

Clinical Pharmacist Impact on Deprescribing Utilizing the VIONE Methodology within the Geriatric Population

Farrah Zonoozi, PharmD PGY1
Pharmacy Resident
Kansas City VA, Medical Center

Disclosure

The speaker has no actual or potential conflicts of interest in relation to this presentation.

Learning Objective

- Discuss the VIONE methodology and determine its success as a deprescribing tool for geriatric patients in a primary care setting at the Kansas City VA Medical Center.

Abbreviations

- **KCVA**= Kansas City Veteran Affairs
- **CAVHS**= Central Arkansas Veteran Affairs Health system
- **Ger iPACT**= Geriatric Primary Care Clinic
- **GDMT**= Goal directed medical therapy
- **Deprescribing**= the process of tapering, stopping, discontinuing or withdrawing drugs, with the goal of managing polypharmacy and improving patient outcomes
- **VIONE**= To be discussed... 😊

Background: Need

- The goal of deprescribing is to optimize medication regimens by de-escalating therapy to minimize harm, inappropriate polypharmacy, and reduce healthcare costs.
- The VIONE methodology was created by two geriatricians at the CAVHS with the intent of standardizing the deprescribing process.
- Currently, at the KCVA healthcare system, no standardized deprescribing tool exists within the geriatric primary clinic.

Background: What is VIONE? ³

Vital: life saving

- Insulin, GDMT for CHF

Important: quality of life

- Pain, urinary incontinence medications

Optional

- Vitamins, herbals

Not indicated: Life expectancy

- Aspirin, statins for primary prevention

Every medicine has a diagnosis/indication

- Proton pump inhibitors started inpatient for prophylaxis

Background information: Medication Reconciliation vs VIONE³

MEDICATION RECONCILIATION

- A list of prescribed medications, herbal products, and over-the-counter medications taken by the Veteran.
- **GOAL:** To confirm and document an accurate and current medication list.



VIONE

- A simple, practical electronic tool that focuses on whether a Veteran should or should not be taking a medication on their current medication list.
- **GOAL:** To create a medication regimen that is helpful, not harmful.

Background: Previous VIONE Success

- **Tool created by geriatricians at CAVHS^{1,2}**
 - Impacted 6,000 veterans
 - Deprescribed >20,000 prescriptions
 - Annualized cost avoidance \$1,000,000
- **KCVA implemented in hospice patients**
 - 30 patients, 135 prescriptions
 - Annualized cost avoidance \$22,466

Background: Patients that Benefit from VIONE Review?

- Clinical considerations that may warrant deprescribing:³
 - Falls
 - Delirium
 - Dementia/Cognitive impairment
 - End of life
 - Non-adherence/ lack of support system
 - No longer justified
 - Burden outweighs benefits
- See VIONE Score Card on page 9



Background: VIONE SCORE CARD³

SCORE CARD	DEFINITION	POINTS
>15 active medications	---	1
Age \geq 65 years old	---	1
CAN Score \geq 90 percentile	Likelihood of death or admission in the next year	1
\geq 2 ED visits in the last year	Primary or secondary stop code of 130 or 131	1
Fall documented within the last year	On problem list, outpatient visit, or inpatient discharges. ICD codes W00 to W19	1

Background: Objective

- Implement the VIONE deprescribing tool within the GeriPACT clinic at KCVA to reduce the number of unnecessary prescriptions and reduce VA healthcare costs.

Research Outcomes

- **Primary Outcome:**
 - Average number of medications discontinued per patient by clinical pharmacists utilizing VIONE methodology
- **Secondary Outcome:**
 - KCVA total cost avoidance within 1 year
 - Frequent medication classes discontinued
 - Patient/caregiver satisfaction
- **Subgroup analysis:**
 - VIONE reason for discontinuation
 - Medications restarted

Methods: Inclusion Criteria

Inclusion Criteria:

