

# ESP

Evidence Synthesis Program

## Deprescribing for Older Veterans

Hanna E. Bloomfield MD, MPH; Amy Linsky MD, MSc; Jennifer Bolduc, PharmD; Nancy Greer, PhD; Todd Naidl, PharmD; Orly Vardeny, PharmD, MS; Roderick MacDonald, MS; Lauren McKenzie, MPH; Timothy J. Wilt MD, MPH

Minneapolis ESP Center  
Minneapolis VA Medical Center

April 2020

The review team developed the report's scope, study questions, and methodology in consultation with the Operational Partners (*ie*, topic nominators), the ESP Coordinating Center, and the technical expert panel (TEP). Broad expertise and perspectives were sought. Divergent and conflicting opinions are common and perceived as healthy scientific discourse. Therefore, in the end, study questions, design, methodologic approaches, and/or conclusions do not necessarily represent the views of individual technical and content experts.

The authors gratefully acknowledge the following individuals for their contributions to this project:

## **Operational Partners**

Operational partners are system-level stakeholders who have requested the report to inform decision-making. They recommend TEP members; assure VA relevance; help develop and approve final project scope and timeframe for completion; provide feedback on draft report; and provide consultation on strategies for report dissemination.

**Kenneth Boockvar, MD, MS**  
Center for Medication Safety in Aging

**Marianne Shaughnessy, PhD, CRNP**  
Office of Geriatrics and Extended Care

**Ilse Wiechers, MD, MPP, MHS**  
National Program Director – Psychotropic Drug Safety Initiative

# Acknowledgements, continued

The authors gratefully acknowledge the following individuals for their contributions to this project:

## **Technical Expert Panel (TEP)**

To ensure robust, scientifically relevant work, the TEP guides topic refinement; provides input on key questions and eligibility criteria, advising on substantive issues or possibly overlooked areas of research; assures VA relevance; and provides feedback on work in progress.

Mary Goldstein, MD  
VA Palo Alto Health Care System  
Stanford University Department of Medicine

Eric Hermes, MD  
VA Connecticut Healthcare System  
Yale University School of Medicine

Jean Kutner, MD, MPH/MSPH  
University of Colorado School of Medicine

Zachary Marcum, PharmD, MS, PhD  
University of Washington School of Pharmacy

Michael Steinman, MD  
University of California San Francisco  
San Francisco VA Medical Center

This report is based on research conducted by the Evidence Synthesis Program (ESP) Center located at the **Minneapolis VA Medical Center, Minneapolis, MN**, funded by the Department of Veterans Affairs, Veterans Health Administration, Health Services Research and Development. The findings and conclusions in this document are those of the author(s) who are responsible for its contents; the findings and conclusions do not necessarily represent the views of the Department of Veterans Affairs or the United States government. Therefore, no statement in this article should be construed as an official position of the Department of Veterans Affairs. No investigators have any affiliations or financial involvement (eg, employment, consultancies, honoraria, stock ownership or options, expert testimony, grants or patents received or pending, or royalties) that conflict with material presented in the report.

- Polypharmacy and use of Potentially Inappropriate Medications (PIMs) is common in older adults
- May lead to falls, cognitive impairment, hospitalizations and death
- Efforts to mitigate effects of polypharmacy and PIMs underway for 30+ years
- Deprescribing
  - Clinically supervised process of stopping or reducing the dose of medications when they cause harm or no longer provide benefit
  - Considers people's med list in the context of their co-morbidities, functional status, treatment goals and life expectancy

*We conducted this study to determine the effectiveness, comparative effectiveness, and harms of deprescribing interventions among community dwelling adults age 65 and older*

## Deprescribing

- Clinically supervised process of stopping or reducing the dose of medications when they cause harm or no longer provide benefit
- Considers people's medication list in the context of their co-morbidities, functional status, treatment goals and life expectancy

## Potentially Inappropriate Medications

- Did not apply specific criteria; accepted individual study definitions
- Includes drugs...
  - identified in the literature as dangerous or possibly dangerous for older adults (e.g. sedatives, anticholinergics),
  - no longer clinically indicated (e.g. never stopped taking PPIs after an ICU stay)
  - unlikely to benefit the patient (e.g. statins in nonagenarians)
  - causing side effects that outweigh the possible benefits (e.g. gastritis on prophylactic ASA).

