



Australian Government
Department of Veterans' Affairs

ELECTRONIC RECORDS

NB: These documents have been obtained from an electronic record. An original hard-copy version of this record does not exist.

Management of tinnitus

a) WHAT are we aiming to do?

Aim: To improve the management of tinnitus in veterans.

b) WHY are we doing this module?

Tinnitus is the perception of sound that has no external source.^{1,2} It is commonly described as ringing, buzzing, hissing, clicking or humming perceived in one or both ears and as coming from within or outside the head.¹⁻³ Tinnitus can be intermittent or constant and its loudness and severity can change over time.^{2,4} It affects up to 25% of the adult population and the prevalence increases with age.^{2,4-6} Tinnitus has been reported as the most common service-related condition among veterans.¹ Most people who experience tinnitus also have some degree of hearing loss.^{2,3} The effects of tinnitus on quality of life can include impaired sleep, poor concentration, difficulty hearing conversations and reduced social enjoyment.² Tinnitus is also associated with anxiety, depression and pain.^{1,2,4,7,8}

Tinnitus is a complex, multifactorial problem with several management options that can improve symptoms and quality of life.^{1,6} Clinicians should initially perform a comprehensive assessment of the patient to identify and treat the cause of the tinnitus if possible.^{1,6,9,10} For patients with tinnitus that is unilateral, persistent (of at least 6 months duration) or associated with hearing difficulties, clinicians should promptly carry out an audiological assessment.^{1,2,6} An audiological examination is appropriate at any time for any patient with tinnitus because tinnitus is commonly associated with hearing loss and some patients with tinnitus may not recognise that they have hearing difficulties.^{1,2}

For patients with hearing loss and persistent, troublesome tinnitus, a hearing aid assessment is advised.^{1,9} The Australian Government Hearing Services Program requires that people fitted with a hearing device meet a minimum 3 Frequency Average Hearing Loss threshold of greater than 23 decibels (3FAHL > 23dB) measured at different frequencies in each ear.¹¹ However, a patient with tinnitus can be exempt from these requirements and fitted with a hearing aid if the hearing device will address both mild hearing loss and severe or constant tinnitus that significantly affects quality of life.¹¹ Even in the absence of marked hearing loss, hearing devices may improve quality of life for patients with tinnitus.^{1,9,12} By amplifying other sounds, hearing aids can make the tinnitus less noticeable and improve concentration and communication.^{1,9,12} Use of hearing aids has also been shown to reduce anxiety, depression and sleeplessness.¹² Despite this, hearing aids are underused; many people with documented hearing loss do not use hearing aids.¹ Choosing to wear hearing devices can be affected by issues such as motivation, perceived value, and fit and comfort of the device.^{1,12}

Another important part of managing tinnitus distress is addressing psychological factors.^{2,12} Tinnitus can lead to emotional disturbance, which can stimulate the sympathetic nervous system and increase the volume of tinnitus, resulting in anxiety and depression.⁹ Because cognitive processes are involved in creating tinnitus-related distress, psychological interventions are commonly used to manage the condition.^{2,3} Cognitive behavioural therapy (CBT) is recommended for patients with persistent, bothersome tinnitus.^{1,10,13} CBT teaches skills to identify negative thoughts that lead to distress and restructure them so that they are more accurate or helpful.^{1,3,9,14} CBT can also assist in managing anxiety, depression or chronic pain if co-existing in patients with tinnitus.^{2,3,7,9,14,15} Studies indicate that CBT is

effective in alleviating the distress caused by tinnitus compared to passive control groups and in some cases compared to active control groups.¹⁻³

Pharmacological therapy is not recommended for tinnitus because there is little evidence of benefit and a risk of adverse effects.^{1,2,6,10,13} No medicines have been shown to reliably eliminate or reduce the perception of sound in tinnitus.^{1,4,15} In addition, some medicines can cause or worsen tinnitus.^{1,4,7,9,10,13} These include aspirin, non-steroidal anti-inflammatory drugs (NSAIDs), loop diuretics, quinine, aminoglycoside antibiotics and cytotoxic medicines.^{1,4,9,10,13} Medicines used to treat mental health conditions (e.g. some anti-depressants) and insomnia may also trigger or aggravate tinnitus.^{1,7,10,16} Medicines might have a role in managing associated conditions, although psychological therapies such as CBT are first-line for depression and insomnia.^{1,4,10,13,17}

Analysis of the DVA claims database found that 39,453 DVA clients had tinnitus. Most DVA clients with tinnitus were males (95%), living in the community (98%), with an accepted condition of tinnitus (99%) and had been in conflict (90%) (Table 1). Their median age was 65 years and 52% were Gold Card holders.

Table 1. Characteristics of DVA clients with tinnitus (N=39,453)

s 22 - Out of scope

Of the DVA clients with tinnitus, 24% experienced depression, 7% had anxiety and 12% had insomnia (Table 2). Despite the prevalence of comorbid mental health conditions, only 8% of DVA clients with tinnitus visited a psychologist.

Table 2. Number and percentage of cohort who had services or medications related to tinnitus

s 22 - Out of scope

Tinnitus is a very common problem among veterans that can negatively impact on people's daily lives. Several options are available to help manage tinnitus and associated conditions, and thereby improve peoples' quality of life. However, interventions and services that could benefit DVA clients with tinnitus appear to be underused. For these reasons, a Veterans' MATES topic focussing on psychological strategies to assist with managing tinnitus and mental health comorbidities in DVA clients may be of benefit. This topic will provide

information to GPs on recommended practices for the management of tinnitus including an audiological examination and hearing aid assessment. It will highlight to GPs the psychological basis of tinnitus-related distress and psychological approaches to manage tinnitus. The topic will inform GPs of how and where to refer patients for CBT. Information provided to DVA clients with tinnitus will encourage them to ask their GP about assessing their tinnitus and having a hearing test. The benefits of CBT for tinnitus-related distress will be highlighted to DVA clients.

