



WEBINAR

Wednesday, 22 June 2022
7.00–8.00 pm AEDT

**FALLS, CONFUSION AND OTHER ISSUES. COULD
MEDICINES WITH ANTICHOLINERGIC EFFECTS BE
THE CAUSE?**

Focus of the Webinar

- ▶ What is anticholinergic burden?
- ▶ Recognising signs of anticholinergic burden.
- ▶ Communication with the multidisciplinary team.
- ▶ Timely assessment of anticholinergic burden.
- ▶ Common withdrawal effects when medicines are being tapered.
- ▶ Implementation of a patient-centred multidisciplinary approach to assessing, managing, and reviewing anticholinergic burden.

The panel



Brent Skimmings
Registered nurse
& facilitator



Melissa Cromarty
Aged care nurse &
Facility Manager



Dr Paresh Dawda
GP & educator



Sally Leedham
Care service employee



Simone Palmer
Carer & consumer
representative

Anticholinergic effects

Central effects:

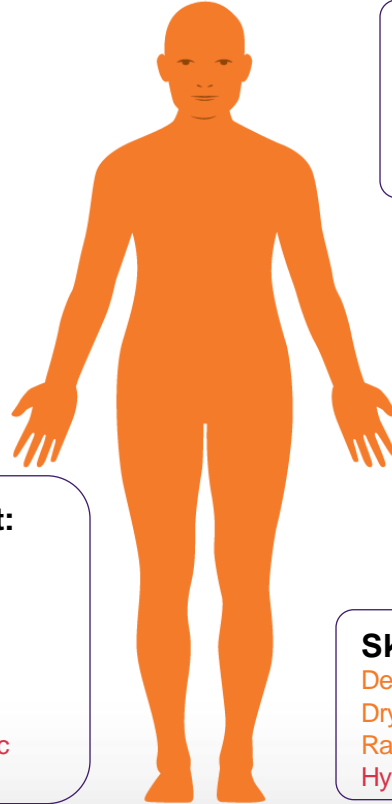
Drowsiness	Cognitive impairment
Fatigue	Falls & accidents
Inability to concentrate	Hallucinations
Restlessness	Delirium
Dizziness	Seizures
Confusion & agitation	Functional decline & increased dependency
Headache & fever	Diminished quality of life
Insomnia	
Memory loss	

Gastrointestinal tract:

Dyspepsia
Constipation
Gastro-oesophageal reflux
Nausea or vomiting
Faecal impaction
Paralytic ileus
GI obstruction

Genitourinary tract:

Urinary hesitancy
Difficulty urinating
Incontinence
Urinary retention or obstruction
Urinary tract infection
Exacerbation of prostatic hypertrophy



Eye:

Mild dilation of pupil	Increased risk of angle-closure glaucoma
Dry eyes	
Inability to focus	
Blurred vision	

KEY System:

Mild
Moderate
Severe

Mouth:

Dry mouth	Malnutrition
Thirst	Difficulty with speech
Oral discomfort	Respiratory infections
Reduced appetite	Dental or denture problems
Difficulty in eating and swallowing	

Skin:

Decreased sweating
Dry and flushed skin
Rash
Hyperthermia/heat stroke

Heart:

Tachycardia
Arrhythmias
Exacerbation of angina
Exacerbation of heart failure
Postural hypotension

Impact on patient health outcomes



Exposure to anticholinergic and sedative burden^b is associated with a

60% ↑

**increase
in fall-related
hospitalisations**



Use of medicines with anticholinergic effects for ≥ 3 months has a

50% ↑

**increased risk
of dementia
compared
to non-use**



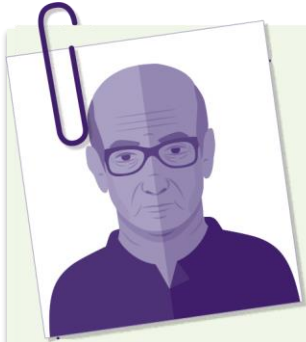
Exposure to anticholinergic and sedative burden^b is associated with a

30% ↑

**increase
in mortality for
older people**

b. Based on the Drug Burden Index (DBI), which measures cumulative exposure to medicines with anticholinergic and sedative effects³
~ Statistics are approximated

Meet Colin



Colin is an 81-year-old resident in your facility and has been newly diagnosed with Parkinson's disease. His wife died 2 years ago. His care staff reported that he has been more forgetful and unsteady on his feet. He has also been complaining of dry eyes and constipation.

