



# Management Tips and Traps:

## Managing co-morbid disease in persons with dementia

### Series 4: Diabetes Mellitus

#### Background

A patient with worsening cognitive function is at risk of poorer glycaemic control because of potential difficulties with (Okura et al., 2009):

- Learning and retaining new knowledge and self-care skills regarding diabetes mellitus (DM)
- Recognizing the importance of self-care
- Planning and organizing daily tasks to optimize glycaemic control
- Motivation to adhere to self-care plans

Executive functioning is frequently impaired in Type 2 DM due to chronic dysglycemia or micro vascular damage (Thabit et al., 2009). These cognitive domains are important for coordinating and executing instrumental activities and self-care behaviours.

#### Tips: to do

##### 1. Dementia awareness is key to tailoring management

Clinicians need to be aware of effects of dementia in persons with DM. Persons with lower Mini Mental State Examination (MMSE) scores may be less engaged and involved in DM self-management practices, require more support to carry out personal care activities and are more likely to have been hospitalized in the previous year (Sinclair et al., 2000).

However, persons with mild-moderate dementia may still retain the ability to self-manage. Regular re-assessment of their capabilities as dementia progresses is vital to provide appropriate, integrated and tailored ongoing care.

This includes: disease knowledge, compliance, using medication dispensers to aid adherence, and memory cards to remind patients about appointments (Koekkoek et al., 2015).

##### 2. Social support and mood may ameliorate the risk of worse glycaemic control

The effect of cognitive impairment on ability to self-manage in these patients may be modified by both mood and social support.

Those with depressed moods have a higher risk of poor glycaemic control independent of cognitive impairment and level of social support (Lustman et al., 2000; Doston et al., 2008).

Among those individuals with poor cognitive status, a high level of social support for DM significantly reduces the risk of worse glycaemic control (Okura, 2009).

##### 3. Focus on education and support for carers and staff

Self-management places a considerable responsibility on the individual. This is particularly challenging for patients with cognitive impairment.

‘Hypo’ awareness may become compromised in the person with dementia. As cognition declines, patients may be unable to take appropriate actions to prevent or treat hypoglycaemic episodes (Sinclair et al., 2014; Sinclair et al., 2000).

Education of care-givers becomes more important and should include information about common (and atypical) signs and symptoms of hypoglycaemia and how to administer treatments (e.g. glucogel, glucagon injections) for hypoglycaemia.

##### 4. Gearing self-management programs towards addressing executive function + memory/learning

Self-management activities and programs should take into account multiple cognitive domains particularly executive function, memory and learning. Executive function is particularly important in problem solving, decision-making and goal setting for self-care activities.

This may potentially relate to diabetes knowledge, insulin adjustments skills, learning/performing insulin injections, adherence, self-care activities, missed appointments and finally, increased inaccuracies in reporting blood glucose monitoring. Memory impairments hamper self-confidence in one's ability to manage complex health behaviours in the long term.

#### Traps: to avoid

##### 1. Continuing aggressive treatment in persons with severe dementia when moderation would be preferable

Balancing the management of comorbid conditions is important and severe dementia may make standard DM self-care goals impossible to reach.

It is important to acknowledge how a comorbid condition limits life expectancy whereby it may negate the need for any of the long term benefits of optimally managed glycaemic control. For instance, if nearly 10 years of intensive glucose control is required for improved health outcomes due to DM, then limited life expectancy may prevent a patient from ever receiving the potential benefits of glucose control (Laiteerapong, 2012).

## 2. Failing to reconsider the high risk of continuing oral hypoglycaemics

Review rather than acceptance of the norm in medication treatment is important. Consideration should be given to substitute long acting sulfonylureas and insulin with lower risk agents.

To improve prescribing patterns for patients with dementia, guidelines for pharmacological management should discuss the impact of dementia as co-morbidity. This must consider the impact of dementia on cognitive abilities and how this may change medication choices.

## 3. Limiting care too soon or inappropriately liberal care goals in mild dementia

Patients with dementia and DM may receive less routine examinations e.g. eye exams, HbA1c testing and LDL tests compared to their non-cognitively impaired counterparts (Thorpe et al, 2012).

While it is key to consider the patient's other comorbid conditions, it should be ensured that this is not detracting from the optimal management of DM.

Furthermore, an excessively conservative view in management may potentially lead to avoidable morbidity and mortality (Thorpe et al., 2012; Bayer et al., 1993).

## References

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## Resources about dementia

Dementia Training Australia:

<https://www.dementiatrainingaustralia.com.au>

Alzheimer's Australia: <https://www.fightdementia.org.au>

Dementia Support Australia: <http://dbmas.org.au>

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