

Prolonged Disorders of Consciousness (PDOC) and the Sensory Modality Assessment and Rehabilitation Technique (SMART): Questions you may have and what to expect

Information for families, friends and carers



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1. What is SMART and why is a SMART assessment conducted?

SMART stands for 'Sensory Modality Assessment and Rehabilitation Technique'. It is a standardised tool recommended by The Royal College of Physicians. It provides specialist assessment of awareness and potential to communicate for those individuals in a prolonged disorder of consciousness.

A prolonged disorder of consciousness is a term referring to those individuals who remain in a coma, vegetative state (VS) or in a minimally conscious state (MCS) following a severe brain injury. The Royal College of Physicians provides the following definitions for these terms:

Coma	A state of unrousable unresponsiveness, lasting more than six hours in which a person cannot be awakened; fails to respond normally to painful stimuli, light or sound; lacks a normal sleep-wake cycle; and does not initiate voluntary actions.
Vegetative state (VS)	<p>A state of wakefulness without awareness in which there is preserved capacity for spontaneous or stimulus-induced arousal, evidenced by sleep-wake cycles and a range of reflexive and spontaneous behaviours.</p> <p>VS is characterised by complete absence of behavioural evidence for self- or environmental awareness.</p>
Minimally conscious state (MCS)	<p>A state of severely altered consciousness in which minimal but clearly discernible behavioural evidence of self- or environmental awareness is demonstrated.</p> <p>MCS is characterised by inconsistent, but reproducible, responses above the level of spontaneous or reflexive behaviour, which indicate some degree of interaction with surroundings.</p>

Emergence from MCS is signalled by the recovery of reliable and consistent responses.

2. What will happen before your relative/friend's admission to Walkergate Park?

A pre-assessment will occur before confirming your relative/friend's admission to allow for a better understanding of their current presentation and care needs.

Before your relative/friend's admission, you are more than welcome to visit Walkergate Park to learn more about the ward environment, meet the staff and discuss how they will be cared for during their admission.

The environment for your relative/friend is very important and whilst you may feel that it is taking an extended period of time for them to be admitted, this is to ensure that we can provide the necessary care to meet their individual needs and keep them safe.

3. What will happen on admission?

During the first few weeks of admission the multidisciplinary team at Walkergate Park – i.e. medical staff, nursing staff, physiotherapist, occupational therapist, speech and language therapist, dietitian – will conduct their assessments and early interventions. The aim is to optimise the physical condition of your relative/friend and environmental factors. This is to ensure they are able to respond in the best possible way when assessing their level of consciousness.

Multidisciplinary assessment and management may cover any of the following areas:

- Health monitoring
- Spasticity management
- 24 hour seating and positioning
- Pain management
- Skin and pressure area management
- Bowel and bladder management
- Nutrition review and management
- Swallowing assessment
- Tracheostomy management (if indicated)
- Medical/pharmacological management

In addition, it is crucial to consider your relative/friend's environment and daily activities. Patients with severe brain injury often demonstrate altered sleep/wake cycles and limited capacity for information processing. This means that they may be unable to make sense of too much sensory information at once, or get easily overwhelmed by constant stimulation. Therefore, the multidisciplinary team may consider implementing a structured timetable which includes both regular activities and rest periods.

Activities may include therapy interventions, personal care interventions, family/friends visiting, watching television or listening to music. Activities will be chosen during the stimulation periods that are appropriate to your relative/friend's likes and interests. Just as important as regular activities is the building in of regular rest periods throughout the day to alternate with activity times. Good quality rest can only be achieved if there is no stimulation at all, i.e. lying on the bed with no/minimal background noise, no music or television on.

There will be two SMART assessors working with your relative/friend – a speech and language therapist and an occupational therapist. They will arrange to meet with you to discuss the SMART process in more detail before commencing the assessment. They will be happy to answer any questions and concerns you may have at any time.

The SMART assessors will conduct screening assessments in order to determine whether a SMART assessment is indeed indicated, and they will liaise with the rest of the multidisciplinary team to decide the best time to commence the formal SMART assessment.