Medical history

Parkinson's disease
Hypertension
Hyperlipidaemia
Depression
Type 2 diabetes
Chronic back pain
Osteoarthritis

Social history

Widowed
Requires 1x assistance in activities of daily living (ADLs)

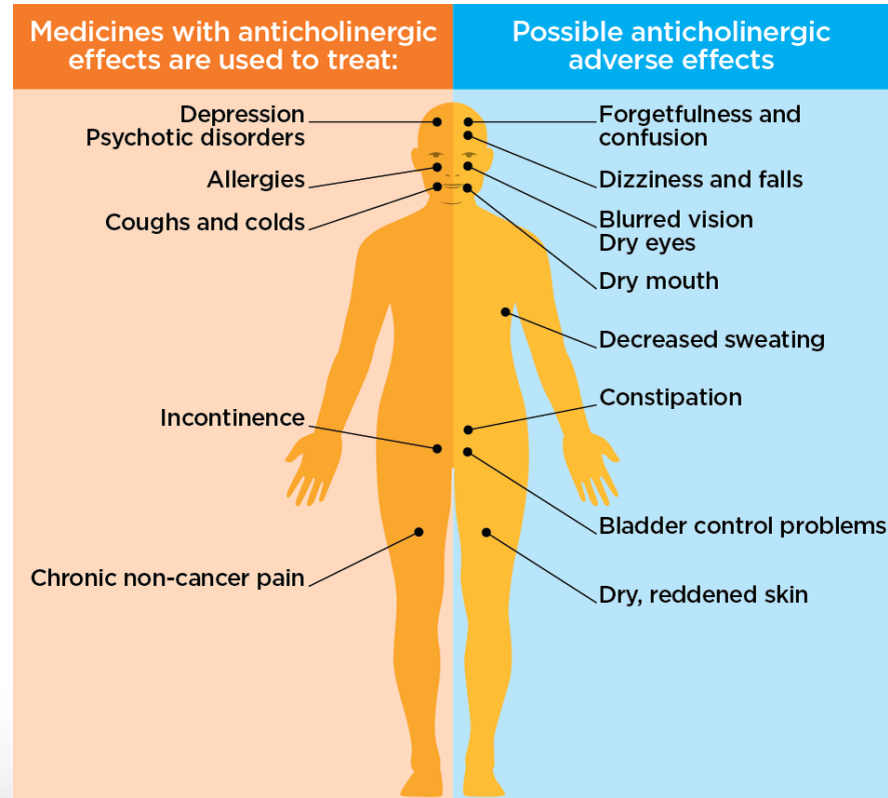
Allergies

Nil

Medicines

metformin 1 g tablet twice daily
tapentadol 100 mg SR tablet daily
rosuvastatin 10 mg tablet at night
sertraline 50 mg tablet daily
telmisartan 80 mg tablet in the morning
temazepam 10 mg tablet at night
levodopa/carbidopa 100 mg/25 mg tablet three times daily
docusate with senna two tablets twice daily
Movicol sachet when required
Optive lubricant eye drops one to two drops in each eye when required

Indications for medicines with anticholinergic effects and their possible adverse effects





The Drug Burden Index

Drug Burden Index (DBI) is a measure of the cumulative exposure to anticholinergic and sedative medicines, which impair physical and cognitive function in older adults.

A high DBI, (DBI \geq 1) is associated with poor clinical outcomes in older people, such as falls, cognitive impairment and an increased risk of all-cause mortality.

Drug Burden Index Calculator



G-MEDSS ©

The Goal-directed Medication
review Electronic Decision
Support System

Goal-directed Deprescribing Report

The Drug Burden Index Calculator © Report

Patient Name: Colin Urgic
DOB: 01/10/1943
Carer Name:
Place of interview: Residential Care Facility

Date of Report: 15/11/2021
General Practitioner: Dr Walters
Date of Medication Review: 12/11/2021

This patient has the following potential anticholinergic and sedative side effects
Confusion, Constipation, Dizziness, Dry Eyes

Patient Medication Profile

Medication	Frequency	DBI	Deprescribe?	Medication	Frequency	DBI	Deprescribe?
metformin 1g	BD	-		telmisartan 80mg	Daily	-	
Tapentadol 100 mg	Daily	0.33	⬇️	Temazepam 10 mg	nocte	0.50	⬇️
rosuvastatin 10mg	nocte	-		Levodopa with carbidopa 100 mg 25 mg	TDS	0.50	
Sertraline 50 mg	Daily	0.50	⬇️	docusate senna 50mg 8mg	2 2x daily	-	

Total DBI for this patient: **1.83**



Low risk: DBI = 0

Moderate risk: 0 < DBI < 1

High risk: DBI ≥ 1

Note: When one medication is entered multiple times, the total DBI is calculated as a cumulative dose. Individual components may not add up to sum total.