What are the effectiveness, comparative effectiveness, and harms of deprescribing interventions among adults age 65 and older?

What are the identified facilitators and barriers that impact implementation of deprescribing interventions within large-scale health systems such as the VA?

What are the effectiveness, comparative effectiveness, and harms of deprescribing interventions among adults age 65 and older?

What are the identified facilitators and barriers that impede implementation of deprescribing interventions within large-scale health systems such as the VA?

Today's presentation focuses on this question



## Comprehensive Literature Search

### Inclusion Criteria

- Controlled clinical trials of deprescribing interventions compared to any other intervention
- Enrolled community dwelling older adults
- Reported one or more outcomes of interest

### Primary Outcomes

- Quality of Life, all-cause mortality, hospitalizations and falls (*adverse drug withdrawal events, major adverse cardiac events, delirium: none reported*)

### Other Outcomes reported here

- Potentially Inappropriate Medications (PIMs)

### Standard techniques for data abstraction and risk of bias assessment

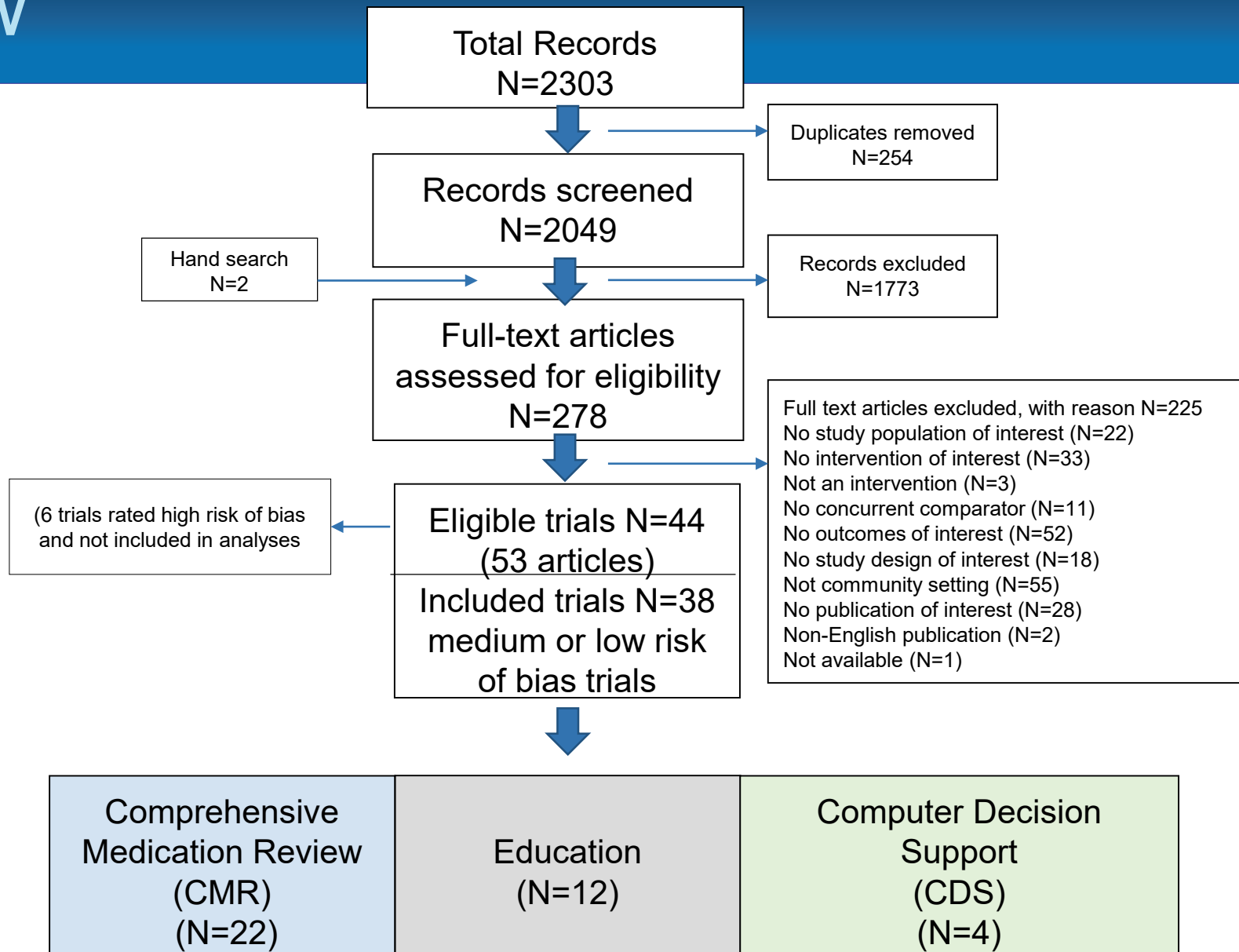
- High risk of bias studies were excluded from analysis