Key messages

For the therapeutic brief and feedback

- Perform a comprehensive assessment to identify and treat the cause of the tinnitus if possible and an audiological examination including to identify hearing loss
- Refer patients with hearing loss and persistent, troublesome tinnitus for a hearing aid assessment
- Educate patients about the psychological basis of tinnitus-related distress
- Through the use of CBT, teach patients skills to identify inaccurate and negative thoughts and to frame these as thoughts that are more accurate or helpful; CBT may require referral to a trained health professional

For the veteran brochure

- Tinnitus-related distress can be managed with psychological interventions including CBT
- Modifying your thoughts and feelings related to tinnitus with CBT strategies can help to counter the effects of tinnitus
- If you need help learning about CBT, ask your GP about referral to a psychologist

Expected behaviour change

- Increase in claims for visits to psychologists

c) HOW are we going to do it?

Target groups

- DVA clients with tinnitus
- GPs who are the primary providers for the DVA clients targeted
- All pharmacies and accredited pharmacists

Intervention

The intervention will consist of the following strategies:

1. A therapeutic brief to GPs and pharmacists providing useful information about recommended practices for the management of tinnitus
2. Prescriber feedback indicating to GPs the DVA clients they treat who have tinnitus and whether the DVA clients are receiving psychologist services
3. Subsequent to the letter and prescriber feedback to GPs and mailing to pharmacies, an educational brochure will be sent to DVA clients with information about managing tinnitus including CBT skills to reduce the impact of tinnitus-related distress

References

1. Tunkel D et al. Clinical practice guideline: tinnitus. *Otolaryngology – Head and Neck Surgery*. 2014; 151: S1-S40.
2. Bauer C. Tinnitus. *NEJM*. 2018; 378: 1224-31.
3. Aazh H et al. Cognitive behavioral therapy for alleviating the distress caused by tinnitus, hyperacusis and misophonia: current perspectives. *Psychology Research and Behavior Management*. 2019; 12: 991-1002.
4. Baguley D et al. Tinnitus. *Lancet*. 2013; 382: 1600-07.
5. Fuller T et al. Cognitive behavioural therapy for tinnitus. *Cochrane Database of Systematic Reviews*. 2020; 1: CD012614.
6. Walker D et al. Tinnitus. *JAMA Clinical Guidelines Synopsis*. 2016; 315: 2221-22.
7. Langguth B et al. Tinnitus and depression. *The World Journal of Biological Psychiatry*. 2011; 12: 489-500.
8. Rauschecker J et al. Frontostriatal gating of tinnitus and chronic pain. *Trends Cogn Sci*. 2015; 19: 567-78.
9. Esmaili A, Renton J. A review of tinnitus. *AJGP*. 2018; 47: 205-8.
10. Therapeutic Guidelines: Neurology. Melbourne. Therapeutic Guidelines. 2020.
11. Australian Government Department of Health. Minimum hearing loss threshold guidelines. 2020. Available at: http://hearingservices.gov.au/wps/wcm/connect/hso/aaf886d4-7b74-4698-aed3-9ebfba731e70/Minimum+Hearing+Loss+Threshold+%28MHLT%29+Guidelines+-+1019.pdf?MOD=AJPERES&CONVERT_TO=url&CACHEID=aaf886d4-7b74-4698-aed3-9ebfba731e70 [Accessed September 2020]
12. Searchfield G et al. Hearing aids as an adjunct to counseling: tinnitus patients who choose amplification do better than those who don't. *International Journal of Audiology*. 2010; 49: 574-79.
13. Australian Medicines Handbook. Adelaide. Australian Medicines Handbook Pty Ltd. 2020.
14. Moseley G, Butler D. Fifteen years of explaining pain: the past, present and future. *The Journal of Pain*. 2015; 16: 807-813.
15. Baldo P et al. Antidepressants for patients with tinnitus. *Cochrane Database of Systematic Reviews*. 2012; 9: CD003853.
16. Langguth B et al. Persistent tinnitus induced by tricyclic antidepressants. *Psychopharm*. 2010; 24: 1273-75.
17. Malhi G et al. Royal Australian and New Zealand College of Psychiatrists clinical practice guidelines for mood disorders. *ANZ Journal of Psychiatry*. 2015; 49(12): 1-185.

Reducing the burden of chronic pain

a) WHAT are we aiming to do?

Aim: To improve management and treatment of chronic pain

b) WHY are we doing this module?

One in five Australians have chronic pain, and this increases to one in three people aged over 65 years.^{1,2} Chronic pain has been reported to be common in veteran populations, with 50 to 70% of general medicine patients within the US Veteran Affairs suffering from chronic pain; the majority reporting either back, hip or knee pain.³ Back pain is the most prominent complaint among the 80% of US veterans returning from the conflicts in Iraq and Afghanistan, who experience chronic pain.⁴ Having chronic pain has been shown to significantly affect a person's quality of life, and is associated with poor self-rated health, high levels of psychological distress, anxiety, and depression, as well as increased disability and unemployment.^{1,2,5}

One third of Australians with chronic pain take an opioid medicine.^{1,6} This is despite a lack of clear evidence supporting the use of opioid medicines for chronic pain, and their association with a number of adverse effects including constipation, nausea, dizziness, sedation, respiratory depression, sleep apnoea, fractures in the elderly and hyperalgesia (increased sensitivity to pain).^{7,8,9} Long term use of opioids can lead to psychological and physical dependence, abuse, tolerance, diversion and overdose.¹⁰ A 2015 systematic review found insufficient evidence to support the use of long term opioid therapy for chronic pain.¹¹ In addition, the likelihood of recovery from chronic pain is four times lower in individuals using opioids.^{12,13}