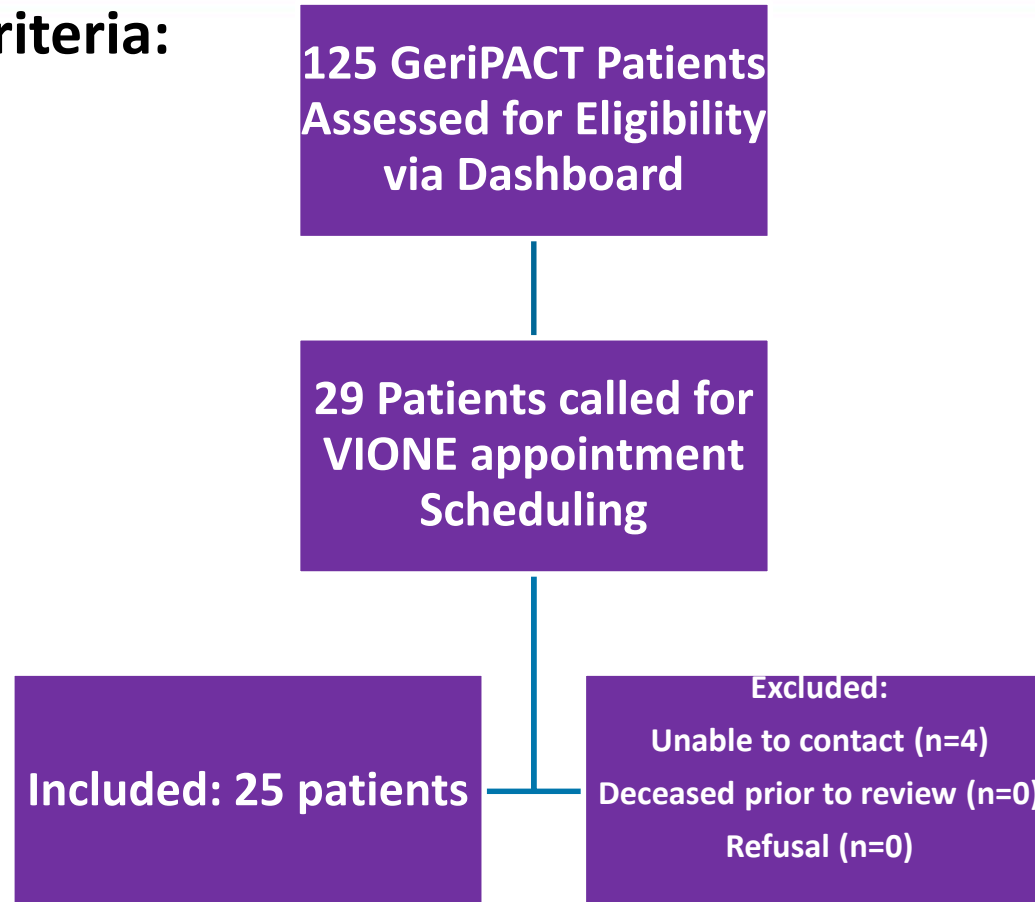
- Assigned to GeriPACT clinic
- VIONE Score of 4 or 5
- ≥ 15 active medications
- 65+ years old

+ 1 OF THE FOLLOWING:

- CAN Score 90+
- 2+ emergency department visits in the last year
- Fall documentation within the last year

Methods: Exclusion Criteria

Exclusion Criteria:

