# Chapter 6 Multimorbidity Case Studies in Dementia Patients: Epilepsy, Diabetes, and Cardiovascular Disease

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### **EXECUTIVE SUMMARY**

Co-/multi-morbidities are prevalent in the elderly. Some noteworthy examples include the elderly with dementia, for example, elderly with Alzheimer's disease, Parkinson's disease dementia and vascular dementia diagnoses. Based on high prevalence rates, the elderly with dementia is likely to experience more than one disease. Usual co-/multi-morbidities in the elderly with dementia are epilepsy, diabetes, and cardiovascular diseases. For this reason, healthcare providers are tremendously challenged with demands for treatment and therapy plans to improve the quality of life and overall well-being of the elderly and their families. This Chapter discusses these co-/multi-morbidities and aims to inspire the translation of this knowledge into specialised services and therapy plans for the elderly.

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### INTRODUCTION

Cognitive impairment is common in ~ 10-20% of the elderly population and a world public health concern (Etgen et al., 2010). Even though this health problem is transitioning from normal ageing cognitive processes to mild cognitive deficits, it could be benign and remain mild or lead to severe dementia (Lee et al., 2008). Therefore, outpatient clinics, hospitals, and primary care units evaluate the symptom complaints with extensive screening methods to differentiate between demented and non-demented patients. Healthcare systems worldwide have increased their detection methodologies to provide the necessary care for the elderly with dementia (Borson & Chodosh, 2014). Thus, many care plans and assistance are available for the patients and their families. Although there is a radical change and improvement in how health care policies favour early dementia detection and care plans, healthcare systems may be overwhelmed when the elderly with dementia have additional health problems that require attention, therapy, and support.

The healthcare systems might experience limitations related to the knowledge, skill sets, clinical system resources, and barriers to understanding that an elder with dementia might have another medical condition (Borson & Chodosh, 2014). It is interesting to evaluate how professionals and health systems face such complex challenges and provide the right treatment plans for the patients (Borson & Chodosh, 2014). For this reason, it has been suggested that redesigning and retraining clinical staff members may organise comprehensive care which can be tailored to the individual patient (Borson & Chodosh, 2014). The management strategies ought to include decision-making curriculums in treatment plans to associate co-/multimorbidities and medications with patient health outcomes progress and sensitivity to the adverse effects of medications (Hommet et al., 2008).

Therefore, the purpose of the Chapter is to identify the diagnosis, monitoring, and treatment challenges of elderly with dementia when they are challenged with more than one disease/diagnosis; and to discuss the long-term management issues in healthcare systems.

### BACKGROUND

Healthcare systems constitute the financial and organisational planning of care distribution. They aim to improve health efficiently and effectively according to patients' needs and available resources. The healthcare systems, such as organisations, institutions, public and private hospitals, primary and secondary health units, including medical doctors, nurses, and clinical staff, require a solid infrastructure to function correctly, for example, supplies of medical equipment, medication, and

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