

## Chapter 67

# A Social Work Approach in High-Tech Neurosurgery and Social Work Research Approaches in Health Care

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### ABSTRACT

*Psychiatric social work is inherently inter-disciplinary with an interactive bio-psycho-social model of behaviour. This chapter mainly focuses upon an innovative study in neurosurgery. Sub-arachnoid haemorrhage (SAH) is a life-threatening condition and survivors are often left with serious cognitive impairment. Patients and their carers led the design of a two-year controlled prospective study of a patient and family support service, using the Specialist Neurovascular Nurse (SNVN) to speed rehabilitation and family readjustment. Cost-effective measures found the SNVN group gained significant psychosocial and fiscal benefits when compared to the control group, thus highlighting the effectiveness of a social work approach in neurosurgery. Other studies in healthcare, including surgical patient safety, effectiveness in reducing mortality, cultural influence on suicide rates and implications for prevention, and the implications of the changing patterns of neurological mortality in Western nations, are briefly described.*

### INTRODUCTION

Psychiatric social work has always considered itself to have an interdisciplinary approach, especially in relation to health care. In part, this is because of the interactive model of the bio-psycho-social approach to the nature of human behaviour. The following studies illustrate the value of such an approach in health care because

social work, as a practice-based discipline, is a science-based art which can bring the insights of a psychosocial perspective into different areas of health care. The contexts of health care practice to be explored are hospital and after-care for neurosurgery patients and suicide prevention in mental health. The author's research suggests that it is helpful to have a social work-based service for patients and their caregivers integrated with

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any health care offered. Ideally, it is recommended that there be at least one social worker in every health care team developing such services. These services are developed using social work principles and practices which by their nature are holistic, collaborative, information sharing, and responsive to patients and their families' needs.

## **SOCIAL WORK APPROACH IN HIGH-TECH NEUROSURGERY**

This chapter begins with an innovative project in high-tech neurosurgery dealing with patient cohorts of sub-arachnoid haemorrhage (SAH), a life-threatening condition. To understand a person and their family's response to a SAH, some background and discussion of what happens to those involved is necessary.

There are probably few conditions more dramatic than that of a SAH in which, generally without warning and no previous symptoms, an aneurysm on one of the major rings of arteries in the brain bursts. Because the skull is a hard box and the brain a soft vital organ, anything that takes up extra space, be it a tumour or a bleed (haemorrhage) such as a stroke, and SAH is a type of stroke, immediately creates a potential life-threatening or seriously disabling condition. The size and position of the bleed will affect the patient physiologically and, therefore, psychosocially but will be different in virtually every patient. It impacts often dramatically because of the suddenness with which it comes upon an individual's family and their social circumstances.

A little more than 50 years ago, almost 90% of SAH patients died within days, and before modern neurosurgery many of the survivors were left with neurological damage which might include loss of speech or sensation, or paralysis ranging from one to all four limbs. At the worst, it involved a traumatic dementia. Today, whilst about 5-10% of SAH are fatal within days, if the patient is

stabilised, one of two treatments is effective. The long-standing treatment is a craniotomy, which involves a surgical opening of the skull, finding the aneurysm, and then clipping it. Whilst this is quite an invasive procedure, this is considered a total cure assuming there are no other aneurysms, although there may be varied degrees of physical weakness and impairment.

A more recent treatment is endovascular in which lines are passed through the femoral artery and up into the brain where a coil is placed within the damaged artery. Since this approach is less invasive it is used more often but as it is not always feasible craniotomies are still performed. Whichever treatment is used, if there are no other aneurysms, the patient's life-threatening condition is cured (Frazer, Ahuja, Watkins, & Cipolitti, 2007; Molyneux et al., 2009). However, mention is seldom made of the fact that 3% of all coiled patients have a re-bleed and die. This suggests that the endovascular approach still requires development as less than 1% of craniotomies have a re-bleed from a failed clip. Nonetheless, in both the retrospective and prospective studies to be described, we found that irrespective of treatment approach, there was no difference in the immediate psychosocial impact on the family of suddenly finding their loved ones in a neurosurgical unit fighting for their lives (Janes et al., 2013; Mezue, Matthew, Draper, & Watson, 2004; Pritchard, Foulkes, Lang, & Neil-Dwyer, 2001, 2004).

Following treatment, many patients develop what is now recognised as a post-traumatic stress disorder (PTSD) reaction (Noble et al., 2011; Visser-Meiley, Rhebergen, Rinkel, van Zandvoort, & Post, 2009), which had long been thought inevitable by virtue of the shock of being confronted with a sudden traumatic life-threatening disease (Buchanan, Elias, & Goplen, 2000). This was summed up by one neurosurgeon in responding to a ward sister's question, "if SAH patients are clinically cured, why do they keep returning to the neurosurgical unit?" He replied,

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