4. What will happen in physiotherapy sessions?

In order to ensure your relative/friend is able to participate in the SMART assessment to the best of their ability physiotherapy sessions are timetabled with a physiotherapist and/or physiotherapy support worker to prepare for the SMART assessment.

Physiotherapy sessions are likely to involve assessment and provision of a suitable wheelchair to help your relative/friend to sit comfortably and well supported. A wheelchair from Walkergate Park is often provided on loan whilst community wheelchair services are contacted to request them to provide a wheelchair for longer term use if needed.

Photographs may be taken of your relative/friend in bed and in their wheelchair to advise all staff on how best to position him/her. This information is used to develop a 24 hour postural management plan. Your relative/friend will also be assessed for the presence of joint stiffness and of muscle spasticity (increased muscle tone). The management of this may include the use of postural equipment, splinting, serial casting, orthotic provision and liaising with the medical team regarding any appropriate medical interventions, for example medication changes.

If at any point during admission your relative/friend requires support with respiratory management (for example if they develop a cough or chest infection) the physiotherapist will provide this in collaboration with the rest of the multi-disciplinary team to manage this in the best way possible. Examples of how your relative/friend may be supported with their

respiratory management are: changes in position, hands-on techniques or suctioning.

Some physiotherapy sessions may take place in the physiotherapy gym however it is likely that most sessions will take place on the ward alongside nursing staff to assist them with day to day postural management of your relative/friend.

During the remainder of your relative's admission physiotherapy input can vary. Once it is deemed that your relative/friend is in an optimal physical condition it is likely that physiotherapy input would reduce to allow the SMART assessment to take priority. The physiotherapist will continue to monitor any physical changes during this time and continue to support the 24 hour postural management plan in place. If you would like to be involved in the postural management of your relative/friend, for example putting on splints or helping with stretches, your physiotherapist can support you to do this if appropriate. The physiotherapist will also spend time supporting handovers to care teams in preparation for discharge.

5. How is the SMART assessment conducted?

The SMART assessment is undertaken over ten sessions within a three week period. SMART sessions are usually conducted while sitting in the SMART room to ensure a distraction-free environment to optimise a person's responses during the assessment.

SMART consists of both a formal and informal component. During the formal component the individual is observed to see how they react to stimulation of all five senses; smell, sight, hearing, taste and touch, one at a time.

Reactions are graded into five levels:

1. No response at all
2. Responses occurring at reflex level (non-purposeful, spontaneous response over which the client has no control)
3. Withdrawal (turning or pulling away from a stimulus)
4. Localising (finding the stimuli and focusing on it)
5. Ability to differentiate between two different stimuli.

The informal component of SMART involves family, friends and carers recording their observations of the individual during day to day activities. This is then considered as part of the analysis.

6. When will you get updates regarding progress and outcome of the SMART assessment?

Until all of the SMART assessment sessions are completed and analysed, the assessors will not be able to give you specific feedback relating to the assessment results.

On completion and analysis of the SMART assessment the SMART assessors will meet with you to explain the outcome of the assessment and what this may mean in regards to recommendations for the future. You will also be given the opportunity for updates on a regular basis with your relative/friend's multidisciplinary team. Please do not hesitate to get in contact with any member of the team for general feedback or if you have any questions.

7. How can you help or be involved?

We appreciate that you know your relative/friend the best and that you may like to be involved in their care whilst you are visiting them. You can do this by maintaining a quiet regulated environment for them while visiting with the TV and radio switched off and noise volume kept as low as possible. We would ask you to follow any guidelines put in place by the rehabilitation team in respect of positioning, splints etc.

Whilst we appreciate that you may wish to bring in gifts and personal possessions (i.e. posters, fluffy toys, cushions etc.) to make the room more homely, we ask that you keep them to a minimum so as not to overstimulate them. We may ask you to bring in specific items (i.e. labelled photographs, favourite perfume, mobile phones) which can be useful during a treatment session.