Between 1990 and 2014, dispensing of opioid medicines increased four-fold.¹⁴ In line with the increasing opioid use, the rate of oxycodone related deaths is also increasing, with an almost seven-fold increase between 2001 and 2011.¹⁵ Of the reported deaths, over half (59%) occurred in men and more than half (56%) were unintentional. In half of the cases, the person had a history of mental illness, and 46% had a history of pain.¹⁵

Use of opioids among the DVA population is common. Analysis of the DVA database¹⁶ showed that 62,509 veterans were dispensed an opioid between 1 July 2014 and 30 June 2015. Of these, 6,761 were chronic users at study entry. There were 24,394 persons who initiated opioids, of which 18,743 had at least 90 days of follow-up. Of these 1,185 (6.3%) became continuous users and 17,558 stopped within 90 days. In addition to these cohorts there were 31,354 intermittent users.

Demographic characteristics of the cohorts are presented in table 1.¹⁶ Initiators who became chronic users were more likely to be women, aged 85 years or more and living in aged-care. Almost half of the existing chronic users were residents in aged-care facilities and 75% were aged 85 years or more.¹⁶

Table 1: Demographic of veterans dispensed opioids

s 22 - Out of scope

Consistent with Australian literature,¹⁷ among the chronic opioid users, post-traumatic stress disorder (PTSD) is common, as is back pain, antidepressant use and benzodiazepine use (Table 2).¹⁶ Health service use showed low rates of claims for pain consultations and exercise physiologists (Table 3).¹⁶

When considering those who initiated opioids, among the youngest cohort (25 to 54 years), no differences were observed among the active comorbidities present at baseline between those who became chronic users and those who stopped (Table 4).¹⁶ Amongst the 55 to 64 year old cohort, alcohol abuse and back pain were more likely to be reported among those who became chronic users. Amongst the 65 to 74 year old cohort, anxiety, smoking and back pain were more commonly reported in those who became chronic users.¹⁶ Amongst the 75 to 84 year old cohort, PTSD, depression and anxiety were more common in those who became chronic users, and amongst the 85 year old and over cohort, depression, psychosis and back pain were more commonly reported (Table 4).¹⁶ Antipsychotic use and paracetamol use were more common in those who became chronic users in the cohorts aged 65 years and above (Table 5).¹⁶

Table 2: Chronic users: proportion current comorbidity

s 22 - Out of scope

Table 3: Chronic users: proportions with health service and medicine use in last year

s 22 - Out of scope

Table 4: Initiator cohorts: proportions who have the following active comorbidities

s 22 - Out of scope

Table 5: Initiator cohorts: proportions who have the following treatments in the year prior

s 22 - Out of scope

Our analysis showed mental health comorbidities were common among veterans who use opioids chronically.¹⁶ Mental health comorbidities were also common in initiators who became chronic users of opioids, however, they occurred at a lower rate than existing chronic users.¹⁶ This suggests a proportion of mental health comorbidity develops subsequent to pain treatment, and there may be an opportunity to intervene to reduce this developing.

A biopsychosocial approach has been shown to deliver the best outcomes for chronic pain.¹⁸ A core part of this approach is providing specific education which includes explaining the biological processes that underpin pain, with the aim of shifting a person's understanding of their pain from that of a marker of tissue damage or disease, to that of a marker of the perceived need to protect body tissue.^{19,20} This approach educates patients that pain can be decreased when the credible evidence of danger to the body is less than the credible evidence of safety to the body.²¹

For these reasons, this topic will provide education to veterans and their health professionals using a biopsychosocial approach that incorporates helping patients to understand how pain works, with the aim of reducing the burden of chronic pain as well as improving the mental health of veterans with chronic pain. It will encourage GPs to review the duration of use of opioid medicines in chronic users and to cease where appropriate. It will also give veterans practical advice on how understanding the biology of pain can help to reduce their pain.

Key messages

For the therapeutic brief and feedback

- Review opioid use in chronic users and cease where appropriate
- When managing chronic pain, consider a biopsychosocial strategy that incorporates helping patients to understand how pain works
- Use the healthcare team when treating chronic pain in veterans

For the veterans brochure

- Learning about the biology of pain can help to reduce your pain
- Pain is produced when danger messages are sent from your nervous system to the brain
- Use the healthcare team to help manage your pain

Expected behaviour change

- A reduction in the duration of opioid use
- An increase in psychologist visits

c) HOW are we going to do it?

Target groups

- Veterans who are chronic users of opioid medicines
- GPs who are the primary providers for the veterans targeted
- All pharmacies and accredited pharmacists
- Psychologists

Intervention

The intervention will consist of the following strategies:

1. A therapeutic brief to GPs, pharmacists and psychologists providing useful information about the management of chronic pain.
2. An insert to the therapeutic brief to GPs, pharmacists and psychologists providing useful information about using a biopsychosocial approach to managing pain.
3. Prescriber feedback indicating to GPs the veterans they treat who are prescribed opioid medicines and the duration of use.
4. Subsequent to the letter and prescriber feedback to GPs and mailing to pharmacies and psychologists, veterans will receive two educational brochures approximately one month apart; the first providing information about the biology of pain, followed up with a second brochure that helps veterans identify and modify the things that might reduce their pain.

