



Therapeutic brief

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www.dva.gov.au/health/veteransmates

Dose Administration Aids: Preventing Medication Error

Missing doses or doubling up on doses are common medication errors that can result in adverse drug events (ADEs) and hospitalisation.^{1,2} Approximately one-third of unplanned hospital admissions involving the elderly are medication related and 50% of these are potentially preventable.¹ Memory problems and a complex medication regimen increase the likelihood of these problems. Older veterans are more vulnerable as they are likely to be taking multiple medicines.^{1,3}

Key points

- > DAAs have been shown to improve health outcomes and medication adherence while reducing adverse drug events.
- > The DVA DAA Service is free to eligible veterans and war widows.
- > A DAA Service coordinates care by the doctor and pharmacist for the veteran.
- > An HMR is the preferred way to determine suitability for a DAA.
- > Not all veterans will gain an advantage from using a DAA.

A dose administration aid (DAA) is a pharmacist-packed box containing medications for a fixed period. DAAs have been shown to improve health outcomes, including memory-related problems, and reduce the likelihood of adverse drug events.⁴⁻⁸

In March 2008 DVA introduced a free DAA Service for eligible veterans and war widows. In June 2008 DVA reviewed the DAA Service and simplified the process.

This therapeutic brief discusses the benefits associated with using a DAA and a Home Medicines Review (HMR). It also covers selection of veterans who are more likely to benefit from a DAA and the simplified process by which a veteran can obtain a free DAA Service through DVA.



② What is the DVA DAA Service?

The DAA Service supplies suitable DVA clients with regularly filled Dose Administration Aids, such as *blister packs*, under the coordinated care of their doctor and pharmacist. A veteran's suitability for the DAA Service is assessed by their doctor before being placed on a six-month program during which they are monitored by their doctor and pharmacist. It is strongly recommended that the doctor orders an HMR to help assess the likelihood that a veteran will benefit from a DAA. After a successful six-month period, veterans may continue receiving the Service with ongoing six monthly reviews under the same supervision.⁵

Patients may be receiving their DAA under other arrangements however the DVA Service is free for eligible veterans.



All DAA devices used for this Service must comply with the relevant Pharmaceutical Society of Australia Guidelines and standards and State/Territory legislation.

There are a number of different types of blister packs that comply, for example Webster-pak®, Medico pak®, Nomad® and PractiPak®.

Benefits

Australian research, including a study of DAA use in 1010 veterans and war widows, identified a number of potential benefits^{4, 8} and is supported by other research including an American study of 200 veterans.^{6, 7} These studies suggest the need to combine the use of DAAs with patient education, information and periodic follow up, including a medication review to prevent any decline in adherence over time.^{6, 9}

Benefits to Veterans

Better adherence and medication management contributes to:

- reduced memory related medication errors
- improved physical and general health
- less pain, anxiety and depression
- better prescription management
- maintaining continuity of medication supply
- reduced hoarding
- lower risk of ADE.^{4, 8}

How to get started

Getting started involves two steps: establishing eligibility and determining suitability.

Establishing Eligibility

Veterans must:

- hold a *Gold, White or Orange* card
- live in the community and not in a residential care facility
- be *likely to benefit* from the DAA service (see below).⁵

Determining Suitability

Australian DAA studies have shown that not every veteran will benefit from a DAA and the reasons were often identified through home visits.^{4, 8} For this reason an HMR is strongly recommended as a tool to help the doctor determine a veteran's suitability for a DAA Service.

Benefits to Doctors

- Records correlate better with medication found in the home.
- Provides a prompt to review a veteran's medication and address medication management issues.
- Helps quantify perceptions of compliance and re-evaluate aspects of prescribing.⁸

Benefits to Pharmacists

- Strengthens the partnership between pharmacist and veteran in medication management.
- Builds collaboration between the pharmacist and doctor.⁸

Why an HMR is important in the DAA Service

An HMR is a patient-focused review conducted in the veteran's home.¹⁰ It enables the pharmacist to see first hand how the veteran is managing their medicines at home.

