

# Rehabilitation after Stroke

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# What is a stroke?

- Blood supply to the brain is suddenly disrupted
- Occurs in 2 main ways:
  - (1) Ischaemic stroke (blocked artery)
  - (2) Haemorrhagic stroke (bleed in brain)



# Rehabilitation-definition

“Stroke rehabilitation is a progressive, dynamic, goal orientated process aimed at enabling a person with an impairment to reach their optimal physical, cognitive, emotional, communicative and/or social functional level”

Heart and Stroke Foundation of Ontario



# International Classification of Functioning, Disability and Health (ICF)

- Impairments: problems in body function or structure such as a significant deviation or loss (eg weakness)
- Activity limitations: are difficulties an individual may have in executing activities (eg reaching for a cup, walking)
- Participation restrictions: are problems an individual may experience in involvement in life situations (eg going shopping, playing sport)



# Australian Stroke Statistics

- Approx 60,000 new or recurrent strokes a year
- Half are over 75 yrs
- 88% of those who survive live at home, most with an activity limitation
- Financial burden is \$2.14 billion a year
- Effective intervention aims to promote maximal recovery and prevent costly complications and subsequent stroke

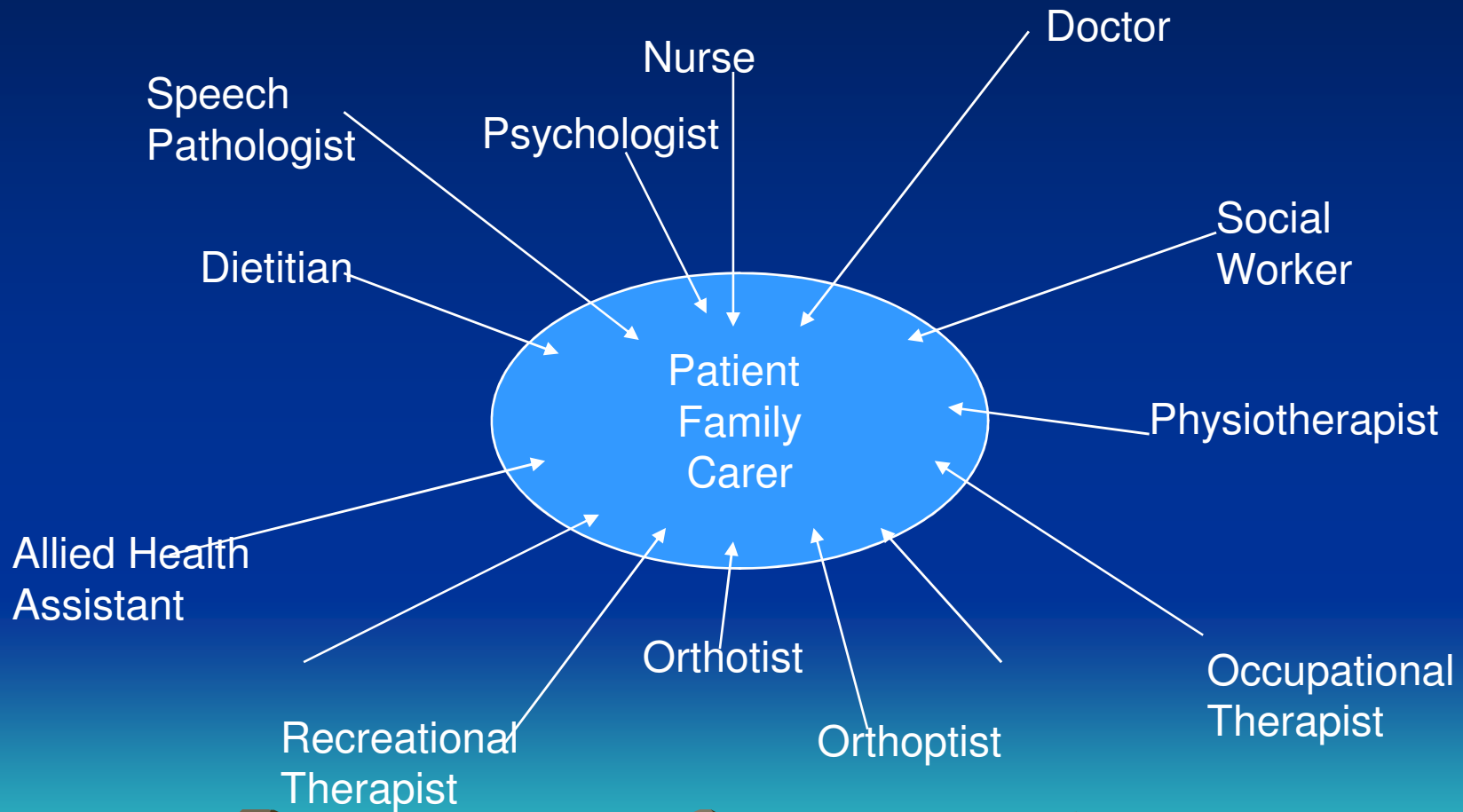


# Organisation of services – continuum of care

- All people with stroke should be treated in a stroke unit with a multidisciplinary team
- Safe transfer of care from hospital to community
- Carer training
- Community rehab and follow-up services
- Long term rehabilitation



# “The Team”



# Team Meetings

- Case conference
- Family conference
- Goal setting:
  - S-specific
  - M-easurable
  - A-attainable
  - R-ealistic
  - T-ime frame



# Amount, Intensity and Timing of Rehabilitation

- Structured to provide as much practice as possible within first 6 months after stroke
- Minimum of one hour of active practice a day at least 5 days a week
- Early mobilisation, as frequently as possible
- Upper limb training should commence early



# Sensorimotor Impairments

- Weakness – strengthening exercises
- Dysphagia (swallowing difficulty) – modified diet, monitor, speech pathology intervention
- Loss of sensation – sensory specific training
- Visual field loss – ‘homonymous hemianopia’ can be improved with prism glasses



# Physical Activity

- Must be task specific and repetitive
- Retrain functional tasks  
eg. Rolling in bed, sitting, standing up, walking
- Whole and part practice
- Upper limb activity:
  - constraint induced movement therapy (CIMT)
  - electrical stimulation
  - mirror therapy
  - robotics



# Activities of Daily Living (ADL)

- Eg, showering, toileting, dressing
- Task specific practice
- Training in use of appropriate aids



# Communication

- Aphasia – impairment of language affecting production or comprehension of speech and ability to read and write
- “Talk time” group at Royal Rehab
- Enhance communication by using alternative methods eg communication board



# Cognition

(thinking, memory, problem solving)

- Attention and concentration training
- Nursing and therapy sessions tailored to use techniques which capitalise on preserved memory abilities
- Use of notebooks, diaries, audio alarms
- Unilateral neglect (of left side due to (R) hemisphere lesion):
  - cues to draw attention to affected side
  - visual scanning



# Managing Complications

- Nutrition and hydration
- Contracture
- Shoulder subluxation
- Reduced cardiovascular fitness
- Fatigue
- Incontinence
- Mood
- Behavioural change
- Falls



# Community Participation and Long Term Recovery

- Self management
- Driving
- Leisure
- Return to work
- Sexuality
- Support – peer and carer



# Summary: Stroke Rehab

- Commence as early as possible
- Involves a team of health professionals
- Practice, practice, practice (use of allied health assistants)
- Continues after discharge from hospital



# References

- Clinical Guidelines for stroke Management 2010:  
[www.strokefoundation.com.au](http://www.strokefoundation.com.au)
- Stroke Recovery Association, NSW:  
[www.strokensw.org.au](http://www.strokensw.org.au)