References

1. Henderson J, et al. Prevalence, causes, severity, impact, and management of chronic pain in Australian general practice patients. *Pain Medicine*. 2013; 14: 1346-1361.
2. Kroenke K, et al. Association between anxiety, health-related quality of life and functional impairment in primary care patients with chronic pain. *Gen Hospital Psychiatry*. 2013; 35: 359-365.
3. Butchart A, Kerr E, Heisler M, Piette J, Krein S. Experience and management of chronic pain among patients with other complex chronic conditions. *Clin J Pain*. 2009 May; 25(4): 293-8.
4. Gironda R, Clark M, Massengale J, Walker R. Pain among veterans of Operations Enduring Freedom and Iraqi Freedom. *Pain Medicine*. 2006; 7(4): 339-343.
5. Holmes A, Christelis N, Arnold C. Depression and chronic pain. *MJA Open*. 2012; 1 Suppl 4: 17-20.
6. Blyth F, et al. Chronic pain in Australia: a prevalence study. *Pain*. 2001; 89: 127-134.
7. The Management of Opioid Therapy for Chronic Pain Working Group. Clinical Practice Guideline for Management of Opioid Therapy for Chronic Pain. 2010. Available at: <http://www.healthquality.va.gov/guidelines/Pain/cot/> [Accessed September 2016].
8. The Royal Australasian College of Physicians. Prescription Opioid Policy: improving management of chronic non-malignant pain and prevention of problems associated with prescription opioid use. Sydney 2009.
9. Australian Medicines Handbook. Adelaide. Australian Medicines Handbook Pty Ltd. 2016.
10. Benjamin R, et al. Opioid complications and side effects. *Pain Physician*. 2008; Opioid Special Issue:11:S105-S120
11. Martell B, et al. Systematic review: opioid treatment for chronic back pain: prevalence, efficacy, and association with addiction. *Ann Intern Med*. 2007; 146: 116-27.
12. Eriksen J, Sjøgren P, Bruera E, Ekholm O, Rasmussen N. Critical issues on opioids in chronic non-cancer pain: an epidemiological study. *Pain*. 2006; 125: 172-179.
13. Sjøgren P, Grønboek M, Peuckmann V, Ekholm O. Population-based cohort study on chronic pain: the role of opioids. *Clin J Pain*. 2010; 26: 763-9.
14. Karanges E, et al. Twenty-five years of prescription opioid use in Australia: a whole-of-population analysis using pharmaceutical claims. *Br J Clin Pharmacol*. 2016; 82: 255-267.
15. Pilgrim J, Yafistham S, Gaya S, Saar E, Drummer O. An update on oxycodone: lessons for death investigators in Australia. *Forensic Sci Med Pathol*. 2015; 11: 3-12.
16. DVA Health Claims Database, University of South Australia, QUMPRC. [Accessed March 2016].
17. Nielsen S, et al. Benzodiazepine use among chronic pain patients prescribed opioids: associations with pain, physical and mental health, and health service utilization. *Pain Medicine*. 2015; 16: 356-366.
18. National Pain Summit Initiative. National Pain Strategy: Pain Management for all Australians. 2010. Available at:

[http://www.campaignforpain.org.au/images/camp_4_pain/The Painful Facts/National Pain Strategy Report.pdf](http://www.campaignforpain.org.au/images/camp_4_pain/The_Painful_Facts/National_Pain_Strategy_Report.pdf) [Accessed September 2016].

19. Moseley G, Butler D. Fifteen years of explaining pain: the past, the present, and future. *J Pain*. 2015; 16(9): 807-813.
20. Gallagher L, McAuley J, Moseley G. A randomized-controlled trial of using a book of metaphors to reconceptualise pain and decrease catastrophizing in people with chronic pain. *Clin J Pain*. 2013; 29: 20-25.
21. Moseley G, Butler D. *The Explain Pain Handbook: Protectometer*. Adelaide, Australia. Noigroup Publications. 2015.

Reducing medicine complexity with Home Medicines Review

a) WHAT are we aiming to do?

Aim: To reduce the complexity of individual patient's medication regimen through review of complexity within a Home Medicines Review.

b) WHY are we doing this module?

In an ageing population, where people are more likely to have a chronic disease, multiple medication use is common. Almost 90% of Australians aged over 50 years take one or more medicines and almost half take five or more.¹ Taking more than five medicines increases the risk of adverse effects and interactions, disability, and frailty in older people.² In the veteran population with chronic disease, use of multiple medicines is even more common, with the average number of medicines taken being between ten and twelve. Persons taking ten medicines concurrently are likely to have 12 potential drug interaction alerts.³ In addition, many of the medicines that are taken by the elderly have the potential to contribute to worsening cognition, mobility, balance, respiration or muscle strength. Mild deteriorations in these functions can have a significant effect on quality of life and the cumulative impact can result in significant harms due to consequences such as falls and delirium.

Complexity with medicine use can arise from the numbers of medicines a person is taking, and it can also arise from the way medicines are administered throughout the day. Patients taking multiple medicines often have complex medication taking regimens requiring multiple doses that are administered multiple times across the day. This can lead to confusion around when and how medicines should be taken with studies showing patients often add additional administration times.^{4,5} In one study only 15% of patients developed the correct medication administration regimen of four administration times, with the majority developing a regimen that included six different administration times.⁴ Another study showed almost half of the patients who were assessed could have their medication regimen simplified, with 26% being able to eliminate one additional administration time a day and 16% being able to eliminate two additional administration times a day.⁵ Additional administration times a day increase risk of non-adherence with medicines through missed doses.⁶ Another study showed that in elderly patients with polypharmacy, the medication regimen had on average four characteristics that were likely to increase the risk of non-adherence, including tablet splitting and multi-dose administrations. Half of the tablet splitting and one fifth of the multi-dose administrations could be avoided.⁷

Reducing medicine complexity can be addressed by:

1. **Simplifying the patients' medicine regimen** by ensuring the patient understands the instructions for taking each of their medicines including the optimal dosing schedule.
2. **Reducing overall medicine use** by systematically identifying, prioritising, and implementing a plan for discontinuation.