Assess anticholinergic burden using existing systems and tools



Health checks

Review current medicines list when taking patient history



Validated assessment tools

Eg, Drug Burden Index (DBI) Calculator



Medication management reviews



Residential Management Medication Review (RMMR)

HMR/RMMR Factsheet for patients



Actively involve patients in HMR/RMMR decisions

TABLE 2 Responding to patient concerns²⁷

 Some patients may be reluctant to take up a HMR/RMMR if they:	 Explain the purpose and benefits of a HMR/RMMR
<ul style="list-style-type: none"> ▶ Don't understand the purpose of the review, its potential benefits or what happens during the process 	<ul style="list-style-type: none"> ▶ A HMR/RMMR allows GPs and pharmacists to work together to provide the best care possible for the patient
<ul style="list-style-type: none"> ▶ Are concerned about upsetting the GP or specialist, losing independence, or dealing with a pharmacist they don't know 	<ul style="list-style-type: none"> ▶ A HMR/RMMR exists to help patients, by encouraging better and safe medicines use, to reduce risk of adverse effects, and improve disease management
<ul style="list-style-type: none"> ▶ Have privacy/cultural issues about an in-home review 	<ul style="list-style-type: none"> ▶ The review should be conducted at the patient's home/aged-care residence unless there is an exemption to conduct it at a neutral venue²⁶



Multidisciplinary opportunities

Multidisciplinary opportunities may support person-centred care and help address any concerns or issues.

- ▶ **Case conferences**
- ▶ **RMMRs**
- ▶ **Medication Advisory Committee (MAC) meetings**
- ▶ **Quality Use of Medicine (QUM) services**

Patient-centred care for older people

WHAT MATTERS TO THE PATIENT



A shared understanding of the patient's personal **goals** and **preferences** may improve health outcomes, facilitate patient-centred HMRs/RMMRs, and drive comprehensive care planning^{12,13}

MEDICINES



Consider **reviewing** the patient's current **medicines list**, including over-the-counter medicines, at least annually and at any transition of care or change in condition⁹

MOBILITY AND MENTATION



Consider anticholinergic burden when making a **differential diagnosis** for presentations such as falls and cognitive decline⁹

Meet Colin



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Reducing anticholinergic and sedative burden

Antidepressant
(sertraline)

Benzodiazepine for sleep
(temazepam)

Antiparkinsonian
(levodopa/carbidopa)

Opioid for pain management
(tapentadol)

Monitoring withdrawal effects when deprescribing¹

Monitor short term (within 1–3 days)

Monitor for withdrawal symptoms

Symptoms can occur within 1–3 days of dose reduction

Monitor long term (> 7 days)

Monitor for recurrence of symptoms

Recurrence of previous or new symptoms may occur within 1–2 weeks of dose reduction or cessation

- ▶ Common withdrawal symptoms when deprescribing medicines with anticholinergic effects include irritability, anxiety, insomnia and sweating.
- ▶ Withdrawal symptoms usually mild and can last up to 6–8 weeks.
- ▶ If severe symptoms (eg, tachycardia, profuse and persistent sweating, severe anxiety, or severe insomnia) occur, restart at the previous lowest effective dose.

