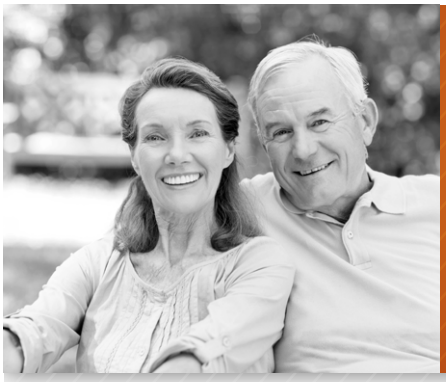
Australian Government
Department of Veterans' Affairs

Veterans' MATES



Therapeutic Brief

www.veteransmates.net.au

November 2016

Pausing to review the medicine regimen

Complex multi-medicine regimens are increasingly common, especially in older people.[1,2] Incremental additions of medicines over time, multiple prescribers, medicines prescribed to treat the side effects of other medicines (prescribing cascade), and repeat prescriptions filled at different times and at different pharmacies can add to the complexity, and number of medicines used.[1,3,4]

Some people find it challenging and stressful to manage their medicines because of declining cognitive and physical abilities.[2] Older people taking multiple medicines often have complicated dosing schedules requiring several administration times across the day.[1] This substantial burden can affect people's social, financial, physical and psychological well-being.[1,5]

When people can't manage their medicines, they are more likely to have adverse outcomes, including inadequate symptom relief and ongoing poor health.[6-8]

This therapeutic brief provides information on how medicine regimens can become complex and outlines steps for reviewing the number of medicines used and simplifying the dosing schedule.

What makes a medicine regimen complex?

Multiple medicine use

The number of medicines taken is the strongest predictor of medicine-related harm.[4] A snapshot of medicine use found 43% of Australians 50 years or older used five or more medicines routinely; 11% used 10 or more routinely.[9] One in eight medicines is purchased from a supermarket, health food store or the internet, and a similar proportion is recommended by family, friends or the media.[9]

Using five or more medicines substantially increases the risk of adverse drug reactions, non-adherence, and disability and frailty in older people.[1,10-12] Multiple medicine use in older people is also associated with increased rates of delirium, falls and fractures, functional and cognitive impairment, malnutrition and mortality.[13] A study of older Australian veterans found one in four had at least one preventable medicine-related hospitalisation over a five year period and of these, a quarter had multiple preventable admissions.[14]

Inside

Key points

- Refer your patient for a Home Medicines Review (HMR) if you suspect, or they tell you they are having difficulty managing their medicines
- Explain options available to your patient, including continuing, changing or ceasing medicines, and discuss expected benefits and risks of harm, and potential outcomes
- Ask your patient what their concerns and preferences are regarding medicines and make decisions together
- Follow the steps outlined to align your patient's medicine regimen with their individual circumstances and preferences

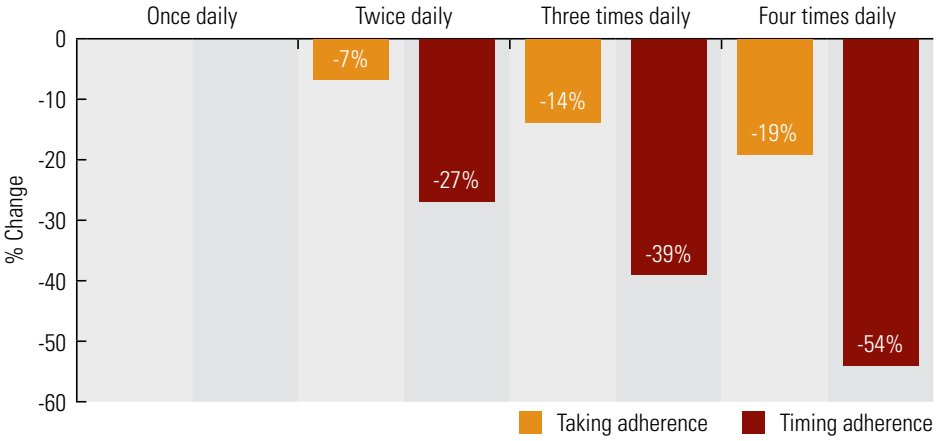
Frequent dosing schedules

Older people taking multiple medicines, especially those with limited literacy or cognitive skills, often find it difficult to coordinate doses, and self-administer their medicines more times a day than is necessary.[15] They might not realise they can take different medicines at the same time, especially when directions are different. For example a medicine to be taken 'twice daily', and a medicine to be taken 'every 12 hours' are often taken at different times.[15]

