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Factors that influence functional independance post stroke

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CHAPTER 1

1.1 Background

There are no accurate incidence or prevalence data available on stroke in South Africa as a whole (Fritz, 1997). However Steyn et al. (1992) established that stroke is the highest cause of death due to chronic diseases of lifestyle in South Africa. About 50% of all patients who have had a stroke have some residual physical disability (Ashburn, 1999) and about 66% of stroke survivors in South Africa need help with at least one activity of daily living (Connor et al., 2004).

The World Health Organization defines stroke as 'rapidly developing clinical signs of focal (or global) disturbance of cerebral function, with symptoms lasting 24 hours or leading to death, with no apparent cause other than vascular origin' (WHO MONICA, 1988). Patients who have had a stroke can be categorized as having an ischaemic stroke (IS), subarachnoid haemorrhage or intracerebral haemorrhage (ICH) depending on the results of brain imaging or autopsy findings. There are several ways of classifying ischaemic stroke subtypes but the most commonly used in South Africa is the one proposed by Bamford et al. (1991) which subdivides ischaemic stroke into total anterior circulation infarction (TACI), partial anterior circulation infarction (PACI), posterior circulation infarction (POCI), and lacunar circulation infarction (LACF).

There has been an improvement in health delivery since the 1950's, but despite these improvements, stroke remains a major source of functional disabilities (Ashburn, 1999). The sequelae after stroke may be motor, sensory, perceptual or cognitive deficits, and these impairments can have various impacts on individual functioning by generating disabilities and affecting rehabilitation potential (Louisette et al., 2001).

The average length of hospitalisation following stroke at the Chris Hani Baragwanath hospital was found to be 12 days (Hale & Eales, 1998). The short hospital length of stay results in most patients being discharged from the

hospital before they can be functionally independent. Most patients who have had a stroke walk on average at three months after stroke (Sabine et al., 2002). This shows that most of these patients will be discharged before they become functionally independent due to the short inpatient rehabilitation time, and this will thus affect their functional independence.

Following a stroke, the degree of functional independence depends on many factors. Patients with the same diagnosis end up with different functional outcomes depending mainly on the patient treatment regimen and patient characteristics (Tilling et al., 2001). A meta-analysis of all randomized studies done by Glader et al. (2001) showed that stroke unit (SU) care improves survival and functional outcome after stroke, and that the benefit is not restricted to any stroke subgroup or model of care. Horner et al. (2003) also found that stroke patients who receive prompt care in stroke rehabilitation units experienced lower mortality and better recovery of physical function in the immediate term and for at least 10 years after stroke onset.

The magnitude of disability observed in stroke survivors is believed to be dependent on the severity of neurological deficits incurred (Kelly-Hayes et al., 2003). As important, but less well understood, is the contribution of gender, older age, and the burden of other health conditions (Kelly-Hayes et al., 2003). Shoulder pain and stiffness have been found to be common secondary problems encountered post stroke (Hale et al., 1999). These problems are attributed to limitation in the ability to use the upper limb in activities of daily living and thus limiting the patient's functional level.

The stroke subtype is one of the characteristics that could be identified and compared with functional ability. A study by Paolucci et al. (2003) provided evidence of better functional progress in stroke survivors with haemorrhagic stroke when compared to ischaemic stroke. However, the inability to classify patients according to stroke subtype may not affect the results of studies because urinary incontinence, increased age, pre-stroke disability and the presence of motor impairment were associated with poorer outcome after stroke rather than subtype (Tilling et al., 2001). This study will not establish

the impact of stroke subtype on functional outcomes because it is not common practice for patients to be diagnosed/classified according to stroke subtype in the referral hospitals.

1.2 Aim of the study

To establish factors that influence functional independence of patients who had a stroke during the period November 2003 – April 2006 in Alexandra, Chiawelo and Mofolo clinics, and Chris Hani Baragwanath hospital out patient department, South Africa.

1.3 Objectives of the study:

1.3.1 To establish the degree of functional independence of patients who have had a stroke at discharge and post discharge.

1.3.2 To establish the influence of demographic, environmental, and physical factors on the functional independence of stroke patients

1.4 Significance of the study:

A study by Hale et al. (1998) has indicated that most stroke patients were discharged from hospital before they were functionally independent and that the average length of hospital stay following stroke at the Chris Hani Baragwanath hospital was 12 days. Sabine et al. (2002) also found that most patients who had a stroke walked on average three months post stroke. This indicates that most patients who have a stroke will still need physical rehabilitation post discharge from hospital.

It is hoped that information about factors that influence patient's functional independence post stroke could be used to plan the patient’s length of hospital stay, the frequency of visits to the outpatient department for rehabilitation; and to also provide patients and their caregivers with some information on the possible pattern of recovery based on the identified factors. Knowledge of the influence of community and household activities on functional independence will be used to motivate for or against participating in these activities.