Managing anticholinergic side effects

- ▶ Review falls as part of the usual falls assessment protocols.
- ▶ Dry mouth management strategies^{1,2}
 - Dental products with high fluoride, calcium or casein to help prevent tooth decay
 - White petroleum jelly for dry lips
 - Avoid lollies and alcohol-containing mouthwashes
 - Stabilise dentures with adhesives to prevent ulcers and remove during sleep
 - High pH artificial saliva without citric acid
- ▶ Dry eye management strategies³
 - Lubricating eye drops, gels or ointments (best given at night)
- ▶ Constipation management strategies⁴
 - High-fibre diet (eg, prunes)
 - Drinking plenty of fluids (unless there are fluid intake restrictions)
 - Exercising

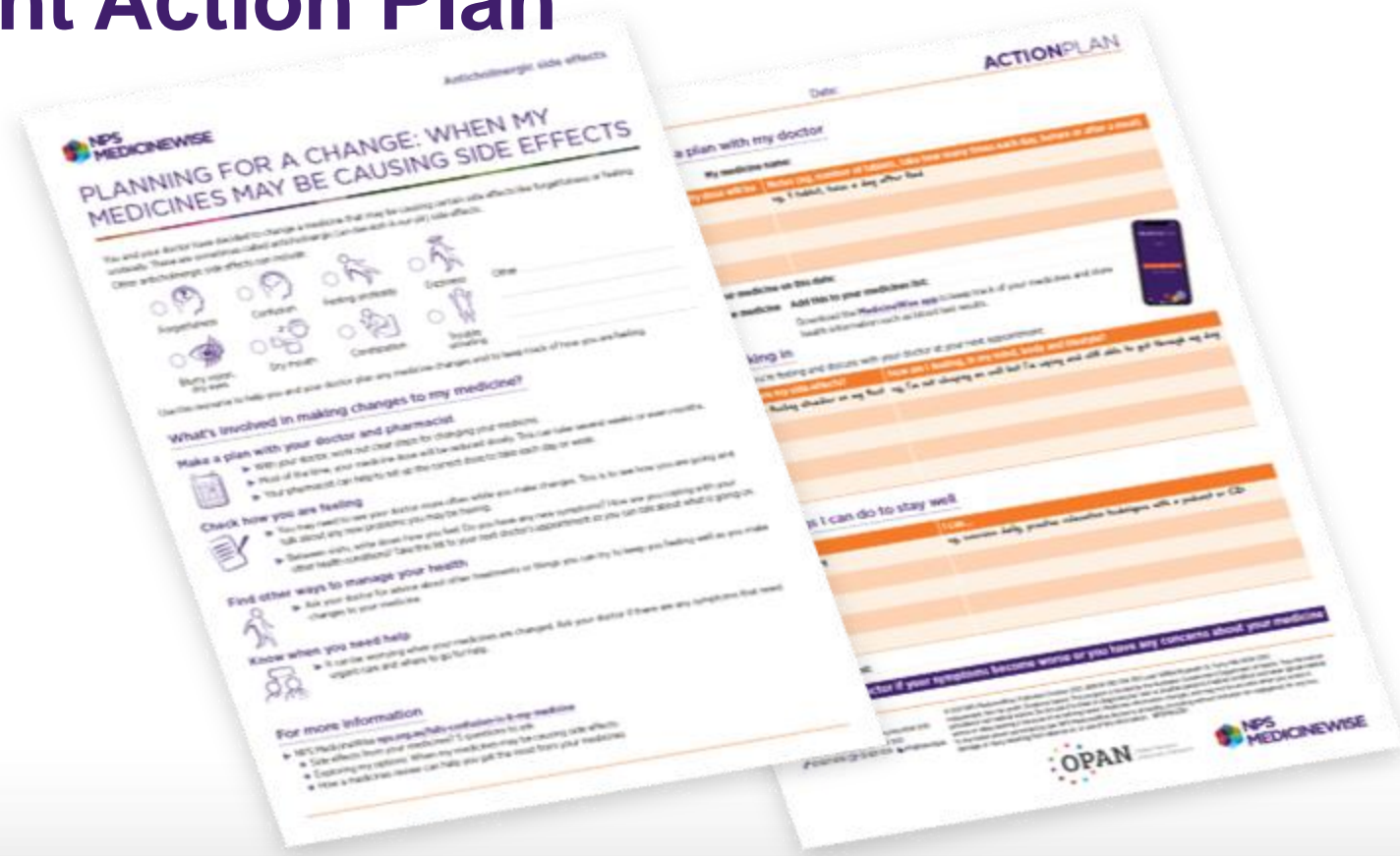
1 Better Health Channel. Dry mouth. Victoria: Department of Health State Government of Victoria, 2021.