The more frequent the dosing schedule, the less likely people are to take their medicines, or to take them at the correct time.[16,17] A systematic review of 51 prospective studies indicated patients were significantly less likely to take their medicines, or take them at the correct time, if they took them two, three or four times a day, compared with once a day (see Figure 1). When directed to take medicines once a day, patients took them between 77% and 93% of the time.[16]

Poor adherence can have significant adverse outcomes. A US study showed patients with type 2 diabetes mellitus who missed multiple doses of an oral anti-hyperglycaemic in the previous month had worse health outcomes compared to those who missed only one dose. Patients who missed three or more doses had more days off work, increased diabetes-related healthcare use, poor glycaemic control, lower quality of life and less satisfaction with their medicines.[8]

Figure 1: Percent change in adherence with increasing regimen complexity[16]



Misinterpretation of directions

Misinterpreting directions is common; seemingly simple instructions can appear unclear and confusing to many patients, causing unintentional misuse and adverse outcomes.[1,15] Older patients might change their lifestyle to take their medicines as they believe their doctor wants them to. For example, they might not leave the house so as to stick to a rigid dosing schedule or they might change their meal times unnecessarily, to accommodate taking their medicines.[1] In some instances, the medicine regimen can dictate the person's life.[1]

Multiple brand names, combination products and generic substitutions

Patients are often faced with different brand names, changes to formulations, and different colours and shapes of tablets and packaging.[18,19] Older patients, in particular, often identify their medicines by colour and shape; when they change, they might stop taking their medicines or take a double dose.[20]

Steps to reviewing the medicine regimen

Reviewing medicine use, explaining options and potential outcomes for patients and aligning decisions with patient preferences has been shown to improve quality of life, give a sense of satisfaction and improve adherence.[1,5,21] Because most patients like to participate in decisions about their health, making decisions with them, particularly those likely to be influenced by the patient's values, preferences and care goals, is particularly important.[22,23]

When reviewing your patient's medicines, consider the anticholinergic load, which is often caused by the administration of more than one medicine with anticholinergic effects. For advice on how to reduce the anticholinergic load go to: www.veteransmates.net.au/TB_anticholinergic

☑ Refer your patient for an HMR

An HMR is an effective way to review your patient's medicines, and identify the kinds of challenges and problems many patients with a multi-medicine regimen face in the home.[21] Refer your patient for an HMR if you think they might be having difficulty managing their medicines or are unnecessarily overcomplicating their dosing schedule.[24,25] *See the 'Not sure of the Home Medicines Review process?' insert available at www.veteransmates.net.au to determine which of your patients might benefit from an HMR.*

In the referral to the pharmacist, document that the reason for the HMR is to review all medicines, and where possible, adjust the dosing schedule to better fit in with the patient's day-to-day life.[25] To make sure your patient gets the most out of the HMR, explain the process to them; many patients are unaware of HMRs, their purpose or benefits.[26] Encourage your patient to talk openly with the pharmacist about the daily routine of taking their medicines (see Box 1). Ask your patient to book in for a follow-up appointment after the HMR to discuss medicines that may require review.

Simplify the dosing schedule: the pharmacist's role

During the HMR the pharmacist confirms all medicines used by the patient, identifies any challenges or issues the patient might be experiencing, and helps to simplify their dosing schedule, following the steps outlined in Figure 2.

Figure 2: Simplifying the dosing schedule – a guide for the pharmacist[1]

Step 1. Ask the patient to 'walk you through their day' starting from when they wake up.