Collaborative Home Medicines Reviews (HMRs), funded by the Australian government, can assist with both of these aspects to reduce medicine complexity. HMRs have been shown to be effective in reducing overall use of medicines, where appropriate,⁸ as well as improve patients' knowledge, skills and confidence in using their medicines.⁹ This collaborative approach involving the general practitioner, pharmacist and the patient has also been shown to improve health outcomes for veteran patients.^{10,11,12}

Table 1: A protocol to identify and prioritise medicines suitable for discontinuation – how the HMR can assist*

Key steps	Explanation	How the HMR can assist
Step 1: Identify all the medicines the patient is currently taking and reasons for each one	Ask the patient to bring all medicines they currently take into consult or home visit. Identify whether patient is not taking any of their regularly prescribed medicines and the reasons behind this.	At the HMR, the patient will be asked to show the pharmacist all the medicines they regularly take including those prescribed, as well as over-the-counter or complementary medicines.
Step 2: Consider overall risk of medicine-induced harm	Risk can be assessed by: medicine factors (number of medicines, use of 'high risk' medicines, anticholinergic load) or patient factors (such as age, cognitive impairment, multiple prescribers, adherence issues)	The accredited pharmacist can help identify both medicine and patient factors that may increase risk of harm.
Step 3: Assess each medicine and its eligibility for discontinuation	Eligibility for discontinuation may include: no valid indication, part of a prescribing cascade, potential or actual harm outweighs benefit, contributing to high anticholinergic load, medicine for specific symptom or disease is ineffective or symptom has resolved, patient preferences and expectations re preventative medicines.	The pharmacist can help identify whether any of the patient's medicines may be suitable for discontinuation by assessing the risks and benefits for individual medicines, in particular high risk medicines and those originally prescribed for prevention. The pharmacist can also ask the patient specific questions about their expectations and preferences.
Step 4: Prioritise medicines suitable for discontinuation	Order of discontinuation can be guided by: medicines with the greatest harm and least benefit, those easiest to discontinue, those that the patient is willing to stop.	The GP can use information from the HMR report to assist with this step.
Step 5: Cease proposed medicines and monitor patient	Come to an agreed plan to discontinue medicines with the patient providing instruction on what they can expect while stopping the medicine. Cease one medicine at a time, tapering those that are likely to cause withdrawal effects. Communicate changes to all involved in the patient's care.	The HMR process provides an opportunity for the GP to suggest changes to the medicine regimen with the patient. The outcomes from the HMR can be provided to the accredited pharmacist as well as to the patient's usual pharmacist to assist with monitoring changes.

*Protocol adapted from Scott et al. Reducing inappropriate polypharmacy: the process of deprescribing. JAMA Internal medicine 2015; 175 (5): 827-834.

With the aim of considering whether there is potential to reduce the number of medicines a person takes, a five step protocol for identifying and prioritising medicines which may be suitable for discontinuation has recently been proposed.¹³ The key steps are outlined in table 1, alongside how an HMR can assist a GP in reviewing a patient's medicines with the aim of simplifying their medicine regimen and reducing use of medicines that are no longer needed or beneficial to the patient. A similar protocol demonstrated success when tested for feasibility in 70 older community dwelling patients.¹⁴ Over an average of 19 months, 311 different medicines were ceased for 64 of the patients and at follow-up 81% of these medicines had not been re-started. Furthermore almost 90% of patients reported an overall improvement in their health.¹⁴ Another study using a similar protocol for reviewing and targeting potentially inappropriate medicines in residential aged-care residents was also successful in reducing the number of medicines prescribed with no significant adverse effects.¹⁵ Almost 60% of the 348 medicines targeted for cessation were successfully discontinued, with at least one medicine ceased for approximately 90% of participants.¹⁵

Medicine review by a pharmacist has also been shown to be able to reduce medicine administration complexity, in terms of the dosage administration times across the day, with just under half of the patients reviewed able to have medication administration complexity reduced.¹⁶ A protocol to assist pharmacists with this process will be developed as part of this topic. See table 2 as an example.

Table 2: Key questions that pharmacists can ask when reviewing medicine administration complexity

Key questions	Examples
Are there any medicines where dose frequency can be reduced?	Where doses of the same medicine are taken split across the day and could be taken once a day (e.g. potassium)
Can the number of dosage units taken at one time for a specific medicine be reduced?	Where two tablets of the same medicine are taken per day and a higher strength would enable only one tablet to be taken
Can tablet splitting be eliminated?	Where a lower strength product is available that enables the appropriate dose to be taken
Can dose times be varied?	Where only taking one night time dose that is not required to be taken at night, can it be moved to coincide with administration of medicines taken at another time in the day
Can the formulation be modified to one that is simpler to use?	Patient already on a metered dose inhaler for which they have good administration technique, so change other respiratory medicines to same formulation
Would a combination product be suitable?	Where patients are stabilised on both individual medicines and same dose combination product exists

Building on the success of previous modules which encouraged the use of HMRs, this topic aims to outline to GPs and pharmacists how the HMR can assist with reducing medicine complexity. It will outline the key steps recommended to identify and prioritise medicines that may be suitable for discontinuation and how the HMR can be used to help facilitate this process. It will also highlight how an HMR can promote the pharmacist and veteran working together to simplify and optimise their medicine administration regimen.

Key messages

For the therapeutic brief and feedback

- Is your patient on a complex medicine regimen? An HMR can help to:
 - Develop an optimal administration schedule
 - Assist with systematically identifying and prioritising medicines that may be suitable for discontinuation

For the veterans brochure

- Take multiple medicines? An HMR can help you by:
 - Giving you an opportunity to ask any questions you may have about your medicines and discuss your preferences
 - Finding out whether you may be able to reduce the number of times a day you have to take your medicines
- Talk to your doctor about having an HMR

Expected behaviour change

- An increase in Home Medicines Reviews in targeted veterans

c) HOW are we going to do it?

