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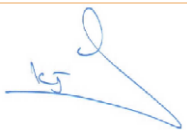
Approval Process

	Name	Title	Institution	Date	Signature
Written by	Nuha Issa Al-Shaaili	Royal Hospital	Ministry of Health	February /2020	Nuha Issa Al-Shaaili
Reviewed by	National Rehabiltation Taskforce For Policeis & Guidelines devlopment		Ministry of Health	March /2020	National Rehabiltation Taskforce For Policeis & Guidelines devlopment
Validated by	Dr. Qamra Al-Sariri	DG of QAC	Ministry of Health	October /2020	Dr. Qamra Al-Sariri
Approved by	Dr. Kadhim Jaffar Sulaiman	DG of SMC	Ministry of Health	October /2020	

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Nuha Issa Al Shaili	Royal Hospital
Jokha Salim Al Abrawi	Al Nahdha Hospital
Samiya Al Raisi	Directorate General of specialized Medical Care
Idris Al Baloushi	Directorate General of specialized Medical Care
Asaad Al Qasmi	Directorate General of specialized Medical Care

Acronyms:

ADL	Activities of Daily Living
DGSMC	Directorate General of Specialize Medical Center
OT	Occupational Therapist
CIMT	Constraint Induced Movement Therapy
MoCA	Montreal Cognitive Assessment
EMG	Electromyography
HCWs	Health Care Workers

Occupational Therapy Procedure for Stroke Rehabilitation

1. Introduction

The focus of occupational therapy is to help individuals achieve health, well-being, and participation in life through engagement in occupations (i.e., activities). Occupational therapy practitioners collaborate with clients and their families or caregivers to determine what activities are necessary, meaningful, and/or relevant to them. Based on their education and clinical expertise, and the philosophical basis of the profession, occupational therapy practitioners are uniquely able to analyze the interactions among the person, the environments in which they need to function, and the occupations they need or want to perform. Many stroke survivors have changes in their physical, cognitive, and emotional abilities that impede them from independently performing their daily activities related to work, school, parenting, or leisure. The delivery of occupational therapy is highly related to cost-reduction of readmission and improves the quality of life post stoke.

2. Scope

This procedure will be of particular interest to occupational therapists working in stroke rehabilitation and practice in the government in the Sultanate of Oman.

3. Purpose

3.1 To standardize the procedure of Occupational Therapy for stroke rehabilitation

3.2 To provide the tools of the occupational therapy assessment and management of patients with stroke

3.3 To provide the criteria followed to reduce the risk of another stroke.

4. Definitions

4.2 **Activities of Daily Living (ADL):** The tasks of everyday life. These activities include eating, dressing, getting into or out of a bed or chair, taking a bath or shower, and using the toilet. Instrumental activities of daily living are activities related to independent living and include preparing meals, managing money, shopping, doing housework, and using a telephone.

4.3 **Apraxia:** Apraxia (called "dyspraxia" if partial) is a neurological disorder characterized by loss of the ability to execute or carry out skilled movements and gestures, despite having the desire and the physical ability to perform them

4.4 **Spasticity:** is a condition in which certain muscles are continuously contracted. This contraction causes stiffness or tightness of the muscles and can interfere with normal movement, speech and gait

5. Procedures

5.2 Amount, intensity and timing of rehabilitation

5.2.1 Amount and intensity of rehabilitation

5.2.1.1 Rehabilitation should be structured to provide as much practice as possible within the first six months after stroke

5.2.1.2 For patients undergoing active rehabilitation, as much physical therapy (physiotherapy and occupational therapy) should be provided as possible with a minimum of one hour active practice per day at least five times per week.

5.2.1.3 Task-circuit class training or video self-modelling should be used to increase the amount of practice in rehabilitation

5.2.1.4 Patients should be encouraged by staff members, with the help of their family and/ or friends if appropriate to continue to practice skills they learn in therapy sessions throughout the remainder of the day.

