

The Occupational Therapy Role in Acute Spinal Stroke at Joondalup Health Campus: A Clinical Case Example

Introduction: Joondalup Health Campus (JHC) uses the clinical practice standard (CPS)¹ to provide guidance on best available evidence in the management of patients with an acute spinal injury. The CPS recommends occupational therapy (OT) input for fabrication of thermoplastic splints and provision of accessories for activities of daily living¹. However, the role of OT with spinal stroke patients is vastly more diverse based on the complex clinical sensorimotor, functional, positioning & pressure area needs². In addition to this, the social-emotional impact of spinal stroke and need for patient and carer education is significant³. Without early intervention, hospital acquired injuries and chronic deficits are more likely to occur resulting in poor patient outcomes^{2, 3}.

Aim: The purpose of this case report was to describe the comprehensive occupational therapy interventions and outcomes for a patient presenting to Joondalup Health Campus (JHC) following a spinal stroke injury.

Intervention: Table 1: Assessment and intervention of clinical areas

Area	Assessment	Intervention
Upper limb	<ul style="list-style-type: none"> Monofilament sensory assessment Spasticity assessment Tardieu assessment GAS lite goal setting assessment Active range of motion assessment Manual muscle testing Collaboration with Senior OT Stroke & Specialist Coordinator 	<ul style="list-style-type: none"> Functional & sensory upper limb therapy program Functional e-stim application Provision of bilateral thermoplastic resting splints & oedema gloves Oedema management plan & skin integrity reviews Education to health staff on upper limb positioning in wheelchair and bed space Occupational therapy assistant upper limb program Consultant neurologist input for consideration of Botox due to increased tone in the left upper limb
Equipment/Seating	<ul style="list-style-type: none"> Seating assessment Specialist equipment assessment 	<ul style="list-style-type: none"> Collaboration with Fiona Stanley Hospital (FSH) rehabilitation technology on provision of tilt in space electric bariatric wheelchair with customisations Carer and nursing seating education
Function	<ul style="list-style-type: none"> Initial assessment Functional assessment 	<ul style="list-style-type: none"> Collaboration with family for baseline function PADL/transfer retraining
Pressure care	<ul style="list-style-type: none"> Pressure care assessment 	<ul style="list-style-type: none"> Provision of pressure relieving mattress/hospital bed Adjustments to thermoplastic splints & wheelchair Liaison with wound care nurse specialist
Goal setting	<ul style="list-style-type: none"> Gas-Lite goal development assessment 	<ul style="list-style-type: none"> Liaison with multi-disciplinary team (MDT) Patient and family goal setting development Family meeting with MDT Carer education to family on OT role
NDIS	<ul style="list-style-type: none"> Liaison with NDIS Social Worker (SW) 	<ul style="list-style-type: none"> Initiated on NDIS application planning with SW Liaison with FSH SW regarding JHC OT identified potential functional requirements

Background: 42 year old female admitted to JHC in February 2022. The patient initially presented with paraesthesia, chest and abdominal pain. An MRI spine confirmed embolic spinal cord infarct C2-T10. The patient presented as tetraplegic initially, incomplete. The patient was transferred to intensive care unit (ICU) for respiratory requirements and remained in ICU at JHC for 3 months and during this time received extensive OT input.



Discussion: The CPS lacks detailed information on the role and impact OT has with spinal stroke patients. This case reports demonstrates the specialised OT interventions implemented during the acute phase of a spinal stroke patient's journey, significantly improving the likelihood of positive long term functional, sensory, motor and psychological outcomes for the patient.

Further clinical studies may inform future clinical practice standards regarding the role and speciality areas of OT for this complex patient group.

Results: Occupational Therapists have a significant role in the management of spinal stroke patients in the acute setting. Without this early intervention, the risk of hospital acquired injury and poor long term outcomes increases. Further research should be conducted regarding the role of occupational therapy in the management of acute spinal cord injury to inform the development of future clinical practice standards.

References:

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