### Data Synthesis and Analysis

- Included pooling of results when populations, interventions and study designs were comparable

### Determination of Certainty of Evidence (how confident are we in our estimate of effect)

- Graded for each primary outcome as high, moderate, low or very low using GRADE criteria



## Comprehensive Medication Review (22 studies, 9350 patients)

- Most often pharmacist-led chart review, patient interview, consultation with provider → recommendations about med changes (16)
- Eight also included a follow-up intervention with patients to reinforce recommendations

## Education +/- Provider Feedback (12 studies, 3463 in 9 smallest, 252,684 in 3 largest studies)

- **Directed to patients only (3)** (*example: pharmacies in Quebec sent patients educational materials on the harms of select drugs--e.g. first generation anti-histamines, alternatives, and, for those on sedative-hypnotics, a visual tapering protocol*)
- **Directed to providers only** (*example: educational sessions for a provider group about risks of polypharmacy, how to identify PIMs, and what to do about them (7, 5 also included performance feedback)*)
- **Directed to providers and patients (2, 1 also included performance feedback)**

## Computerized Decision Support (4 studies, sample sizes from 128 to 59,680)

- Alerts and/or decision support algorithms embedded within the electronic medical record

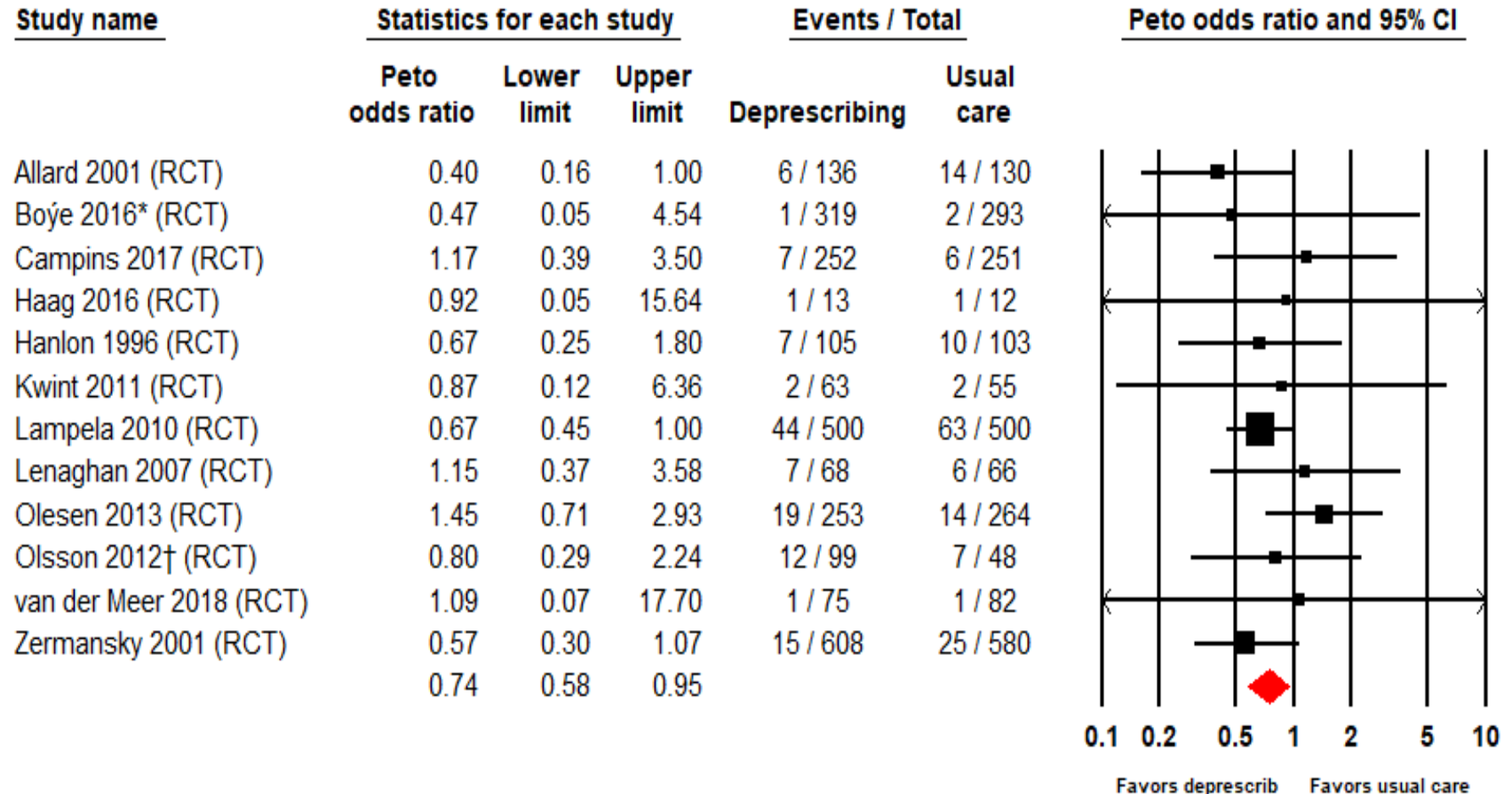
# Results Overview (primary outcomes)

Intervention	All-cause mortality	Hospitalizations	Quality of Life	Falls
CMR	Small reduction, low certainty	Little to no reduction, moderate certainty	Little to no improvement, low certainty	Little to no reduction, low certainty
