



@AndradeAQ

Data-driven interventions for an emergency preparedness system: a national experience in Australia

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What is Veterans' MATES?

- A data driven **precision public health** program providing up-to-date health and medicines information specifically tailored for members of the veteran community and their healthcare team.
- Funded by the Australian Government Department of Veterans' Affairs since 2004
- Provided by University of South Australia in partnership with
University of Adelaide
Australian Medicines Handbook
Drug & Therapeutics Information Service
HealthLink



We take a Big Data Source



To identify health care
issues and trends



Pinpoint those who would
benefit from an intervention
and provide individually
tailored recommendations



And then measure the
impact of the intervention



Australian Government Department of Veterans' Affairs routinely collected health claims data

1
BILLION

Contains over a
billion health claims
records

18
YEARS

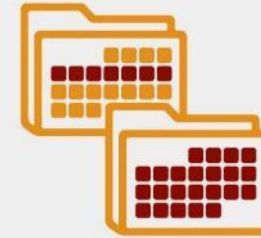
More than ten years
of historical health
data



Contains hospital
records including
diagnosis and
procedures



Includes pharmacy,
medical and allied
health records including
doctor visits, radiology
and pathology claims



Client data are
updated weekly, health
claims data are
updated monthly*



* DVA clients who opt out are excluded
retrospectively

Elements for improved decision-making

Prompts
(positive and negative)

Introductory
header

Context*
(time series
chart)

Goal setting
and rationale

*In this case, feedback on behaviour

Consider DVA-funded services to support independent living	
Occupational therapist claim:	None claimed in the last five years
Cognitive, dementia, and memory assistive technology claim (DVA's National RAP schedule):	05/02/2017
DVA-funded dose administration aid claimed:	None claimed in the last two years
Home Medicines Review (HMR) claimed:	None claimed in the last two years
No. of unique medicines dispensed in last year:	5
ACTIONS:	
Refer to an occupational therapist	YES <input type="checkbox"/>
Refer for a Home Medicines Review and DVA-funded dose administration aid service	YES <input type="checkbox"/>

Australian Government
Department of Veterans' Affairs
Date: 15/03/2020

Dear DR P SURNAME

This Veterans' MATES information aims to assist you to review gabapentinoids (pregabalin or gabapentin) that may cause harmful side effects when used long term. It is advisory in nature. The information is based on DVA claims that indicate that a veteran has had 3 or more dispensings of pregabalin or gabapentin in a 12 month period, with at least 1 of the dispensings during the last 4 months of this period*.

Consider whether your patient will benefit from non-pharmacological pain therapy and, if warranted, whether adjusting the dose or ceasing gabapentinoids is appropriate. Please consider within the context of this patient's current treatment.

Educational material explaining the rationale for these recommendations can be found at the [Veterans' MATES website](#)

FIRST & SURNAME** DOB: <DD/MM/YYYY> Gender: <Male or Female> ACCOMMODATION: Community

<Residential address>

Relevant claims history for pain

*Daily average dose per month (mg), estimated from dispensing data
**Oral morphine equivalent daily average dose per month (mg), estimated from dispensing data

Notes

Latest Home Medicines Review (HMR) claim	None claimed in the last 2 years
Latest Psychologist visit	None claimed in the last year

Medicine(s)	Last Dispensed	Other Prescriber
Pregabalin (Lyrica) Cap 75 mg	10/10/19	Yes
Tramadol hydrochloride (Tramadol SR) controlled release Tab 50 mg	02/09/19	No
Oxycodone hydrochloride (OxyNorm) Cap 10 mg	02/10/19	No

Suggested actions:

- Review indication for use of medicine(s). Confirm pain is neuropathic.
Rationale: The majority of evidence for effectiveness of gabapentinoids is limited to diabetic neuropathic pain and post-herpetic neuralgia. There is limited evidence for effectiveness of gabapentinoids when a neuropathic component is not well established.
- Review duration of use, consider tapering and ceasing.
Rationale: Recommended duration of use of gabapentinoids is no longer than 6 months.
- Check for side effects of medicine(s). Consider risks for driving or falling.
Rationale: One-third to one-half of patients taking gabapentinoids suffer from dizziness or somnolence.
- Review need for therapy, consider potential for cessation.
Rationale: Patient received doses of pregabalin of below 150 mg per day. Potentially subtherapeutic dose for neuropathic pain.
- Patient co-dispensed opioids. This increases the risk of side effects in a dose-dependent manner.
- Consider referral for a Home Medicines Review (HMR) for review of medicines for pain.





