The current research and literature about the pathophysiology, diagnosis and management of Lewy Body Dementia (LBD) or Dementia with Lewy Bodies (DLB) can be difficult for experienced practitioners, students of the health professions and those without a health background to follow. An awareness of the growing body of evidence about DLB is essential to understand that not all dementias are the same, and disease specific knowledge does inform care planning and practice.

DLB is a specific type of dementia, with different manifestations and diagnostic symptoms to other frequently diagnosed types of dementia. However, Lewy bodies themselves, as a physical presence, are common in the ageing brain and are often present in Alzheimer’s patients, so a definitive diagnosis is not always possible (Schneider et al., 2012).

In 2005, International Consensus Criteria for DLB were developed for consistency in diagnosis worldwide. The following table (outlines the Consensus Criteria for Clinical Diagnosis of Probable and Possible DLB, first published in 2005 then updated in 2017 (McKeith et al., 2017).
Table 1: Revised criteria for clinical diagnosis of probable and possible dementia with Lewy bodies

(McKeith et al., 2017, p. 90)
It is proposed that the diverse nature of the symptoms associated with DLB may be indicative of the location of the Lewy Body deposits throughout the nervous system (Donaghy et al., 2017). Specific presentations considered worthy of further consideration for DLB include:

- Drooling
- Misjudging objects  (Donaghy et al., 2017)

However, in contrast to earlier research, in their 2017 study, Donaghy et al. did not find a distinction between the onset of hyposmia (loss of sense of smell), constipation and dizziness in DLB and Alzheimer’s disease. Increased daytime sleepiness, was found to be more common in DLB, but as it occurs in patients with Alzheimer’s disease, cannot be considered definitive (Donaghy, et al., 2017).

One of the differential diagnostic considerations for DLB, when compared with Alzheimer’s disease is the timing of the onset of symptoms. For example, the extrapyramidal features, which have a late onset in Alzheimer’s disease, have an early onset in DLB, whereas the antero-grade memory loss, regarded as an early sign in Alzheimer’s, is less prominent in DLB (Tiraboschi et al., 2006).

The cognitive changes associated with early DLB are arguably the most significant indicator of its onset. That is, the early symptoms of driving difficulty such as getting lost, misjudging distances, failing to see stop signs or other cars and impaired job performance. It is worth noting that these particular symptoms pose a real and present danger for the individual, people around them and the community at large. Research by Donaghy et al. (2017) found that cognitive fluctuations, Parkinsonism and sleep
disorders were more common in DLB than Alzheimer's disease at all stages of the disease progression.

Thinking point:
Quite often on the evening news, we hear about an elderly person who has driven into a building because of a driving error. These errors are reported as putting their foot on the wrong pedal (accelerator versus brake) or misjudging the distance. In Ed's story, one of the earliest signs for Mary was when she drove to the General Practitioner (GP) and the GP was concerned enough about her condition to stop her driving home. There are far reaching impacts of removing the ability to drive, legal or otherwise. There are mobility and social impacts, which affect the quality of life for older adults, which may in turn lead to a deterioration in their overall wellbeing.

However, consideration for the individual's future limitations must be weighed against the safety of others in the community as well as safety for the individual.

Further, the cognitive fluctuations in DLB are more likely to be episodic and vary in nature, although they can occur in between 60-80% of cases. The episodes have been described as the individual disengaging from their environment, which can range from just 'blanking out' to change in consciousness, confusion, speech or motor changes or excessive drowsiness. There are tools that health professionals can use to determine if these changes in behaviour are related to the onset of DLB. In addition to standard mental health assessment tools, these include questionnaires like the Clinical Assessment of Fluctuation, One Day Fluctuation Scale. The features more likely to be associated with DLB than Alzheimer's are daytime drowsiness, daytime naps lasting more than 2 hours, prolonged staring spells, and episodes of disorganised speech.

Risk factors for DLB:

- Age – average age of onset is 75 years
- Male gender – 4 x more common in males than females
- Family history of Parkinson’s disease
- Lack of caffeine use
- Higher educational attainment
- History of anxiety and/or depression

(Savica, Grossardt, Bower, Ahlskog, & Rocca, 2013)

Management/Treatment:

There is no cure for DLB. Therefore, the disease is managed according to symptomatic presentation. The aim is to minimise the symptoms to promote quality of life and extend participation in activities of living for the individual and their family/carers.

There are limited options for pharmacological treatment of DLB due to the range of symptoms that the healthcare team are seeking to alleviate. That is, to improve some symptoms may exacerbate another. Management advice includes that tricyclic antidepressants, low potency neuroleptics, antiparkinsonian anticholinergic drugs and antispasmodics for bladder to gastrointestinal tract be avoided due to the potential negative impact on cognitive function, potentiate psychotic symptoms and worsen orthostatic hypotension (McKeith & Mosimann, 2004). Thus, anti-parkinsonian pharmacological approaches should be limited to levodopa (Burn, Mosimann, & McKeith, 2005). The evidence to support drug choice for managing DLB is not clear or definitive.

Strategies for disease management should include activities to promote orientation and memory. Burn et al (2005) recommend explaining, education and reassurance as well
as targeted behavioural interventions to relieve the stress of the psychiatric symptoms on both the individual and their carers.

The following flowchart provides a logical, structured approach to the management of care for an individual with DLB (Burn et al., 2005).

Table 2: Management approach to DLB (Burn et al., 2005, p.369)

| Baseline assessment of cognitive, extrapyramidal and neuropsychiatric features |
| Identify key symptoms that require treatment |
| Non-pharmacological assessment and intervention |
  | Improvement of sensory impairment |
  | Exclusion of dehydration, infections, metabolic changes |
  | Reduction of environmental risk factors for falls |
| Pharmacological interventions and strategies |
  | Careful review of medication chart: reduce polypharmacy |
  | Prefer serial, not parallel interventions |
  | Choose preferred medication for key symptom |
  | Inform patient and caregiver about potential risks and benefits |
  | Careful follow-up and monitoring |