Education	Little to no reduction, moderate certainty	Little to no reduction, moderate certainty	Little to no improvement, low certainty	Insufficient evidence
CDS	NONE REPORTED			

# Results Overview (primary outcomes)

Intervention	All-cause mortality	Hospitalizations	Quality of Life	Falls
CMR	Small reduction, low certainty	Little to no reduction, moderate certainty	Little to no improvement, low certainty	Little to no reduction, low certainty
Education	Little to no reduction, moderate certainty	Little to no reduction, moderate certainty	Little to no improvement, low certainty	Insufficient evidence
CDS	NONE REPORTED			

**All-cause mortality reported in 12 trials: OR 0.74 (95% CI: 0.58,0.95; I<sup>2</sup> =0)**



low certainty

Intervention

## Potentially Inappropriate Medications

CMR

In the 13 trials that reported PIMs, 9 found fewer in the intervention than control groups; in 7 studies the difference was statistically significant

Education

All 11 trials that reported PIMs found fewer in the intervention than control groups; in 7 studies the difference was statistically significant

CDS

Two of the 4 trials that reported PIMs found significant reductions in PIMs in the intervention groups and 2 reported no intervention effect

\* No certainty of evidence evaluations conducted for this outcome

- Deprescribing based on comprehensive medication review may reduce mortality
- All 3 deprescribing interventions may reduce use of PIMs
- The evidence did not indicate that deprescribing either reduces or increases falls, hospitalizations, or Quality of Life



Our findings are generally consistent with other systematic reviews

Data suggested some hypotheses worthy of further investigation...

