

Philosophy and Practice of Care

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1.0.Introduction

This case study presents an analysis of Mary, an 82-year-old woman who suffered a stroke 18 months ago and has since been diagnosed with vascular dementia. Dementia contributes significantly to an individual's disability and it places a significant physical, psychological and social burden on both those with the diagnosis and their caregivers. Person-centric care is essential to care provision for individuals with dementia. One way to think about this type of treatment is as treating each patient as an individual (Blake et al., 2020) or as adhering to a set of procedures that shows dignity, respect and value for the patient as a person (McCormack et al., 2021). Beyond simply identifying goals with the patient, patient-centred care also takes into account the patient's perspective and circumstances throughout the decision-making process (Byrne et al., 2020).

This essay begins with an evaluation of Mary's complex needs using Engel's biopsychosocial model. This is followed by a targeted evaluation of communication challenges faced by Mary and potential interventions which can address these issues. In line with NMC (2019) guidelines, the patient's name and associated personal data are anonymised to protect their confidentiality.

2.0.Biopsychosocial Model

The biopsychosocial model was first proposed by Engel (1997), who identified that the existing biomedical model of disease management was missing several dimensions. The model intended to shape diagnostic and treatment approaches to psychosomatic illnesses (Kusnanto et al., 2018). The biopsychosocial model has since been used for various physical and mental health disorders. For example, in the UK, the National Institute for Clinical Excellence (NICE) has called for the use of biopsychosocial model to inform clinical practice and evidence-based decisions in its guidelines for dementia care (NICE, 2022). The key biological, psychological and social factors impacting Mary's care are evaluated in this section.

Biological Factors

Mary experienced a stroke and post-recovery has been diagnosed with vascular dementia. Vascular dementia (VaD) is a result of cognitive impairment, a decline in function, neurological symptoms and associated behavioural disorders. Vascular dementia occurs when

there is cerebral tissue ischaemia which leads to gliosis and demyelination (Kalaria, 2018). In Mary's case, VaD developed after she experienced a stroke. According to extant literature (Iemolo et al., 2009; O'Brien and Thomas, 2015), there are several mechanisms defining why patients who have experienced stroke may develop dementia. Authors contend that post-stroke dementia may arise as a result of vascular lesions on the brain, pre-existing neuropathological effects, or white matter lesions which may lead to cognitive decline. Furthermore, Chin (2023) posited that there can be alteration of small vessels, which causes damage to the cerebral tissue and can lead to cognitive alterations.

The risks of vascular dementia for Mary's physical health need to be acknowledged. According to McArdle et al. (2021), postural control or balance requires the coordination of diverse body systems including vestibular, cognitive and somatosensory systems. It is possible that with VaD, Mary may lose some of this coordination, which can lead to mobility and gait issues.

Mary has pernicious anaemia, or vitamin B12 deficiency. There is some evidence to show that low vitamin B12 status in individuals with dementia can further create cognitive impairment issues. According to Smith and Refsum (2009), one potential factor which causes this is the elevation of concentration of homocysteine as a result of low vitamin B12. Ford and Almeida (2019) also indicated that low vitamin B12 status may have a mediating effect on an individual's cognition, including causing atrophy of the brain and damage to the white matter. Bailey et al. (2020), in an analysis of community-dwelling elderly adults, indicated that there is a higher risk of whole-brain atrophy and associated cognitive decline in individuals with pernicious anaemia. If left untreated, the additional risks of pernicious anaemia for Mary's cognitive impairment need to be acknowledged.

Another biological factor impacting the patient's wellbeing is her hypertension. When blood vessel damage produces vessel wall thickness and luminal constriction by medial hyalinosis, long-term hypertension impacts cerebral circulation and metabolism (Duron and Hanon, 2008). This leads to rigidity and a twisting, unnatural lengthening. Protein from plasma leakage, inflammation, oxidative stress, and oedema develop as a result of changes to the blood-brain barrier and endothelial function (Naing and Teo, 2020). These factors further restrict blood flow to the brain and promote myelin degeneration. Loss of safeguards due to dysfunctional autoregulation in the brain perpetuates the cycle of neuronal damage (Sharp et al., 2011). It is possible that hypertension may have been a contributory factor to Mary's

stroke and subsequent VaD. At the same time, if her hypertension is not managed properly, it can continue to contribute to neuronal injury and damage.

May's daughter has noticed that Mary has lost weight as her clothes are too big for her. There are nutritional problems, including weight loss, in patients with vascular dementia (Tjahjyo et al., 2021). Such nutritional problems can lead to further adverse outcomes including rapid cognitive decline and a higher rate of future institutionalisation (Fostinelli et al., 2020). Nutritional problems in patients with dementia can be associated with weight loss and potential changes in appetite and diet preferences. Petermann-Rocha et al. (2020) contended that while the relationship between weight loss and dementia is not clear, diverse pathophysiological explanations have been provided. In Mary's case, it is possible that her weight loss can further cause dysfunctions in her limbic system. Mary lives alone and is dependent on her daughter to provide meals and support. If left unchecked, loss of appetite and weight loss associated with dementia can lead to gait and balance issues, frailty and depression (Peavy et al., 2022). It is therefore important that Mary's nutritional needs are met.