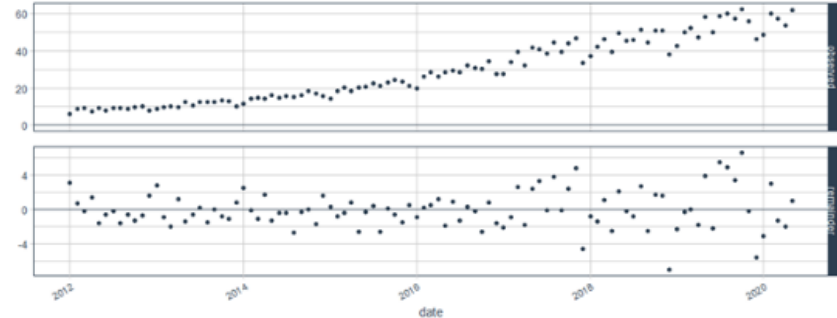
Issue identification

Increased demand for psychologist visits

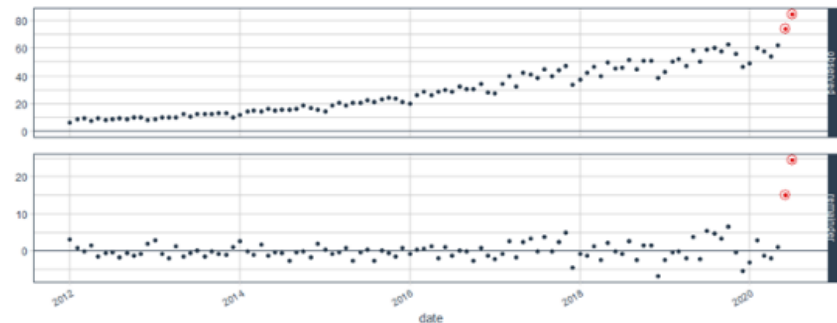
Database search for patients with evidence of mental conditions, focusing particularly on post-traumatic stress disorder (PTSD)



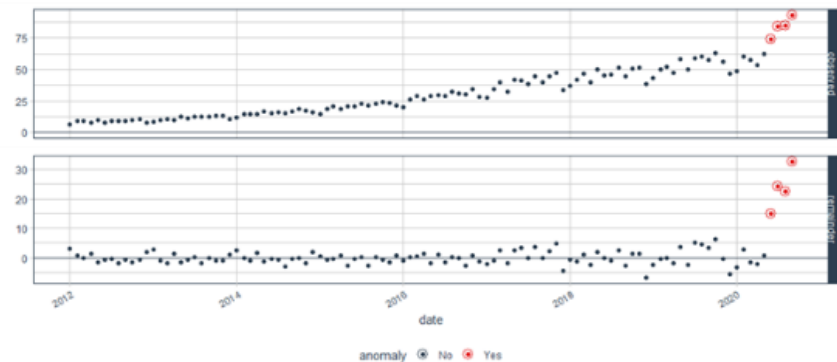
May 2020



July 2020



Sept 2020





Promoting access to mental health services – July 2020

This Veterans' MATES information identifies your DVA clients with past claims indicative of mental health conditions, past or current. They may be at heightened risk of poor mental health outcomes during the COVID pandemic.

