

### The APA Valuing Skills Series

# The role of physiotherapy in stroke rehabilitation



# Patient journey: stroke rehabilitation

#### **Post-acute care services**

Stroke rehabilitation focuses on rehabilitation goal setting, assessment, therapies and interventions to promote optimal ongoing physical, cognitive and emotional recovery for stroke survivors.

#### Who is in the multidisciplinary team?

The team of staff looking after stroke patients is called the multidisciplinary team. They each have a distinct role in the management of the stroke patient.



#### Rehabilitation treatment provided by a physiotherapist

**Physiotherapists** play a key role in the multidisciplinary team while the patient is in hospital and afterwards. The healthcare team provides the stroke patient with a rehabilitation program to help them become as mobile and as independent as possible. As part of rehabilitation, the physiotherapist will provide treatment tailored to the specific needs of the individual. For patients recovering after stroke, physiotherapists have a leading role in supporting them in the post-acute phase. Impairments after stroke may include loss of strength, coordination and sensation; spasticity; muscle stiffness and joint contracture. A physiotherapist will assess these impairments to ascertain how much they are causing movement difficulties and then devise, monitor and progress an appropriate rehabilitation program.

HIGHEST ACUITY LOWEST ACUITY

#### **Acute care**

The physiotherapist is a core member of the **acute medical team** with a key role in initial diagnosis, rehabilitation and recovery of function.

#### **Subacute**

Inpatient rehab

Day rehab

**Outpatient rehab** 

The **physiotherapist** has a clinical leadership role in management and rehab in the **subacute phase**.

Physiotherapists have an autonomous role in assessing, diagnosing, treating and discharging patients.

#### **Post-acute**

In-home rehab

**Chronic** 

**Community rehab** 

The **physiotherapist** manages patients and supervises other health providers in the **post-acute** and chronic phases.

The **exercise physiologist** works across the recovery of the post-acute and chronic phases when it is safe to do so. **Physiotherapists** and **exercise physiologists** often work together as part of multidisciplinary teams across the post-acute and chronic phases.



# Post-acute care services

The **patient journey** outlined here maps all aspects of the clinical patient experience in detail, based on patient complexity. These scenarios draw on real patient cases and aim to guide safe and clinically appropriate care.

Peter is a **67-year-old man** who had a stroke, spent four weeks in inpatient rehab and is now at home and attending outpatient rehab. Initially, MRI showed a left pontine infarct and a right parietal infarct. His initial impairments were weakness and loss of coordination in his right arm and leg.

Peter is a civil engineer who ran his own company for many years and now works as a conflict resolution consultant on large construction projects. The demands of this job include inspecting construction sites and attending onsite meetings. This requires Peter to walk on building sites over uneven surfaces and up and down slopes.

## ONE MONTH AFTER STROKE



#### Peter is now at home and attending outpatient rehab.

The **general practitioner** provides ongoing monitoring of Peter's international normalised ration and risk factors for stroke.



## Peter has been continuing to participate in ongoing physiotherapy to improve his mobility.

He needs to be able to walk over uneven ground and slopes and to manage stairs without a railing if he is to safely return to work.





#### Physiotherapy assessment finds the following activity limitations:

- slow and unsafe walking due to slow swing phase and balance issues in the right leg
- inability to ascend/descend stairs without using a railing due to decreased leg control
- inability to write legibly due to poor force control in right hand
- significant weakness in right plantarflexors, quadriceps and hip abductors, creating gait impairments
- significant coordination impairments in the right leg and hand.

#### Peter and the physio identify the following goals:

- to walk at normal walk speeds, ie, 1.2 m/s (currently 0.9 m/s)
- to walk on uneven surfaces and slopes with no loss of balance
- to be able to walk up and down stairs with no rail
- to be able to write legibly at usual speeds.



## The physiotherapist works on the following with Peter during one-to-one sessions:

- balance exercises targeting balance on right leg and speed of swing phase
- part and whole task training of walking and stairs
- · handwriting exercises.

The physiotherapist structures the **following additional practice** in the therapy area:

- strengthening in weight-bearing for right leg muscles
- treadmill walking targeting increased speed of swing phase.

#### And the following home exercise program:

- part practice—rapid swing phase
- step-ups and step-through on stairs.

# TWO MONTHS AFTER STROKE

#### With physio Peter is able to:

- walk at 1.1 m/s on even surfaces
- walk on uneven surfaces and mild slopes with no loss of balance
- ascend and descend a flight of stairs without using a rail
- continue to work on his right push-off to further increase his walking speed. He is now starting to work on return to jogging.





## THREE MONTHS AFTER STROKE

#### Goals achieved at end of management pathway

When Peter is discharged from physiotherapy, he is able to:



negotiate stairs in a normal manner



walk at 1.2 m/s on varied surfaces and walk on all slopes with no loss of balance



jog two kilometres



write legibly at usual speed.

Peter returned to full-time work.