- CMR may also reduce health care costs
- CMR interventions may be more effective if the initial evaluation and recommendations are followed by a patient call or visit a few months later
- Provider-education-only-interventions (i.e. without feedback) are NOT effective
- Direct-to-consumer patient engagement programs with targeted educational materials, including instructions on how to taper and discontinue specific meds, may be an effective mechanism for reducing PIM use on a large scale.

What are the identified facilitators and **barriers** that impact implementation of deprescribing interventions within large-scale health systems such as the VA?

## 9 Studies

### Patient Reluctance

- Didn't relate to the patient stories presented in educational materials
- Did not get a sense their provider was fully on board
- No alternative med was suggested

### Provider and System-level Barriers

- No TIME!
- No clinical pharmacists
- Fear that patients won't like it
- Inadequate resources
- Reluctance to DC meds prescribed by colleagues

- Center for Medication Safety in Aging
- VIONE
  - Vital, Important, Optional, Not Indicated, Every drug has indication
- Improving Safety and Quality QUERI
- U.S. Deprescribing Research Network (NIH)

If you have further questions, please feel free to contact:

**Hanna E. Bloomfield**

612.467.2800

Hanna.Bloomfield@va.gov

Full-length report and cyberseminar available on ESP website:

<http://www.hsrd.research.va.gov/publications/esp/>

## Increasing impact of evidence synthesis through integration of first-hand experiences of Veterans and clinicians

Steven K. Dobscha MD  
Director, HSR&D Center  
to Improve Veteran  
Involvement in Care

Vivian Christensen PhD  
Health Services Investigator  
ESP Coordinating Center

April 21, 2020

Interactive website available on ESP website:

<http://www.hsrd.research.va.gov/publications/esp/reports.cfm>

- Overall Goal: Augment systematic review findings with narrative data
- Some research suggests that including a translational component in reviews, addressing questions such as “What patient, practitioner, or facility-level factors make implementation more or less likely to succeed?” may foster greater use of evidence by health systems. (Helfand, et al. 2019; Christensen, et al. 2019)
- The inclusion of qualitative data has potential to increase interest, utility, and ultimately, impact of ESP reports.
- Qualitative information from stakeholders may allow their “voices” to be heard, encourage patient-centered care and enhance quality improvement efforts within the VA health system.

- What is your current *primary* role in the VA? (please choose best answer)
  - Clinician
  - Administrator
  - Researcher

- Using stakeholder qualitative interviews (including of Veterans and clinicians), develop a narrative that highlights the barriers and facilitators to deprescribing from multiple perspectives.
- Organize and present this narrative as an interactive multi-media product which will accompany the final ESP report.
- Conduct a preliminary evaluation of the product to determine the utility of including narrative data with traditional systematic review results to inform implementation and quality improvement efforts.



# An interactive web-based product

- We designed a web-based multi-media product focusing on portraying the experiences of Veterans and VA clinicians as they initiate and go through the deprescribing process: <https://www.hsrd.research.va.gov/publications/esp/deprescribing/>

Health Services Research & Development Publications » Esp » Deprescribing » Narrative: Deprescribing for Older Veterans

## Health Services Research & Development

The screenshot displays a web interface for the 'Deprescribing' project. On the left is a vertical navigation menu with the following items: HSR&D Home, About Us, Research Impacts & Awards, Research Topics, Career Development Program, Centers and Research Networks, Cyberseminars, For Managers, For Researchers, For Veterans, Funding, Meetings, News, Publications, and Studies & Citations. The main content area features a video player with a dark overlay containing the text: 'Increasing impact of evidence synthesis through integration of first-hand experiences of Veterans and clinicians'. Below the video, a paragraph states: 'This project is designed as a narrative companion to the VA Evidence Synthesis Program (ESP) report entitled "Deprescribing for Older Veterans" which reviews the scientific literature around the effectiveness and harms of deprescribing interventions for older adults.' At the bottom left of the video area is a 'Veterans Crisis Line' logo with the number '1-800-273-8255' and a 'GO TO THE' button.