FIRST & SURNAME* DOB: <DD/MM/YYYY> GENDER: <Male or Female> ACCOMMODATION: <Community>
ADDRESS:

Mental health services or medicines	Current history (last claim in 2020)	Past history (last claim prior to 2020)
Antipsychotic medicine	12 May 2020	-
Hypnotic medicine	12 May 2020	-
Psychologist service	-	14 Feb 2017
Psychiatrist service	-	3 Jan 2018
Accepted disability for PTSD	Yes	

90-SECOND TOOL: Grounding technique

Patients with history of PTSD are at higher risk of emotional distress during the COVID pandemic. This grounding technique was developed for post-trauma recovery (provided by Phoenix Australia) as a way to modulate the amygdala response. It is about focusing on what is going on around you in the here and now. **Trial this emotion management technique by saying to your patient:**

- Sit down to do this exercise – or to hold onto something solid.
- Really feel the sensation of being connected to the floor, the chair, the wall.
- Take a moment your clothes on
- Take a moment the wall, or bird
- Take a moment like the leaves r
- Remind yourself

Suggested actions for your consideration

- **At the next appointment, check for signs of distress for this patient.**
- **Review the use of medicines for mental health**
Have a conversation with your patient about how they are taking their medicines as prescribed. Consider a referral for a Home Health, if appropriate. Home Medicines Reviews are also now available

Along with this letter, you will receive information about 4 other DVA clients. V currently experiencing and hope we can help support your care of DVA clients: *The services and medicines for the identified patients are sourced from the DVA Health Clair from RPBS, PBS or MBS claims in the past 5 years. The most recent claim date for each service between service delivery and claim payment. In addition, not all services provided can be 75 years or younger who have received mental health services or multiple dispensings for a r

This information has been endorsed by the DVA Editorial Committee, which includes representatives for general comments and feedback please contact MATES.comments@unisa.edu.au

HEALTH PROFESSIONAL FACT SHEET

Practical ways to help your patients manage distress during and after COVID-19

Changes brought about by COVID-19 to the way we work, communicate and connect every day have caused uncertainty, loneliness and distress for many people.^{1,4} People are recovering¹ but, for some (see Box 1), COVID-19 and its flow-on effects (see Box 2) can be a trigger to the brain's emotional and fear detection centre.¹ Distressing emotions and negative thoughts of past traumas and anxieties can be re-initiated and persist well after COVID-19 has diminished.^{1,4}

Anticipate acute and continuing distress for some DVA patients.^{1,4} At each consultation, ask your patient how they are going.

Help your patients

experiencing distress to:

Understand the stress response

A good first step to mitigate distress is to acknowledge that it exists and know it is normal to feel distress during an event like COVID-19. **Share this 90-second video by Phoenix Australia – Centre for Posttraumatic Mental Health with your patients to help them understand the stress response (the first video at this link: www.recoveryonline.org.au/managing-emotions)**



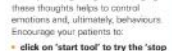
Explain to your patient that simple techniques, such as controlled breathing and mindfulness or grounding can help calm the mind and body, especially when practiced a few times every day.^{1,14} **With your patients, work through the following techniques included in the suite of High Res SMART tools:**



A 1-minute video and tool on controlled breathing:
www.openarms.gov.au/get-support/self-help-tools/show-all-tools/physical/controlled-breathing



A 2-minute video/tool on guided grounding techniques:
www.openarms.gov.au/get-support/self-help-tools/show-all-tools/physical/guided-grounding



Manage negative thoughts
Ruminating negative thoughts can fuel anxiety. Recognising and managing these thoughts helps to control emotions and, ultimately, behaviours. Encourage your patients to:

- click on 'start tool' to try the 'stop and swap thoughts' tool:

Box 1. Veterans most at risk of acute and continuing distress may have experienced:

- post-traumatic stress⁴
- anxiety disorders⁴
- depressive disorders⁴
- health anxiety^{1,4}

Box 2. Flow-on effects from COVID-19 may include:

- anxiety, loneliness or a sense of isolation⁴
- family, unemployment and financial stress⁴

Teach your patients to recognise signs of distress so they can practise learnt techniques well before they feel overwhelmed.⁴

- Distressed patients may be:^{1,4}**
- anxious, worried or irritable
 - sleeping less or more
 - withdrawn or depressed
 - feeling a loss of control or a sense of hopelessness
 - finding it difficult to concentrate
 - agitated, angry or vigilant
 - using more alcohol leading to anti-social behaviours and violence
 - having interpersonal relationship difficulties



Reach

- 42,327 DVA-client specific messages for 15,588 GPs.
 - 24,532 digital messages direct to EHR
 - 17,795 delivered by post
 - All Australian states and territories
- Eligible DVA-clients received intervention by post