Psychological Factors

Following her stroke, Mary has expressive dysphasia. As part of the psychological assessment, it is important that clinicians understand the psychological implications linked to expressive dysphasia. In particular, the goal is to understand how it might be impacting Mary's ability to express herself and communicate and the associated frustration she might face. According to Worrall et al. (2016), aphasia is present in 31 per cent of first-time stroke victims and may persist in 60 per cent of individuals 24 months after onset. It is possible that Mary's aphasia is not getting better.

Damage to the language cortex causes the cognitive and linguistic deficits associated with aphasia. The severity of a person's aphasia symptoms can vary widely, ranging from a minor impairment to a total loss of all linguistic abilities (Le and Lui, 2023). Expressive aphasia often occurs as a result of damage to the Broca region of the brain. It is a form of non-fluent aphasia characterised by a significant decrease in the output of natural speech and the loss of typical grammatical organisation. It is important to understand the psychological impact of aphasia on the patient (Acharya and Wroten, 2023).

It is also important to evaluate the impact that aphasia has on Mary's communication capabilities. Clearly, she understands communication and is able to make small sentences to speak and express her needs. According to Baker et al. (2020), patients with aphasia may experience a negative mood change, including frustration and irritability. It is possible that Mary is feeling frustrated with the type of care currently available to her but is unable to express her concerns. Secondly, as Lincoln et al. (2011) contended, the incidence of depression after aphasia is high. The authors identified that when comparing patients who are stroke survivors and do not have aphasia with those who do, those with aphasia have a depression incidence rate of 62–70 per cent, which is two times higher. According to Worrall et al. (2017), in individuals living with aphasia, there is low mood. Chun et al. (2022) also contended that suicide risk is 73 per cent higher during the first five years after a stroke. Aphasia-associated language impairments may further exacerbate the existing psychiatric comorbidities. Given this evidence, evaluating other mental health comorbidities including mood disorders is essential in Mary's case as part of her psychological assessment.

Social Factors

Mary's aphasia and dementia may have a social impact on her wellbeing. There is strong evidence to show that aphasia can have a strong impact on Mary's ability to engage with others. This is because it reduces in her overall quality of life (Hilari, 2011). Northcote et al. (2016) also contended that there is social isolation in individuals with aphasia as they face challenges communicating with others. In Mary's case, she is dependent on her daughter and the support team to manage her activities of daily life.

In patients with dementia, living alone can exacerbate symptoms. Several qualitative studies have examined what it is like to live alone with dementia, and the results have been characterised as a "vague existence" (Svanstrom and Sundler, 2015). These accounts paint a picture of an experience marked by challenges in areas such as household management, money management, routine tasks, mobility and boredom. The outcome is feeling alone, boredom and a loss of significance and meaning of existence (Duane et al., 2013; Lloyd and Stirling 2015; Svanstrom and Sundler, 2015). Lloyd and Stirling (2015) also contended that individuals with dementia face further challenges of managing the support available from health and social care. It is possible that by living alone, Mary is exacerbating her isolation, which can impact her overall wellbeing.

As part of social factors assessment, it is important to recognise the living environment of the patient. In patients with dementia, environmental modification is essential to manage cognitive deficits (Ludden et al., 2019). It is possible that Mary has been missing meals as a result of difficulties accessing food or remembering to eat at a specific time. As part of intervention, it is important to recognise if environmental changes can be carried out to address Mary's needs.

3.0.Communication-based Intervention

As Mary has expressive aphasia, she has a problem in saying or writing specific words. Furthermore, her vascular dementia may contribute to progressive cognitive impairment which can impact her ability to communicate with her care providers as well as her daughter. There are several interventions available to improve Mary's ability to communicate. This section evaluates key alternatives and identifies how they can be integrated into a communication care plan for Mary.

Communication Audit

The first step of the care plan is to assess the current level of communication that Mary can have and areas of improvement. It is important to conduct a thorough evaluation of communication skills. This can include impairment, environmental variables, activity, engagement, and personal characteristics (Hopper, 2007). A speech-language pathologist or clinical neuropsychologist can carry out a communication examination. The CMHT team should ensure that the right specialist is identified to provide insights into Mary's needs. The person's or care partner's unique concerns and desired outcomes must primarily guide the selection of particular duties for a communication assessment. The key elements of the analysis should include case history, interviews with the individual suffering from dementia/aphasia and their family, a neurological exam to evaluate language competencies and behavioural evaluations. In Mary's case, the Living with Aphasia assessment—a pictographic self-report of communication-related impact on quality of life—can be used (Simmons-Mackie et al., 2014). This can help Mary identify the key areas where she needs help and the core areas where her daughter can help her.

