MEDICATION AND COGNITION

How these cards were developed
1) Medications that may adversely affect cognition were identified from the literature and expert opinion.
2) Data on the prescribing frequency of all medications in Australian residential aged care was sourced.
3) Commonly prescribed medications that may adversely affect cognition were identified (Table 1).

How to use these cards
The cards may be used as a reference to provide a starting point in identifying medications that may be adversely affecting a person’s cognition. They are NOT intended to be used to guide prescribing decisions.

Keep these cards close-to-hand, such as attached to the medication trolley or beside a dispensing computer.

Medication and cognition implications
Adverse cognitive effects may occur when any of the medications in Table 1 are taken at any dose.

Particularly high-risk circumstances include:
- When a medication from Table 1 is taken at a high dose and/or in combination.
- When any new medication is started, stopped, or the dose is changed.
- When there are medication interactions.
- During times of increased stress, e.g. illness, infection, pain.
- When a person has reduced ‘cognitive reserve’, e.g. cognitive impairment, frailty.
MEDICATION AND COGNITION

Medicines may cause a number of unintentional effects on a person’s cognition e.g. memory, thoughts and behaviour (see below). These effects may become apparent as soon as a new medication is started or a dose is changed, or may occur gradually over a period of time.

- Inability to concentrate
- Memory impairment
- Agitation
- Cognitive impairment
- Confusion
- Delirium
- Attention deficit
- Hallucinations

If you have ANY concerns regarding possible adverse effects of a resident’s medication, request a medication review.

MEDICATION AND COGNITION

Cognition may be adversely affected by the anticholinergic and/or sedative effects of many medications.

In Table 1:
- HIGH RISK medications have the strongest anticholinergic effects, and may be considered as the MOST LIKELY to affect cognition.
- LOWER RISK medications have less anticholinergic effect, and are more likely to affect cognition when used in combination with other medications in Table 1, or at high doses.

Many of the medications listed in Table 1 have sedative effects which may also impair cognition.

Other potential adverse effects of these medications include:

**Anticholinergic effects**
- Dry mouth
- Urinary retention
- Constipation
- Irregular heart rate
- Blurred vision

**Sedative effects**
- Feeling sleepier/increased lethargy
- Slurred speech
- Dizziness, unsteadiness

Both anticholinergic and sedative medications are strongly associated with an increased risk of falls.
Table 1. Selected medications that may adversely affect cognition and are commonly prescribed in Australian residential aged care.

### Anticholinergic effects

<table>
<thead>
<tr>
<th>Higher</th>
<th>Lower</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorpromazine</td>
<td>Aripiprazole</td>
</tr>
<tr>
<td>Clozapine</td>
<td>Asenapine</td>
</tr>
<tr>
<td>Fluphenazine</td>
<td>Haloperidol</td>
</tr>
<tr>
<td>Olanzapine</td>
<td>Paliperidone</td>
</tr>
<tr>
<td>Pericyazine (perciazone)</td>
<td>Quetiapine</td>
</tr>
<tr>
<td>Trifluoperazine</td>
<td>Risperidone</td>
</tr>
<tr>
<td>Ziprasidone</td>
<td></td>
</tr>
</tbody>
</table>

### Antipsychotics

- Amintriptiline
- Clozapine
- Doxepin
- Dosulepin (dathipron)
- Imipramine
- Nortriptiline

### Antidepressants

- Citalopram
- Fluoxetine
- Fluvoxamine
- Mirtazapine
- Paroxetine

- Phenelzine
- Selegiline
- Sertraline
- Venlafaxine

### Antihistamines

- Cyproheptadine
- Dexchlorpheniramine
- Promethazine

- Aminemazine (trimeprazine)
- Cetrizine
- Loratadine

### Opioids

- Tapentadol
- Codeine
- Dextropropoxyphene
- Oxycodon
- Tramadol

### Bladder antispasmodics

- Darifenacin
- Oxybutynin
- Propantheline
- Solifenacin
- Tolterodine

### Other medicines

- Atropine
- Benztropine (benzatropine)
- Hyoscymine
- Tiapryphenidyl (benzhexol)

- Benzodiazepines
- Amandine
- Baclofen
- Carbamazepine
- Colchicine
- Entacapone

- Loperamid
- Metoclopramide
- Pramipexole
- Prochlorperazine
- Ranitidine
- Valproate

**Note:** Many of these medications may also have sedative effects.

**Note:** Many of these medications may also have similar adverse effects on cognitive function.

Remember, many other less-commonly prescribed medications may also cause similar adverse effects on cognitive function.
REFERENCES

These cards are based on:


This set of reference cards may be used by all staff involved with medication management in community and residential aged care settings. The cards accompany the DTA ‘Optimising medication management of behavioural and psychological symptoms of dementia (BPSD)’ quick reference cards. The information focuses on commonly prescribed medications in Australian residential aged care and their associated degree of adverse cognitive effects, primarily medications with anticholinergic and sedative actions. The medication list is not exhaustive, and should not be used as the sole reference when managing a patient with a suspected cognitive adverse effect. They are not intended to be used to guide prescribing decisions. These cards provide general information only and do not claim to reflect all considerations. As with all guidelines, these cards must be used in consideration of each individual patients’ circumstances and goals of care.

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DTA Commonly prescribed medications in Australian residential aged care that may adversely affect cognition Quick Reference Cards may be printed without alteration for in-house use only.

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