Let them tell you in their own words, about all the medicines they currently use, and how and when they take them across the day. *Asking questions from Box 1 may prompt a discussion and provide you with further information about whether taking their medicines affects physical, psychological or social aspects of their daily life and whether they take their medicines as directed.*

Step 2. Fill out 'My current medicine routine' with the patient

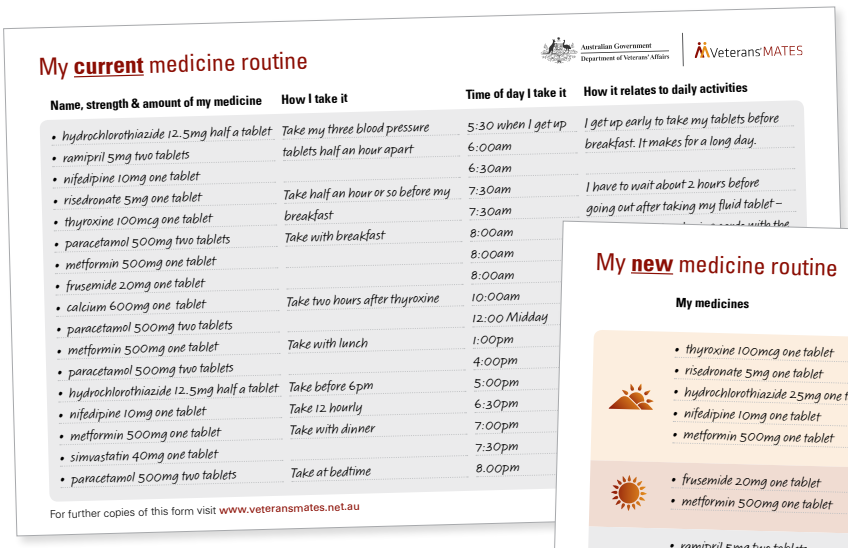
Write down all the medicines the patient currently takes, how and when they take them, and how they fit or do not fit in with their daily activities. Ask the patient to tell you what they understand each medicine is for. Let them demonstrate their competency in the use of any devices they have. Consider the anticholinergic load. On completion, show the patient how many times a day they are taking medicines and how much of their day is organised around their medicines. Clarify any medicine names and directions for use if required.

Step 3. Fill out 'My new medicine routine' with the patient

Invite the patient to talk openly about their day and what their preferences might be for taking medicines. Discuss options for linking their medicines to their needs and daily activities. *Where possible and appropriate, reduce dosing frequency and dosage units, eliminate tablet cutting and recommend a suitable adherence aid. For further information, refer to the website at: www.veteransmates.net.au*

Step 4. Provide feedback to the patient's GP

Encourage the patient to take the completed 'My new medicine routine' form with them to the follow up appointment with their GP. In a written report to the GP, identify medicines needing further review and any other feedback.



My **current** medicine routine

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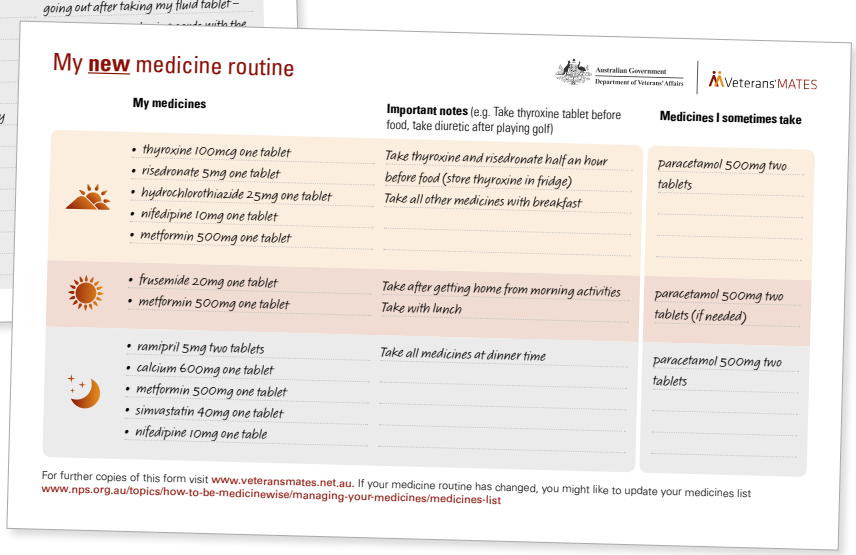
Name, strength & amount of my medicine	How I take it	Time of day I take it	How it relates to daily activities
• hydrochlorothiazide 12.5mg half a tablet	Take my three blood pressure tablets half an hour apart	5:30 when I get up	I get up early to take my tablets before breakfast. It makes for a long day.
• ramipril 5mg two tablets		6:00am	
• nifedipine 10mg one tablet		6:30am	
• risedronate 5mg one tablet	Take half an hour or so before my breakfast	7:30am	I have to wait about 2 hours before going out after taking my fluid tablet –
• thyroxine 100mcg one tablet		7:30am	
• paracetamol 500mg two tablets	Take with breakfast	8:00am	
• metformin 500mg one tablet		8:00am	
• frusemide 20mg one tablet		8:00am	
• calcium 600mg one tablet	Take two hours after thyroxine	10:00am	
• paracetamol 500mg two tablets		12:00 Midday	
• metformin 500mg one tablet	Take with lunch	1:00pm	
• paracetamol 500mg two tablets		4:00pm	
• hydrochlorothiazide 12.5mg half a tablet	Take before 6pm	5:00pm	
• nifedipine 10mg one tablet	Take 12 hourly	6:30pm	
• metformin 500mg one tablet	Take with dinner	7:00pm	
• simvastatin 40mg one tablet		7:30pm	
• paracetamol 500mg two tablets	Take at bedtime	8.00pm	