- Approved as QI project
- Using a convenience sampling method, we conducted 15 semi-structured interviews (10 clinicians, 5 Veterans).
- During interviews, physicians were encouraged to identify a Veteran patient with whom they had initiated deprescribing.
  - Attempt to create dyad/triad “stories”
- Our semi-structured interview guides were based on information from three sources:
  - Review of existing literature
  - Pilot interviews with physicians
  - Discussion with CIVIC’s Veteran Engagement Group, which provides guidance to researchers.
- All interviews were voluntary. Interviews lasted between 30 and 60 minutes, were audio-recorded and transcribed verbatim.
- Using Atlas.ti 8, we conducted a thematic analysis based on our interview data.
- We created 2 stories for the product based on the qualitative data from our interviews.
- The Advice page elaborates on several themes that emerged during our analysis.

## Story One: Deprescribing Benzodiazepines



<https://www.hsrd.research.va.gov/publications/esp/deprescribing/>



"It is a lot easier to prescribe than to deprescribe, particularly when patients are coming to you with complaints of symptoms."

**Dr. Hansen**  
Clinical Psychiatrist, VA

Clinicians often struggle to strike a balance between prescribing multiple medications to address various medical problems and the risks that use of multiple medications may create, especially for older Veterans. Deprescribing is a comprehensive process of drug review, decreasing dose, or discontinuation that aims to reduce medication risk in the context of patients' co-morbidities, functional status, preferences, goals, and life expectancy. Deprescribing requires trust, communication, coordination, and patience. The following story, based on in-depth interviews of a Veteran, clinician and pharmacist describes the process of tapering off of a benzodiazepine from multiple perspectives.

- Challenges

- Challenges with Data collection

- Difficult for physicians to identify specific patients—often spoke more generally
- Veterans eager to share stories, but described experiences with multiple providers
- Some Veterans didn't want to be interviewed
- Not sure we ended up with the most common types of stories

- Other challenges

- Timeline/creating product *concurrent* with evidence review process
- Level of expertise and resources needed to create high quality interactive product
- Limitations of VA internet requirements

- Clinical takeaways
  - Facilitators of successful deprescribing
    - Clear communication between clinician and patient; shared decision making; understanding patient's health goals, sustained commitment to the deprescribing process—follow through
  - Barriers to successful deprescribing
    - Challenges with coordinated care; lack of patient understanding of risks associated with continued polypharmacy; fears of tapering; limited treatment options



- FOR CLINICIANS (primary role):
- How likely would you be to use such a product in the future?
- Very likely
- Somewhat likely
- Unsure
- Not very likely
- Very unlikely



- FOR ADMINISTRATORS:
- How likely would you be to use such a product in the future?
- Very likely
- Somewhat likely
- Unsure
- Not very likely
- Very unlikely



- FOR RESEARCHERS:
- How likely would you be to use such a product in the future?
- Very likely
- Somewhat likely
- Unsure
- Not very likely
- Very unlikely



1. **Please go to the product and test it out**—send feedback to either of the email addresses listed below.

<https://www.hsrd.research.va.gov/publications/esp/deprescribing/>

2. Or, if you have further questions, please feel free to contact:

Steven K. Dobscha MD

[Steven.Dobscha@va.gov](mailto:Steven.Dobscha@va.gov)

Vivian Christensen PhD

[Vivian.Christensen@va.gov](mailto:Vivian.Christensen@va.gov)

[christev@ohsu.edu](mailto:christev@ohsu.edu)

Full-length report and cyberseminar available on ESP website:

<http://www.hsrd.research.va.gov/publications/esp/>

# Supplemental Slides



### THE PARTNERSHIP



**Mr. Sanders, 84**

Air Force Veteran (1958 – 1976)  
VA patient (30+ years)

