberty Safeguard (DOLS) orders simply because they require close medical supervision.</p> <p>Capacity is specific to the treatment decision at hand. It may also fluctuate if their decision-making ability changes over time due to variable cognition. As decisions are time- and situation-specific, it is important that capacity should be assessed in respect of each decision to be made, and a one-off capacity assessment will be inadequate. Many patients recovering from severe brain injury may have fluctuating capacity or may regain capacity over time. On-going capacity assessments are required and staff require training to undertake capacity assessments, especially where these are nuanced.</p> <p>All staff must be aware of their responsibilities under the MCA 2005 and that it is the giving, not the withdrawing of treatment that needs to be justified. Just because a treatment can be given does not necessarily mean that the patient would want to receive it. All patients who lack capacity and are undergoing rehabilitation in hospital and residential settings should have a written Treatment Escalation Plan that is discussed with their family so that, any treatment escalation that is offered is given in line with the patient's likely wishes.</p>
<p><b>Risks of harm</b></p>	<p>Failure to comply with the MCA 2005 could result either in patients not having the treatments they would wish for, or being given treatment that they would not wish to receive.</p>
<p><b>Opportunities</b></p>	<ul style="list-style-type: none"> <li>• Guidance from the BSRM supports the appropriate use of DOLS orders (12)</li> <li>• Guidance from the Resuscitation Council (ReSPECT) provides practical advice on appropriate Treatment Escalation Planning(13)</li> <li>• National Guidelines from the British Medical Association and RCP, endorsed by the General Medical Council provide advice on best interests decision-making including the giving/withholding of life-sustaining treatment in accordance with the MCA 2005(14,15)</li> </ul>
<p><b>Strategy / plans</b></p>	<ul style="list-style-type: none"> <li>• To roll out training in capacity assessment, best interest decision-making, treatment escalation planning and appropriate application of DOLS orders for professionals working in rehabilitation medicine.</li> <li>• To provide practical support for more complex decision-making, including the provision of second opinions regarding decisions to give or withhold life-sustaining treatment as appropriate and in line with patient's own likely wishes.</li> </ul>

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