For further copies of this form visit www.veteransmates.net.au



My **new** medicine routine

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My medicines	Important notes (e.g. Take thyroxine tablet before food, take diuretic after playing golf)	Medicines I sometimes take
• thyroxine 100mcg one tablet • risedronate 5mg one tablet • hydrochlorothiazide 25mg one tablet • nifedipine 10mg one tablet • metformin 500mg one tablet	Take thyroxine and risedronate half an hour before food (store thyroxine in fridge) Take all other medicines with breakfast	paracetamol 500mg two tablets
• frusemide 20mg one tablet • metformin 500mg one tablet	Take after getting home from morning activities Take with lunch	paracetamol 500mg two tablets (if needed)
• ramipril 5mg two tablets • calcium 600mg one tablet • metformin 500mg one tablet • simvastatin 40mg one tablet • nifedipine 10mg one table	Take all medicines at dinner time	paracetamol 500mg two tablets

For further copies of this form visit www.veteransmates.net.au. If your medicine routine has changed, you might like to update your medicines list www.nps.org.au/topics/how-to-be-medicinewise/managing-your-medicines/medicines-list

For PDF copies of these forms and examples of the completed forms visit www.veteransmates.net.au

Box 1: Having a conversation with the patient[7,21,22,27]

Allow the patient to talk about their experiences to find out:

- If there is anything they would like to ask about their medicines
- What medicines they might be taking that they don't view as medicines, for example medicines purchased from the supermarket or health food store and creams, or eye drops
- What aspects of medicine taking they find difficult, for example correctly storing medicines, cutting tablets, or following directions
- If there is anything about their medicines they would like to change
- If there are any medicines they don't like taking
- What they expect to gain from taking their medicines and whether they feel those expectations are being achieved
- What their main goals are with regard to their health and treatment overall
- If they experience any side effects from their medicines
- If they are prepared to trial any changes to their medicines.

Review the number of medicines used

On receipt of the written HMR report, discuss the results with the pharmacist.[24] Follow the steps in Figure 3 to help guide the order and mode for changing or deprescribing medicines.

Case study: Reviewing the medicine regimen – the final result

Mrs Jones, 87 years old, lives alone, does not go to her doctor often and has been taking the same medicines for many years. Her GP refers her for an HMR.

She is taking her medicines multiple times a day. She feels exhausted and weak, has stopped attending social functions, and feels stressed about the number of medicines she is taking. Mrs Jones has purchased paracetamol from the supermarket and is taking two, four times a day for muscle aches and pains, which her GP is unaware of. She has put the aches and pains down to getting older. She is spending most of her day taking her medicines as she believes her doctor would like her to.

The pharmacist talks with Mrs Jones about what her expectations are regarding her medicines, health, treatment and quality of life. The pharmacist shows Mrs Jones how to align her dosing schedule with her day, by filling out the two forms provided during the HMR.