The pharmacist is then well positioned to determine the veteran's suitability by assessing their individual needs, circumstance and capability for managing a DAA Service and assessing potential disadvantages.

The HMR also provides the veteran with education and information regarding their medicines including any over-the-counter medication they may be taking. It is also an opportunity to provide information about using DAAs.

An annual HMR is recommended for anyone using a DAA.

Veterans most likely to benefit from the DAA Service

- Those with more severe illness
- Use multiple medications or have complex regimens e.g. taking four or more oral medicines
- Have reported non-adherence
- Require help with activities of daily living
- Experience confusion or difficulty in handling their medicines^{5, 8}
- Have been hospitalised in the preceding year.⁴

Veterans who may not benefit from the DAA Service

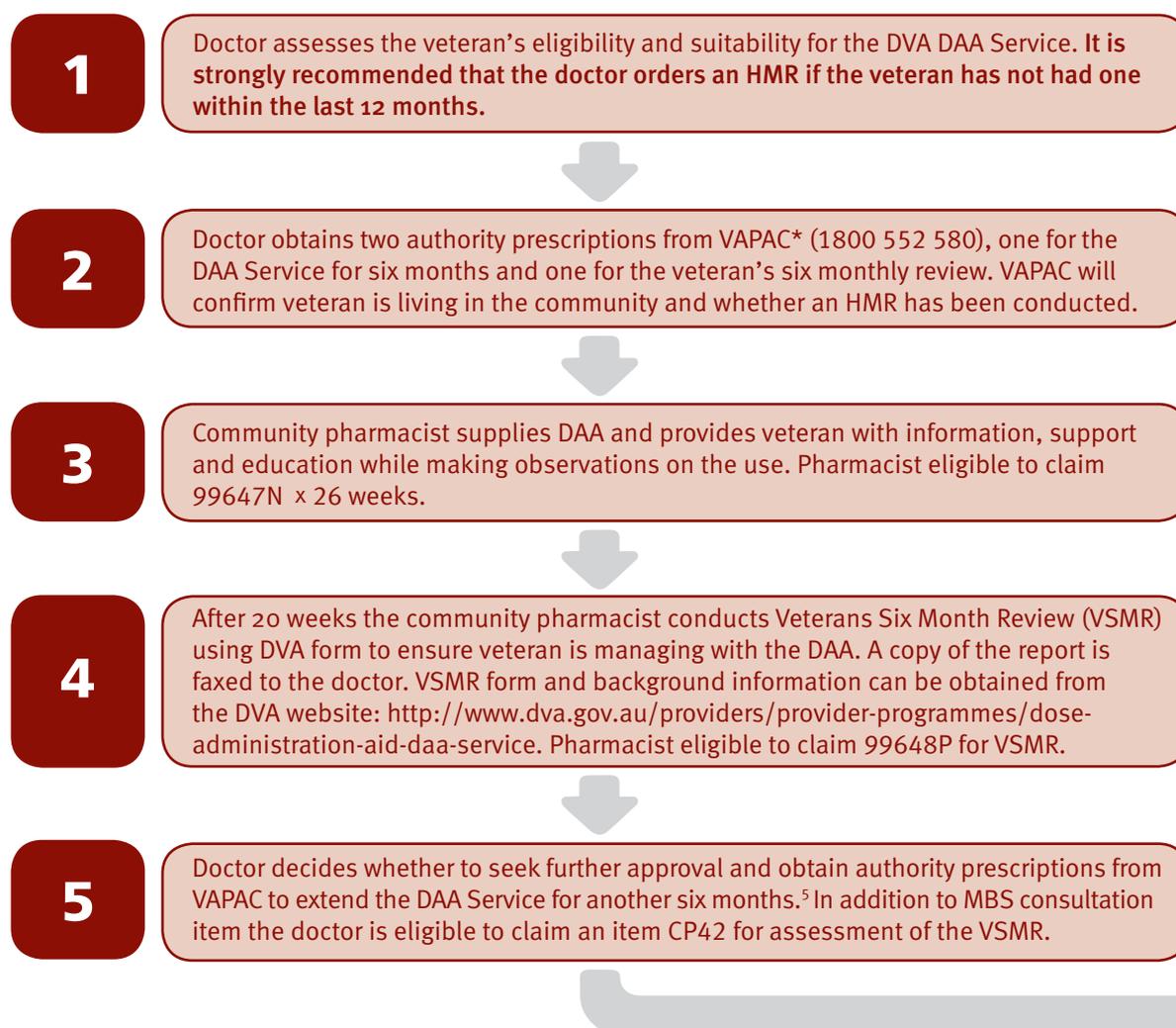
- Have fewer than 4 oral medications, can manage and adequately understand their own medicines.
- Are on a number of medicines that are not appropriate to be packed into a DAA, e.g. PRN medication, liquids, inhalers etc.
- Are visually impaired or have dexterity problems.⁸