Target groups

Target groups for this intervention are:

- Veterans who are dispensed multiple medicines
- GPs who are the primary providers for the veterans targeted
- All pharmacies and accredited pharmacists

Intervention

The intervention will consist of the following strategies:

1. A therapeutic brief to GPs and pharmacists providing useful information about how an HMR can assist with reducing medicine complexity.
2. An online insert for GPs providing useful information about the HMR process.
3. Medicine routine forms for pharmacists, to help visually show patients how their daily dosing schedule might be improved.
4. Prescriber feedback indicating to GPs the veterans they treat, an indication of their medicine complexity, and whether they have had an HMR.
5. Subsequent to the letter and prescriber feedback to GPs and mailing to pharmacies, an educational brochure will be sent to veterans providing them with information about how a Home Medicines Review can help make their medicine routine less complicated, easier to manage, and better fit in with day-to day life.

References

1. Morgan TK, et al. A national census of medicines use: a 24-hour snapshot of Australians aged 50 years and older. *MJA*. 2012; 196: 50-53.
2. Gnjjidic D, et al. Polypharmacy cutoff and outcomes: five or more medicines were used to identify community-dwelling older men at risk of different adverse outcomes. *J Clin Epidemiol*. 2012; 65(9): 989-995.
3. Sutherland JJ, et al. Co-prescription trends in a large cohort of subjects predict substantial drug-drug interactions. *PLoS ONE*. 2015; 10(3): e0118991. doi:10.1371/journal.pone.0118991
4. Wolf M S, et al. Helping patients simplify and safely use complex prescription regimens. *Arch Intern Med*. 2011; 171(4): 300-305.
5. Lindquist LA, et al. Unnecessary complexity of home medication regimens among seniors. *Patient Educ Couns*. 2014; 96(1): 93-97.
6. Coleman CI, et al. Dosing frequency and medication adherence in chronic disease. *J Manag Care Pharm*. 2012; 18(7): 527-39.
7. Witticke D, et al. Opportunities to reduce medication regimen complexity: a retrospective analysis of patients discharged from a university hospital in Germany. *Drug Saf*. 2013; 36: 31-41.
8. Castelino RL, et al. Are interventions recommended by pharmacists during Home Medicines Review evidence-based? *Journal of Evaluation in Clinical Practice*. 2011; 17(1) 104-10.
9. Gilbert AL, et al. Collaborative medication management services: improving patient care. *MJA*. 2002; 177: 189-192.
10. Kalisch LM, et al. Improving heart failure outcomes with pharmacist-physician collaboration: how close are we? *Future Cardiol*. 2010; 6(2): 255-268.
11. Roughead EE, et al. The effectiveness of collaborative medicine reviews in delaying time to next hospitalisation for patients with heart failure in the practice setting: results of a cohort study. *Circ Heart Fail*. 2009; 2: 424-428.
12. Roughead EE, et al. Collaborative Home Medicines Review delays time to next hospitalization for warfarin associated bleeding in Australian war veterans. *J Clin Pharm Ther*. 2011; 36: 27-32.
13. Scott I, et al. Reducing inappropriate polypharmacy: the process of deprescribing. *JAMA Internal medicine*. 2015; 175(5): 827-834.
14. Garfinkel D, Mangin D. Feasibility study of systematic approach for discontinuation of multiple medications in older adults. *Arch Intern Med*. 2010; 170(10): 1648-1654.
15. Potter K, Flicker L, Page A, Etherton-Beer C. Deprescribing in frail older people: a randomised controlled trial. *PloS One*. 2016; 11(3): e0149984. doi:10.1371/journal.pone.0149984
16. Elliot RA. Reducing medication regimen complexity for older patients prior to discharge from hospital: feasibility and barriers. *Journal of Clinical Pharmacy and Therapeutics*. 2012; 37: 637-642.

Module 41: Maintaining mental fitness

a) WHAT are we aiming to do?

Aim: To improve use of health services and medication for mental health in younger veterans

b) WHY are we doing this module?

Almost half of Australians will experience a mental health problem in their lifetime with one in five Australians having a mental health problem in any given year. Every year, anxiety affects 14% of Australians and depression affects 6% of Australians.¹ Depression and anxiety commonly co-exist, up to 90% of patients with depression have comorbid anxiety.² These are also closely related to other mental health problems such as alcohol and drug misuse.

Anxiety and depression is more common in those aged under 55 years, with a quarter of those aged 25 to 34 years experiencing a mental health problem in any given year; this compares with only 6% of those aged 75-85 years.¹ Despite the common occurrence of depression and anxiety, many people do not seek treatment. A national survey of the mental health of Australians found that more than half of those with a mental health problem in any given year had not received any form of health service for their condition.¹ Furthermore, a study of US military personnel amongst those deployed to Iraq and Afghanistan found that only 23-40% of those with a mental disorder received help; the perceived stigma associated with having a mental illness was identified as a major barrier.³

Psychological therapies, particularly cognitive behaviour therapy (CBT) play a core component of treatment for both anxiety disorders and depression. A review of meta-analyses found that CBT is highly effective for the treatment of anxiety and depression and that the benefits have demonstrated long-term effectiveness.⁴ Australian guidelines recognise that CBT on its own is an effective treatment for anxiety and mild to moderate depression and is recommended as first line treatment for anxiety. Although it is recognised that for some patients a combination of CBT and an antidepressant will be more effective, particularly for those patients with more severe depression.^{6,7}