2 Deutsch A, Jay E. Aust Prescr 2021;44:153-160.

3 Better Health Channel. Dry eye. Victoria: Department of Health State Government of Victoria, 2021.

4 Veterans'MATES. What you can do about constipation. Canberra: Australian Government, 2007.

Patient Action Plan



Choosing Wisely 5 Questions Resource

NPS MEDICINEWISE

SIDE EFFECTS FROM YOUR MEDICINES? 5 QUESTIONS TO ASK

Anticholinergic side effects

Medicines can help you feel better, but they can also cause unwanted effects. If you're someone you rely on for usual medical problems like bronchitis, confusion or feeling dizzy or unsteady you might have put it down to getting older. Do make sure you're aware that one of your conditions is worsening. These symptoms you're experiencing could be side effects from one or more of your medicines. These are sometimes called anticholinergic (or the anti-AChE) side effects.

Symptoms you may notice

Box 1: These side effects can be caused by medicines used for:

- Sleep problems
- Depression
- Delirium or mood changes from dementia
- Pain
- Stomach control problems
- Allergies
- Coughs and colds.

These could be medicines prescribed by your doctor or one of the over-the-counter medicines you can buy without a prescription.

For some people these side effects may be only mildly uncomfortable, but they can lead to more serious health problems, such as falling a fall or needing medical care.

The side effects from these medicines are more common if you are:

- Getting older:** Your body becomes more sensitive to medicines over time so you have been taking for a long time.
- Taking more than one medicine for the conditions listed in Box 1.**
- Starting a new medicine for a condition listed in Box 1.**
- Taking a high dose of one or more medicines for the conditions listed in Box 1 for a longer time than is usually recommended.**
- Taking one or more medicines for the conditions listed in Box 1 for a longer time than is usually recommended.**

Always talk to your doctor or pharmacist before stopping or changing any of your medicines.

EFFECTS FROM YOUR MEDICINES? 5 QUESTIONS TO ASK

Always talk to your doctor or pharmacist before stopping or changing any of your medicines.

For if you notice these when if they're mild

Did what's causing the symptoms, if it's the biggest sign to manage or discuss

5 Questions to ask your doctor or pharmacist about your medicines

1. Am I taking this medicine?
Are you taking any medicines that you no longer need. Sometimes a medicine should only be used for a short time. If you're not sure, ask your doctor or pharmacist. Maybe you're not taking another medicine which is more effective, and the one you're taking can be stopped. A medicine review can help find any medicines that are not needed or not working for you.

2. What are the side effects?
If you're experiencing an unwanted side effect, your doctor might suggest a change to one or more of your medicines. Ask your doctor or pharmacist about the side effects of the medicines you are taking. A doctor or pharmacist can advise your medicines and work out the medicines that are best for you.

3. What can I do about side effects?
If you're experiencing an unwanted side effect, your doctor might suggest a change to one or more of your medicines. Ask your doctor or pharmacist about the side effects of the medicines you are taking. A doctor or pharmacist can advise your medicines and work out the medicines that are best for you.

4. What if I don't do anything?
If you're experiencing an unwanted side effect, your doctor might suggest a change to one or more of your medicines. Ask your doctor or pharmacist about the side effects of the medicines you are taking. A doctor or pharmacist can advise your medicines and work out the medicines that are best for you.

5. Are there other things I can do to manage my condition?
If you're experiencing an unwanted side effect, your doctor might suggest a change to one or more of your medicines. Ask your doctor or pharmacist about the side effects of the medicines you are taking. A doctor or pharmacist can advise your medicines and work out the medicines that are best for you.

For more information about your medicines and side effects you're worried about, ask your doctor or pharmacist. When a pharmacist visits you at your home, local care facility or a community pharmacy, you can get a free paper medicines list, go to nps.org.au/medicines or call 131 456. You can download a free paper medicines list, go to nps.org.au/medicines or call 131 456 and download or print one today, or use the MedicinesWise app to keep track of your medicines.

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Medicines and side effects videos

Available here www.nps.org.au/side-effects

- 1. Is it old age or could it be your medicines?**
- 2. Taking medicines as we get older, what you need to know**
- 3. Home medicine reviews (HMRs)**
- 4. What you need to know about coming off medicines**
- 5. 5 questions to ask your health professional about your medicines**

Other Resources

NPS MedicineWise Website

<https://www.nps.org.au/professionals/anticholinergic-burden#hp>

Drug Burden Index Calculator

<https://gmedss.com/landing>



Thank you