Some DAAs have instructions in Braille but veterans would need to be assessed as to their ability to manage such instructions.

For qualifying veterans *eligibility* is only *indicative* and not a fixed criterion. Every veteran needs to be assessed on their individual circumstances, capability and needs irrespective of initial presentation. For example some veterans with fewer than 4 solid oral medications may benefit from a DAA Service.



Steps that need to be taken



*Veterans' Affairs Pharmaceutical Benefits Advisory Centre (VAPAC)

This information is accurate at the time of publication. For the latest information on the DVA DAA Service process refer to materials posted on the DVA website <http://www.dva.gov.au/providers/provider-programmes/dose-administration-aid-daa-service>



④ What can be packed in a DAA

A DAA is used to hold only suitable solid oral medications that are taken on a regular basis. Not all medicines are suitable for a DAA for safety and stability reasons. The decision as to a medicine's suitability for a DAA is left

to the pharmacist's professional judgment. Pharmacists work with a range of practice guidelines and standards to ensure the DAA is safe and appropriate to use.⁸

Table 1: Examples of types of medicines that should not be packed in a DAA^{11, 12}

Medicine types affected by moisture	Examples
Effervescent tablets	Effervescent forms of ranitidine, aspirin and potassium chloride
Dispersible tablets	Madopar Rapid [®]
Sublingual or buccal tablets	nystatin, glyceryl trinitrate, buprenorphine
Chewable tablets	vitamin C
Wafers	olanzapine
Tablets containing aluminium hydroxide, magnesium trisilicate	Gaviscon [®]
Moisture sensitive medicines	sodium valproate, amisulpride, rabeprazole
Medicines that may be appropriate for a limited time in a DAA	Examples
Storage temperature may affect stability	thyroxine
Medicines known to be susceptible to light degradation	nifedipine, tamoxifen
Data available indicating stable if packed for 2 weeks or less	omeprazole
Other	Examples
PRN medication	analgesics, laxatives

Note: Stability data may or may not be available from the manufacturer.

What to tell your patients

- DAAs are usually blister packs prepared by a pharmacist to ensure you take the right medicine at the right time.
- DAAs are not about taking control of your medicines away from you.
- Your community pharmacy needs to know about all of the medicines (including non-prescription medicines) you are taking so that they can be considered for the DAA Service.
- You will need to have your DAA filled regularly at your community pharmacy. Discuss a suitable routine with your pharmacist.

Useful websites

For more information on DAAs go to:

- DVA: <http://www.dva.gov.au/providers/provider-programmes/dose-administration-aid-daa-service>

For more information on HMRs go to:

- Australian General Practice Network: <http://www.gppaustralia.org.au/content/home-medicines-review>

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