Analysis of DVA gold card holders aged 65 years or less found high use of both antidepressants and anxiolytics; 45% (13,154) were dispensed an antidepressant in 2012 with rates of use consistent across age groups (figure 1).⁵ Thirteen per cent (3,822) of DVA gold card holders aged 65 years or less were prescribed an anxiolytic in 2012 with prevalence highest amongst those aged 26 to 35 years (figure 1). Out of those dispensed antidepressants, 41% aged 26 to 35 years were also dispensed an anxiolytic (figure 2).⁵

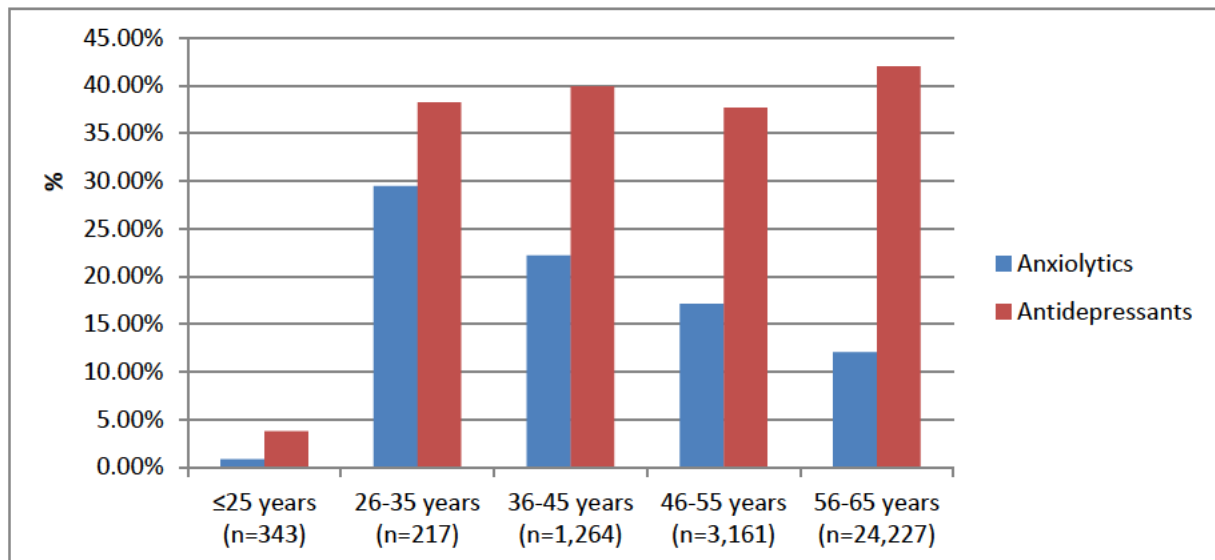


Figure 1 - Prevalence of anxiolytic and antidepressant use in veterans, by age group

Medication use is only one strategy to support management of mental health. To support the mental health and wellbeing of veterans, in 2013 the Department of Veterans' Affairs released the Veteran Mental Health Strategy.⁸ This strategy developed with extensive consultation from the veteran community, takes a person-centred approach, and includes a wide range of initiatives promoting self-care and management such as the 'At Ease' website, the Mental Health and Wellbeing after Military Service booklet, the Wellbeing Toolbox, Veterans and Veterans Families Counselling Service (VVCS), as well as resources for health professionals such as the Mental Health Advice Book.

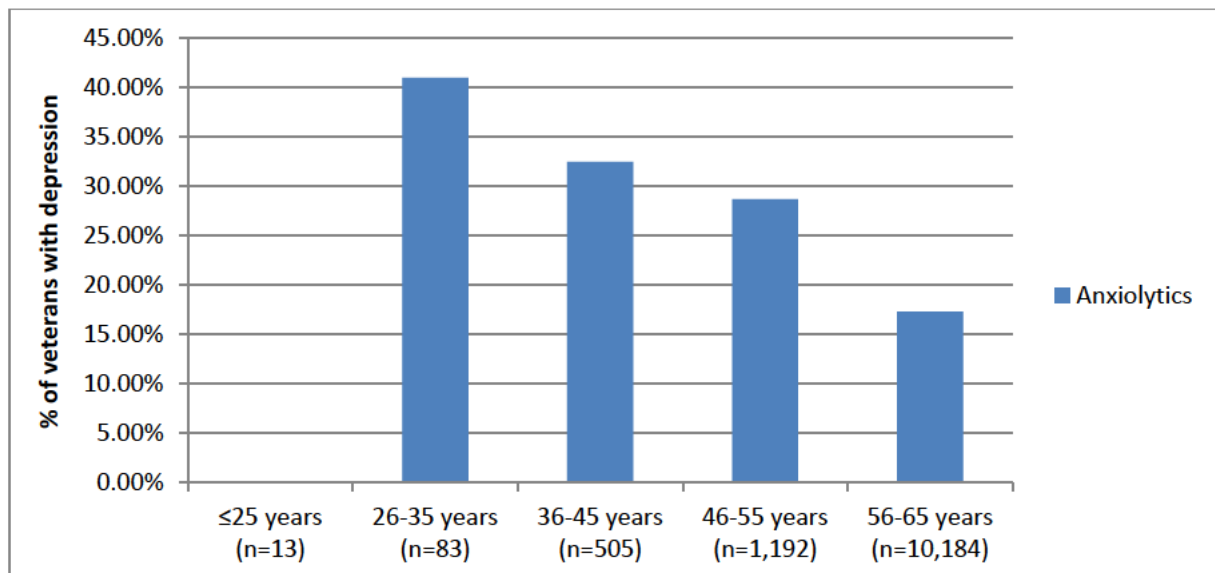


Figure 2 - Prevalence of anxiolytic use amongst DVA gold card holders who are dispensed antidepressants, by age group

Therefore, building on the messages provided in the Veteran Mental Health Strategy, this topic will promote to younger veterans the importance of mental fitness; engaging them to recognise the symptoms of mental health problems as well as promote the many resources available to help maintain mental fitness whether it be for themselves, a family member or a fellow veteran. It will also reinforce to GPs, the benefits of psychological therapies to treat anxiety and depression, the limited role of benzodiazepines, and the range of resources available to their veteran patients via DVA.