5.2.2 Timing of rehabilitation

5.2.2.1 Patients should be mobilized as early and as frequently as possible

5.2.2.2 Upper limb training should commence early and CIMT is one approach that may be useful within the first week after stroke.

5.3 Sensorimotor impairment

5.3.1 Weakness

One or more of the following interventions should be used with people with reduced strength

5.3.1.1 Progressive resistance exercise

5.3.1.2 Electrical stimulation

5.3.2 **Loss of sensation**

5.3.2.1 Sensory-specific training can be provided for stroke survivors who have sensory loss

5.3.3 **Visual field loss**

5.3.3.1 Stroke survivors who appear to have difficulty with recognizing objects or people should be screened using specific assessment tools, and if a visual deficit is found, referred for comprehensive assessment by relevant health professionals

5.4 Physical activity

5.4.1 **Upper limb activity**

All people with difficulty using their upper limb should be given the opportunity to undertake as much tailored practice of upper limb activity (or components of such tasks) as possible.

5.4.1.1 Interventions which can be used routinely include:

5.4.1.1.1 Constraint- induced movement therapy n selected people

5.4.1.1.2 Repetitive task-specific training

5.4.1.1.3 Mechanical assisted training

5.4.1.2 One or more of the following interventions can be used in addition to those listed above

5.4.1.2.1 Mirror therapy

5.4.1.2.2 Electrical stimulation

5.4.1.2.3 Bilateral training

5.5 Activities of daily living

5.5.1 Patients with difficulties in performance of daily activities should be assessed by a trained clinician.

5.5.2 Patients with confirmed difficulties in personal or extended ADL should have specific therapy (e.g. task specific practice and trained use of appropriate aids) to address his issues.

5.5.3 Staff members and the stroke survivor and/or their carer/ family should be advised regarding techniques and equipment to maximise outcomes relating to performance of daily activities and sensorimotor, perceptual and cognitive capacities.

5.6 Cognition

5.6.1 Assessment of cognition

5.6.1.1 All patients should be screened for cognitive and perceptual deficits using validated and reliable screening tools (The MoCA assessment is recommended as an Arabic version is available)

5.6.2 Memory

Any patient found to have memory impairment causing difficulties in rehabilitation or adaptive functioning should:

5.6.2.1 Have their nursing and therapy sessions tailored to use techniques which capitalise on preserved memory abilities.

5.6.2.2 Be assessed to see if compensatory techniques to reduce their disabilities, such as notebooks, dairies, electronic organizers and alarms if applicable.

5.6.2.3 If the patient is illiterate or unable to use electronic devices, family support will be essential to aid with the memory difficulties

5.6.2.4 Be taught approaches aimed at directly improving their memory

5.6.2.5 Have therapy delivered in an environment as like the patient's usual environment as possible to encourage generalization.

5.6.2.6 Advice and educate the family regarding techniques to improve cognitive function.

5.7 Limb apraxia

5.7.1 For people with confirmed apraxia, tailored interventions (e.g. strategy training) can be used to improve ADL.

5.8 Agnosia

5.8.1 The presence of agnosia should be assessed by appropriately trained personnel and communicated to the stroke team.

5.9 Neglect

5.9.1 Any patient with suspected or actual neglect or impairment of spatial awareness should have a full assessment using validated assessment tools.

5.9.2 Patients with unilateral neglect can be trialed with one or more of the following interventions:

5.9.2.1 Simple cues to draw attention to the affected side

5.9.2.2 Visual scanning training in addition to sensory stimulation

5.9.2.3 Eye patching

5.9.2.4 Mental imagery training or structured feedback.

5.10 Spasticity

5.10.1 Interventions to decrease spasticity other than an early comprehensive therapy program should NOT be routinely provided for people who have mild to moderate spasticity (i.e. spasticity that does not interfere with a stroke survivor's activity or personal care).

5.10.2 In stroke survivors who have persistent moderate to severe spasticity (i.e. spasticity that interferes with activity or personal care), electrical stimulation and/or EMG biofeedback can be used.