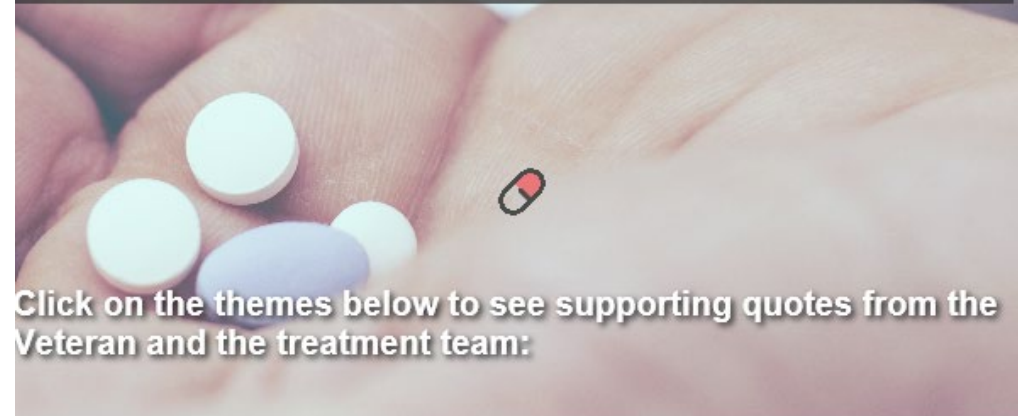


**Dr. Katz, 45**

Physician, Primary Care VA  
Medical Center (11 years)

## Advice from Veterans and Clinicians:

In this section we illustrate the themes that were identified from our analysis of semi-structured interviews with Veterans and clinicians (physicians, pharmacists, and nurses) about their first-hand experiences with deprescribing. The following strategies were described by the participants as being critical to successful deprescribing efforts.



Click on the themes below to see supporting quotes from the Veteran and the treatment team:

ESTABLISH TRUST >

COMMUNICATE THE REASONS WHY YOUR PATIENT SHOULD GO OFF THE MEDICATION >

## THE TRIAD



**Mr. Holland, 68**  
Navy Veteran  
(1967 – 1975) VA patient  
(30+ years)



**Dr. Hansen, 52**  
Psychiatrist, General Mental  
Health VA Medical Center  
(12 years)



**Dr. Wilkins, 34**  
Clinical Pharmacist, Mental  
Health Team VA Medical Center  
(7 years)



"My goal is to take a medication for sleep and anxiety that does not make me feel super groggy in the morning...Is there something bigger, badder, and better than this clonazepam?"

**Mr. Holland**  
VA Patient

Mr. Holland has been on clonazepam for over twenty years, but his main concern is having trouble with sleep. Currently, Mr. Holland takes 12 medications daily. A lengthy medication list and multiple comorbidities are not uncommon among Veterans. That is why the deprescribing process can be complex and often require a team approach. For psychiatrists like Dr. Hansen, the motivations for using a particular treatment approach can be different from those of the patient.



"I think the memory impairment was probably at the forefront... in general with elderly patients, there's increased risk of dementia, falls and fractures with any benzo. There's increased risk of impaired driving. They're not processing their meds as well as they were when they were younger... It doesn't matter if you're a veteran or not, if you're an elderly person, and you keep taking the same dose of benzodiazepines, eventually, you're going to have serious trouble with it..."

**Dr. Hansen**  
Clinical Psychiatrist, VA

Veterans like Mr. Holland who take benzodiazepines such as clonazepam may experience withdrawal when missing doses or when trying to reduce the dose. Withdrawal effects can seem very much like anxiety – the symptom that clonazepam is supposed to treat. Patients often fear that their symptoms may return if benzodiazepines are reduced or discontinued. In Mr. Holland's situation, Dr. Hansen must take into account multiple factors including the age of his patient, the patient's preferences, and the possibility of withdrawal symptoms that might arise as the patient tapers off the benzodiazepine.



"I usually like to do one thing at a time pharmacologically... Just pulling away something while adding something else creates and just adds to the mess in a way."

Decision-making between doctor and patient should include clear messages about possible reactions to tapering the medication, agreement on the frequency of check-ins and desired outcome, and an emphasis on the importance of patience and trust while walking through the deprescribing process.



"I will do it in a very caring way, when I can tell someone's really attached to it... I've learned you can figure out how attached somebody is to their benzodiazepine. And if they're super attached to it, I put on the brakes; reassure them, we don't have to make any changes today. But we'll talk about it more next time..."