During your visit be very mindful that even though you may not be getting a response from your relative/friend do not assume that they cannot hear you. Try not to have conversations about them or discuss things that you would not wish them to know about in their presence.

If there is more than one person visiting, only one person should speak at a time and if possible should try not to touch the person at the same time. This is to avoid them becoming overstimulated. Speak slowly and use simple language, giving at least 20 seconds for the person to respond before continuing.

If you notice any new or meaningful responses please report them to one of the allocated SMART assessors.

8. What will happen after the SMART assessment?

If the outcome of the SMART assessment indicates a diagnosis of vegetative state the focus will be on discharge planning. This may mean identifying a suitable discharge destination/care setting. The multidisciplinary team will seek to ensure adequate handovers are provided with guidelines to improve health management and to maximise quality of life.

If the outcome of the SMART assessment indicates a diagnosis of minimally conscious state and it is felt that your relative/friend may be ready to benefit from a SMART treatment programme followed by reassessment, they would move to the Minimally Conscious Treatment Programme, with a maximum overall length of stay of six months.

If your relative/friend is responding consistently at level 5 (differentiating response) or demonstrating clinical criteria for emergence from the minimally conscious state, they would transfer to a Neuro-rehabilitation Programme, again with a maximum overall length of stay of six months.

9. How long will my relative/friend stay at Walkergate Park?

The average length of stay for patients admitted for a SMART assessment is 12 weeks. Within this time we aim to complete the assessment, discuss the outcomes with you and identify a suitable discharge destination.

10. How will you be supported with discharge planning?

You will be supported through the discharge process by members of your relative/friend's treating team. Others who may be involved are a discharge coordinator from Walkergate Park, a social worker and a member of the Continuing Health Care team.

Discharge planning begins during the assessment phase of your relative/friend's stay at Walkergate Park; you will be given a discharge date early on during admission (i.e. three weeks into their admission at the latest). You will be asked for consent to a referral to Adult Social Care to request a social worker to support the discharge process and help you to identify a suitable care facility or community care team (i.e. carers who can provide care to your relative/friend at home).

You will be asked to assist in the completion of a Continuing Healthcare Needs checklist. This is the process that looks at how the care your relative/friend receives will be paid for when they leave hospital. It might be possible for the NHS to contribute towards the costs of ongoing care where there are health care needs that must be met.

Your views and those of other family members and/or close friends are important and you will be fully involved in the discharge process. Your relative/friend will be discharged when a suitable care and support package is in place to meet their needs. This could be in a care home or in their own home. There may be occasions when your relative/friend will need to be transferred into an interim placement or back to the referring hospital but this will be discussed with you should this be required.

Before discharge, the receiving care team will be invited to meet with the treating team at Walkergate Park so that information about their needs, care and treatment can be fully explained to them.

11. What happens after discharge?

Your relative/friend will be reviewed by Walkergate Park approximately three months after discharge.

It is important for your relative/friend to be monitored for any changes to their level of responsiveness. Should any improvements in their awareness and level of responsiveness occur, they should be referred back to Walkergate Park.

12. References/further reading

Royal College of Physicians' Guidelines for Prolonged Disorders of Consciousness (2013).

The Knowledge Centre at Walkergate Park is a useful resource for further information.

In addition please refer to these useful links to find out more information about PDOC or SMART:

- <http://www.rhn.org.uk/our-work/our-services/assessments/smart/introduction-to-smart/>
- <http://www.healthtalk.org/> (enter search term 'minimally conscious')
- <https://www.headway.org.uk/about-brain-injury/individuals/effects-of-brain-injury/coma-and-reduced-awareness-states/>

Useful links to find out more information about the discharge process:

- <https://www.gov.uk/government/publications/nhs-continuing-healthcare-and-nhs-funded-nursing-care-public-information-leaflet>
- <http://www.nhs.uk/Conditions/social-care-and-support-guide/Pages/nhs-continuing-care.aspx>
- <http://www.carehome.co.uk>



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