It is likely Mrs Jones' simvastatin was causing her muscle aches and pains, and weakness. After a discussion with the pharmacist and Mrs Jones, the GP ceases the simvastatin, trials a cessation of the frusemide, and changes the risedronate to a once a month dose, and the nifedipine and metformin to a controlled release form. Mrs Jones now spends much less time taking her medicines each day. She no longer has muscle aches and pains or feels so exhausted and stressed. She has resumed her social outings with friends and is enjoying life again.

Full reference list available on the website: www.veteransmates.net.au

Figure 3: Reviewing the number of medicines used – a guide for the GP[21,27,28]

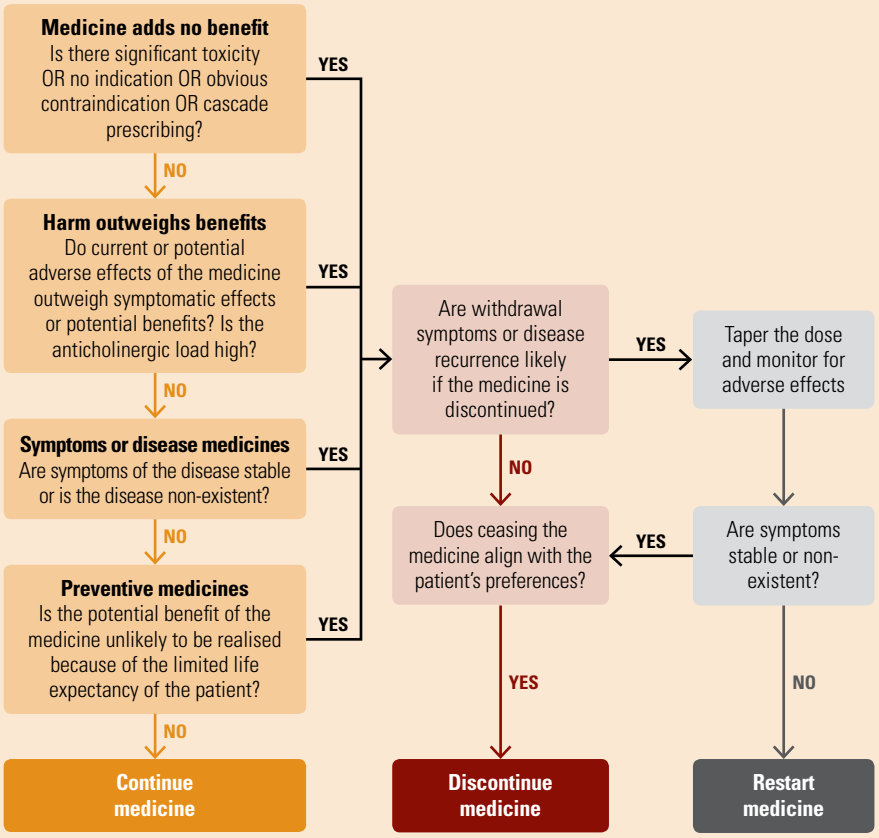
Step 1. Review all medicines

Review and compare the medicine list received from the HMR report with your current medicine list in your record. Discuss any differences found with your patient and update your current medicine list as appropriate. Ask the patient for their 'My new medicine routine' list.

Step 2. Assess medicine-related benefits and risk of harm, and discuss options with your patient

Take into account the number of medicines used, high-risk medicines, past or current toxicity and the patient's individual circumstances and preferences (see Box 1). Ask your patient if they are aware of and understand their options, and explain probable outcomes of continuing or discontinuing medicines. Consider your patient's age, cognitive ability, dexterity problems, comorbidities, other prescribers, and past or current adherence.

Step 3. Assess and consider the ongoing need for each medicine with your patient



Step 4. Prioritise medicines to be changed

Discuss, prioritise and plan any changes with your patient; ask them what they want. Decide and agree on specific medicines to change, generally one at a time in a stepwise approach.

Step 5. Implement the plan and monitor the patient

In collaboration with your patient, initiate the changes, and monitor and support them as necessary. Develop a Medication Management Plan with your patient and communicate the plan to the accredited pharmacist, community pharmacy and your patient.

Adapted from Scott I, et al. 'Reducing inappropriate polypharmacy: the process of deprescribing'. JAMA Internal Medicine. 2015.

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