Memory Book

The first intervention discussed is the development of a memory book. The individual with dementia can be given a communication book, which is also a book about them and their family. The purpose of the memory book is to act as a memory aid; it contains labelled pictures and photographs of material. The visual aid is intended to serve as a reminder of places and people. The information that will become part of the memory book should be decided by discussing with the patient, clinician, external care partners and family. In Mary's case, this information should include details of personal information, family members, everyday actions, food and beverages, schedule and meals. According to Hickey and Douglas (2021), it is important that the mental health nurse and an occupational therapist identify the right layout and organisation of the memory book. This includes elements like size, types of pictures, written or other stimuli.

Script Training

Another element of the communication-based intervention is script training. The script training is intended to help with Mary's aphasia and help her speak better. The primary goal of script practice is learning, or generating spontaneous retrieval, so that the screenplay can be used to engage better in interactions with others (Volkmer et al., 2020). For example, the speech therapist and the mental health nurse can consider Mary's interests and demands, the level of linguistic complexity and the total length of the text when writing it (Khayum et al., 2012). The individual then practises the text with the help of a therapist or caretaker, moving from simple phrase repetition to choral rendition and eventually producing the script on their own (El-Wahsh et al., 2021). Recording sessions for therapy on camera can help with a retrospective of what went well, what did not, and how to improve communication moving forward (Khayum et al., 2012).

Communication Partner Training

The final intervention is considering communication partner training methodologies. The goal of training for a person's communication partner is to help them better communicate with their loved one who has dementia. The use of a communication partner is to help them understand the concerns of the patient with VaD and associated aphasia. Dementia carers can receive communication partner training in a variety of formats, therefore identifying the right mode of intervention is important (O'Rourke et al., 2018). According to El-Wahsh et al., (2021), there can be multi-session programmes for communication dyads (e.g. targeted

training including both Mary and her daughter) and groups (e.g. considering group sessions where Mary and her daughter can visit others who have similar aphasia and dementia-linked communication problems). This essay contends that it is essential to promote the use of body language, facial expressions, and other forms of non-verbal communication (El-Wahsh et al., 2021). In particular, given that Mary finds it difficult to speak specific words and can have problems with grammar, support for non-verbal communication through communication partner-based training can be considered. Additionally, as her primary care provider, Mary's daughter can be encouraged to slow down speaking, using basic and concrete language, and offering visual signals are all techniques that can help the patient and their communication partners.

The following table presents a summary of the care plan targeting communication interventions.

Intervention	SMART Goal					Resource Needs
	<i>Specific</i>	<i>Measurable</i>	<i>Achievable</i>	<i>Relevant</i>	<i>Time-bound</i>	
Memory book intervention	Create a personalised memory book.	Include a minimum of 20 pages within the memory book.	Collaborate with Mary's family and her caregivers to develop the right intervention.	It can enhance Mary's ability to communicate through recall and improvement in familiarity.	Complete the memory book in 2 months and track progress	CMHT Occupational therapist Speech therapist
Script training	Specific scripts and cues to help Mary communicate her basic needs	Create script for ten major daily activities	Collaborate with Mary's family and her caregivers to develop the right intervention.	Improves Mary's ability to express herself	Three months with regular reviews	CMHT Speech therapist Occupational therapist
Communication partner training	Train Mary's daughter in becoming the most effective communication partner	Conduct five training sessions, three without Mary and two with Mary (dyad training)	Provides better resources for Mary's family to communicate with her	Enhances the overall communication environment	Two months with regular review for follow-up	CMHT Psychologist specialising in communication partner training. Speech therapist

Table 1: Care Plan – Goals and Resource Needs

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4.0. Conclusion

Mary's stroke related vascular dementia can cause further cognitive impairment which could be worsened by her aphasia. Furthermore, she has pernicious anaemia and low vitamin B12 has been linked to cognitive impairment. Mary may experience difficulties with movement and walking if she loses some of her coordination as a result of VaD. It is possible that Mary is missing meals and therefore is experiencing weight loss. Key psychological factors that need to be discussed is her frustration associated with aphasia. Patients with aphasia are prone to more psychiatric comorbidities like depression. Her aphasia can further create social isolation impacting her overall quality of life. Mary has expressive aphasia; therefore, she has trouble finding the right words to use when speaking or writing. Additionally, her vascular dementia may cause cognitive decline, which may hinder her capacity to express herself to her carers and her daughter. The use of communication partner training, memory books and script writing can act as key interventions to address Mary's vascular dementia.

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