Key messages

For the therapeutic brief and feedback

- Patient centred care for mental health – DVA supports for veterans
- Younger veterans – helping them care for their mental health
- Always consider psychological therapies for patients with anxiety and depression
- Limit medicine use for mild mental health issues

For the veteran brochure

- Maintaining mental fitness? – tips to maximise health
- Patient centred care for mental health – DVA supports for veterans
- Medicines may be appropriate to treat some mental health conditions
- Visit the DVA 'At Ease' website and tell your friends about it

Expected behaviour change

- A reduction in the use of anxiolytics, and low dose antipsychotics as monotherapy
- An increase in the use of psychological services
- An increase in use of the ADF Post-discharge Health Assessment.

Study objectives

1. To provide useful information to GPs about the management of anxiety and depression.
2. To increase GPs' knowledge of their younger veterans, and mental health treatments.
3. To provide pharmacies and accredited pharmacists with useful information about the management of anxiety and depression.
4. To provide useful information to veterans about how to maintain mental fitness.
5. To improve management of anxiety and depression as evidenced by a reduction in the use of anxiolytics, and low dose antipsychotics as monotherapy.
6. To improve management of anxiety and depression as evidenced by an increase in claims for psychological services.

c) HOW are we going to do it?

Target groups

Target groups for this intervention are:

- Veterans aged 55 years old and younger;
- GPs who are the primary providers for the veterans targeted; and
- All pharmacies and accredited pharmacists.

Intervention

The intervention will consist of the following strategies:

1. A therapeutic brief to GPs and pharmacists providing information about the management of anxiety and depression.
2. Prescriber feedback indicating to GPs their younger veterans, and mental health treatments.
3. Subsequent to the letter and prescriber feedback to GPs and mailing to pharmacies, a letter and an educational brochure will be sent to veterans providing them with information about how to maintain mental fitness.

How the strategies link to the objectives

The strategies listed in the previous section are designed to address specific objectives of module forty-one. This section of the document details each objective of module forty-one and then the strategy that is primarily designed to achieve the objective.

1. To provide useful information to GPs about the management of anxiety and depression.
Information will be provided in the therapeutic brief and letter.
2. To increase GPs' knowledge of their younger veterans, and mental health treatments.
Information provided by veteran-specific prescriber feedback.
3. To provide pharmacies and accredited pharmacists with useful information about the management of anxiety and depression.
Information provided in the therapeutic brief and pharmacy letter.
4. To provide useful information to veterans about how to maintain mental fitness.
Information provided in the veteran brochure and letter.
5. To improve management of anxiety and depression as evidenced by a reduction in the use of anxiolytics, and low dose antipsychotics as monotherapy.
The total module will facilitate this objective.
6. To improve management of anxiety and depression as evidenced by an increase in claims for psychological services.
The total module will facilitate this objective.

d) EVALUATION: What was the effect?

Development of measurement instruments and criteria

Evaluation of all objectives will be undertaken. This section of the document details each objective of module fourty-one and the indicators which will be used to measure whether the objective has been achieved and the data source for each indicator.

1. To provide useful information to GPs about the management of anxiety and depression.
Indicator: the percentage of GPs reporting the information in the therapeutic brief was useful.
Source: response form distributed with print material or available on-line.
2. To increase GPs' knowledge of their younger veterans, and mental health treatments.
Indicator: the percentage of GPs reporting the information helpful.
Source: in-house database of the activity plus response forms distributed with print material or available on-line.
3. To provide pharmacies and accredited pharmacists with useful information about the management of anxiety and depression.
Indicator: the percentage of pharmacies reporting the information in the therapeutic brief was useful.
Source: response form distributed with print material.
4. To provide useful information to veterans about how to maintain mental fitness.
Indicator: the percentage of veterans reporting the information was useful.
Source: response form distributed with print material.
5. To improve management of anxiety and depression as evidenced by a reduction in the use of anxiolytics, and low dose antipsychotics as monotherapy.
Indicator: anxiolytic use pre and post the module.
Source: DVA Health Claims Database.

Indicator: low dose antipsychotic as monotherapy use pre and post the module.
Source: DVA Health Claims Database.
6. To improve management of anxiety and depression as evidenced by an increase in claims for psychological services.
Indicator: psychological services claims pre and post the module.
Source: DVA Health Claims Database.

References

1. Australian Bureau of Statistics 2007. National Health survey of mental health and wellbeing: summary of results. Cat. No. 4326.0. Canberra: ABS.
2. Tiller J. Depression and anxiety. *Medical Journal of Australia Open* 2012; 1 (Suppl 4): 28-31.
3. Hoge C, Castro C et al. Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. *N Engl J Med*
4. Butler A, Chapman J et al. The empirical status of cognitive-behavioural therapy: a review of meta-analyses. *Clinical Psychology Review* 2006; 26: 17-31.
5. DVA Health Claims Database, University of South Australia, QUMPRC. [Accessed June 2013].
6. Australian Medicines Handbook. Adelaide: Australian Medicines Handbook Pty Ltd; 2013.
7. Psychotropic [revised 2013 June]. In: eTG complete [CD-ROM]. Melbourne: Therapeutic Guidelines Limited; 2013 June.
8. Department of Veterans' Affairs. Veteran mental health strategy, a ten year framework 2013 – 2023. Department of Veterans' Affairs; Canberra, 2013.