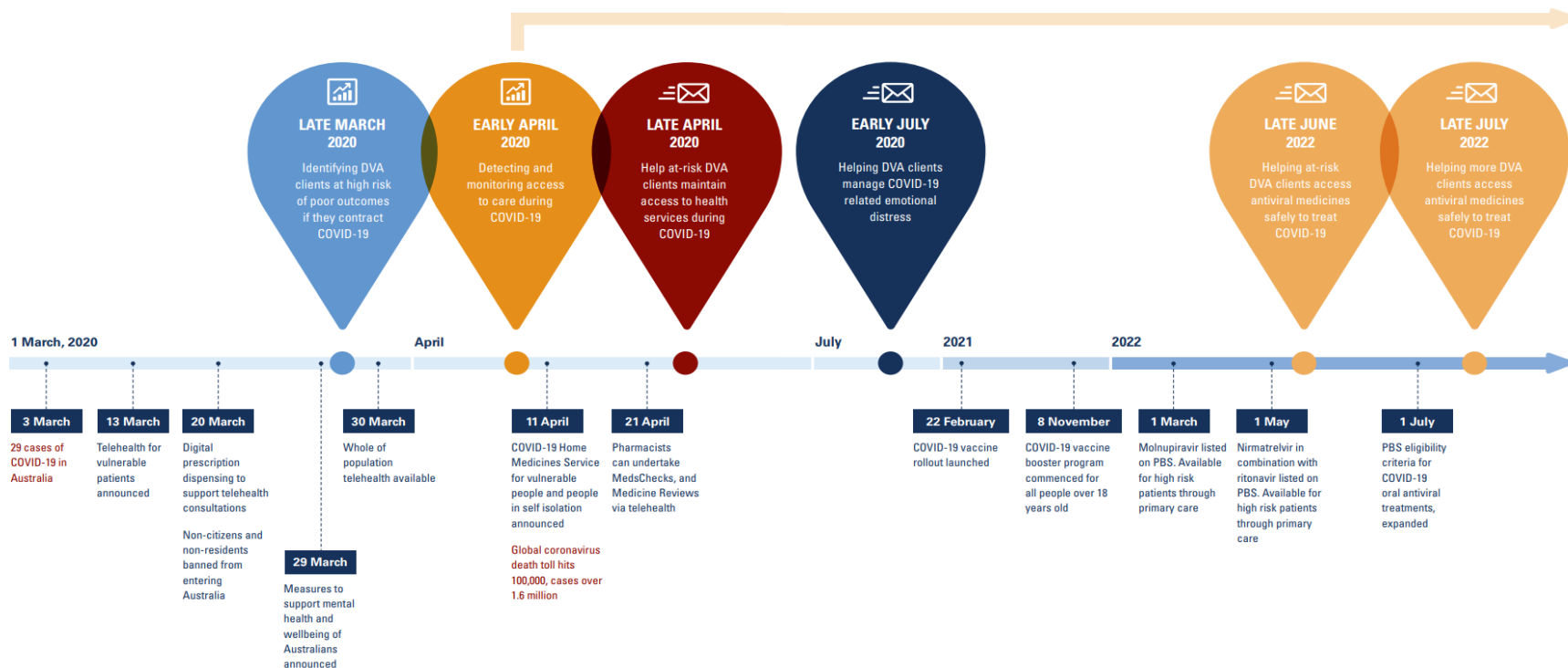


Evaluation and Results

- Pre-post comparison
 - Increase in the average number of psychologist services in the 3 months after the intervention when compared to the three months prior
 - digital: 0.51 prior to 0.56 post, $p < 0.001$
 - post: 0.59 prior to 0.65 post, t-test $p < 0.001$
 - There was no significant difference between digital and post groups (ordinary least squares regression $p = 0.1$)



COVID response



Conclusion

- Clear opportunities for better data use in emergency preparedness systems
 - Algorithms to identify need urgent care
 - Intervention was developed, targeted, and delivered to GPs across Australia in 4-8 weeks
 - Secure delivery to the clinical desktop in real time interventions





Acknowledgements



Veterans' MATES team

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