5.11 Contracture

5.11.1 Conventional therapy (i.e. early tailored interventions) should be provided for stroke survivors at risk of or who have developed contracture.

5.11.2 For stroke survivors at risk of or who have developed contractures and are undergoing comprehensive rehabilitation, the routine use of splints or prolonged positioning of muscles in a lengthened position is NOT recommended.

5.11.3 Overhead pulley exercise should NOT be used routinely to maintain range of motion of the shoulder.

5.11.4 Serial casting can be used to reduce severe, persistent contracture when conventional therapy has failed.

5.12 Subluxation

5.12.1 For people with severe weakness who are at risk of developing a subluxed shoulder, management should include one or more of the following interventions:

5.12.1.1 Electrical stimulation

5.12.1.2 Firm support devices

5.12.1.3 Education and training for the patient, family/ carer and clinical staff on how to correctly handle and position the affected upper limb.

5.12.2 For people who have developed a subluxed shoulder, management may include firm support devices to prevent further subluxation.

5.13 Swelling of the extremities

5.13.1 For people who are immobile, management can include the following interventions to prevent swelling in the hand and foot:

5.13.1.1 Dynamic pressure garments

5.13.1.2 Electrical stimulation

5.13.1.3 Elevation of the limb when resting

5.13.2 For people who have swollen extremities, management can include the following interventions to reduce swelling in the hand and foot:

5.13.2.1 Dynamic pressure garments

5.13.2.2 Electrical stimulation

5.13.2.3 Continuous passive motion with elevation

5.13.2.4 Elevation of the limb when resting

5.14 Fatigue

5.14.1 Therapy for stroke survivors with fatigue should be organized for periods of the day when they are most alert.

5.14.2 Stroke survivors and their families/carers should be provided with information and education about fatigue; including potential management strategies such as exercise, establishing good sleep patterns, avoid sedating drugs and too much alcohol.

5.15 Mood disturbance

5.15.1 Patients with suspected altered mood (e.g. depression, anxiety, emotional lability) should be assessed by trained personnel using a standardised and validated scale.

5.15.2 Psychological strategies (e.g. problem solving, motivational interviewing) can be used to prevent depression after stroke.

5.15.3 Psychological (cognitive-behavioural) intervention can be used for stroke patients who are depressed.

5.16 Return to work

5.16.1 Stroke survivors who wish to work should be offered assessment (i.e. to establish their cognitive, language and physical abilities relative to their work demands), assistance to resume or take up work, or referral to a supported employment service (Clinical Guidelines for Stroke Management, 2010)

6. Responsibilities

6.1 Occupational therapists are responsible for:

6.1.1 Request required assessments to ensure assessing the physical abilities, cognition and mental health of the stroke survivor.

6.1.2 Document and discuss the progress of the patient with the patient, caregivers and the multidisciplinary team.

6.1.3 Conduct joint sessions with other HCWs when feasible.

6.2 Medical doctors are responsible for:

6.2.1 Ensure referring the patients to the occupational therapy services and consultants/ residents to be aware of the OT role.

6.3 Rehabilitation Department Head of Department are responsible for:

6.3.1 Ensure that guideline is conveyed to all OTs working with stroke survivors.

6.3.2 Facilitate the provision of required assessments and tools to deliver the occupational therapy service.

7. Document History and Version Control

Document History and Version Control			
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02			
03			
Written by	**Reviewed by**	**Approved by**	
Nuha Issa Al-Shaaili	National Rehabiltation Taskforce For Policeis & Guidelines devlopment	Dr.Kadhim Jaffar Sulaiman	

8. Related Document

There is no related document for this procedure

9. References

Title of book/ journal/ articles/ Website	Author	Year of publication	Page
American Occupational Therapy Association. (2014). Occupational therapy practice framework: Domain and process (3rd ed.). *American Journal of Occupational Therapy, 68,* S1–S48. doi:10.5014/ajot.2014.682006	AOTA	2014	
Clinical Guidelines for Stroke Management	National Stroke Foundation	2010	