Doctors and pharmacists are aware that each patient will require a unique deprescribing plan. Communication is key. By including the patient in the process, the deprescribing process is more likely to reach a satisfactory outcome. Sometimes patients and clinicians don't agree on the optimal outcome, but working together, an acceptable compromise may be achieved. Some patients may prefer to stay on the same medication, but at a lower dose, which may be acceptable to the clinician.



"You need to understand that you are working for them and with them. You are not here to take away the medical decision from them. I always tell the candidate, 'You are part of the team. You are one of us and we are going to work together as a team to help our Veteran'."



"Dr. Hansen would ask questions and he would throw out suggestions and just work with me...I felt like I was part of the team, you know...I'm feeling very good. I had a different experience with another doctor that would say, 'This is what I'm going to do.' Period. And I would say, 'Well, why are you going to do that?' She would not answer my questions. I told her, 'You're upsetting me for the simple fact that you you're not answering questions.' And so, I told her, 'I would like to be assigned another doctor.'"



Sometimes it is challenging for a clinician and patient to reach full agreement on a treatment approach or outcome. Bringing in another team member, such as a pharmacist, can help. Though pharmacists cannot prescribe some scheduled drugs like clonazepam, their knowledge of medications and their effects on the body is extensive.



"[His] main complaint was actually his insomnia, not his anxiety. And so even through multiple attempts to try to convince him to stick with the taper, offering a lot of support on medications for insomnia [he asked to go back on clonazepam]."

**Dr. Wilkins**  
Clinical Pharmacist, VA



"The withdrawals were simply... I would fall asleep but then, I would soon wake up two or three hours later and then, I would stay awake for like half of the night."



"After a lot of attempts to add supportive meds, or adjustive meds in lieu of the extra benzo, Dr. Hansen ended up kind of relenting and giving him back the clonazepam."



"He kept begging to go back on clonazepam. We finally threw up our hands and switched him back over. That is kind of where we are at now. I think [this is where] he is going to wind up."



"I can sleep now. Sleep is important, especially if you have anxiety. Because if you don't sleep, things go around in your head all night long."

A successful deprescribing process often requires sustained follow up. Each member of the triad plays their part so that the Veteran does not feel alone in the process. Although Mr. Holland resumed taking clonazepam, in the end, the dose was reduced; further attempts at reducing the dose are anticipated.



"...I will try to tailor my approach to what I think is most likely to succeed, and I will go extremely slowly when I pick up on somebody being really hesitant and scared. I mean, honestly, some people are just literally terrified. They believe this is the drug that has helped them more than anything in their whole life... so I will reassure people like that, at the outset, look, no worry, no hurry, I'm going to keep giving you the information that you need. And we're going to work together on this."



"The only thing that was challenging was having to come up here to see the two doctors every week, two weeks. But that's normal, there's nothing you can do about it. So, it is what it is, you know?"



"The end result is we've got medications down that seem to work fairly well. We may need to make a small change later on but for now, they're working pretty good, yeah."

Click on the themes below to see supporting quotes from the Veteran and the treatment team:

**ESTABLISH TRUST** 

"Once I establish a good relationship with the patient and they trust me and I work with them, then I think I succeed more. The first time you meet them, you lose them if you say something like, 'Stop driving,' 'Stop opioids,' 'Stop alcohol' or 'Do this.' They will never come back." – **Clinician**

"I fight every time they change residents to make sure that I have the same supervisor [attending physician]. I trust the supervisor, and you know if it is something that she says I need to do, I pretty much go with it." – **Veteran**

"I will do it in a very caring way, when I can tell someone's really attached to [a benzodiazepine], I put on the brakes; reassure them, 'We don't have to make any changes today. But we'll talk about it more next time...' And when we get to the next time, it'll be 'okay, I know this is going to be a little scary for you. But I have some ways of doing this...and let me remind you again about all the reasons why you should be ready to give this a shot.' So I'm always reinforcing that this is for their own health and wellbeing not for me." – **Clinician**