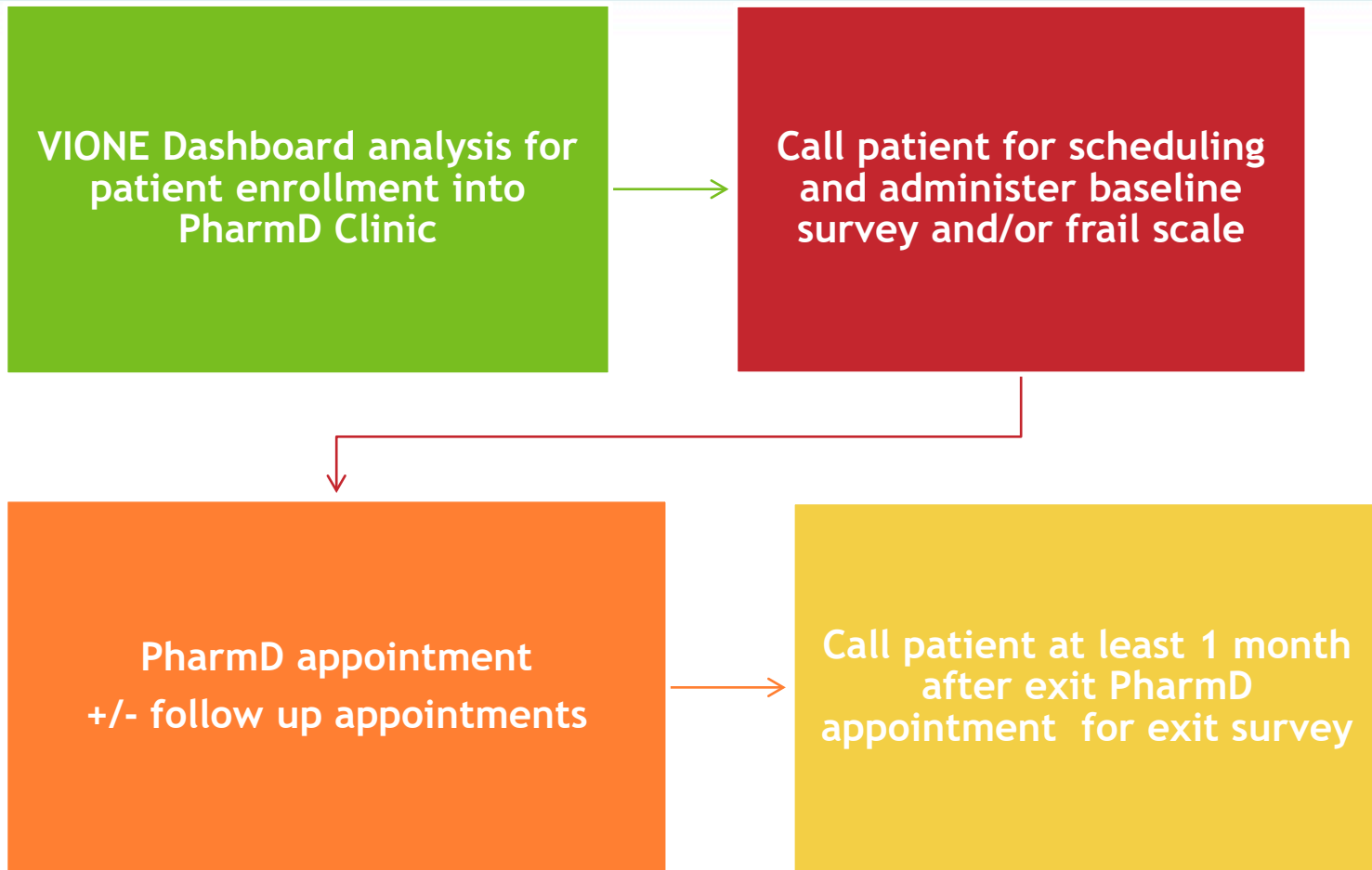


Methods: Study Design

- Single centered, non-randomized quality improvement project
- IRB exempt
- Dates analyzed between August 2019 and March 2020.



Methods: Study Design



Pharmacist Interventions: Surveys Administered

- Author created satisfaction survey modeling after the “Likert Scale” to be administered pre and post review.⁴
- The validated “FRAIL Scale” is a simple 5 question survey assessing: Fatigue, Resistance, Ambulation, Illness, and Loss of weight.⁵
- The “FRAIL Scale” was administered one time to determine if “frailty” should be added to patient problem list.

Geriatric Medication Satisfaction Survey On a scale from 0-5 0 indicating strongly disagree and 5 indicating strongly agree. Score out of 30

=====

I feel my medications benefit my health
I remember to take my medications
I understand why I am taking each of my medications
I do not think I have side effects from my current medications
I am happy with the number of medications I take
I am overall satisfied with my medications

FRAIL SCALE:

=====

- Fatigue
("Have you felt fatigued? Most or all of the time over the past month?")
Yes = 1, No = 0

- Resistance
("Do you have difficulty climbing a flight of stairs?")
Yes = 1, No = 0

- Ambulation
("Do you have difficulty walking one block?")
Yes = 1, No = 0

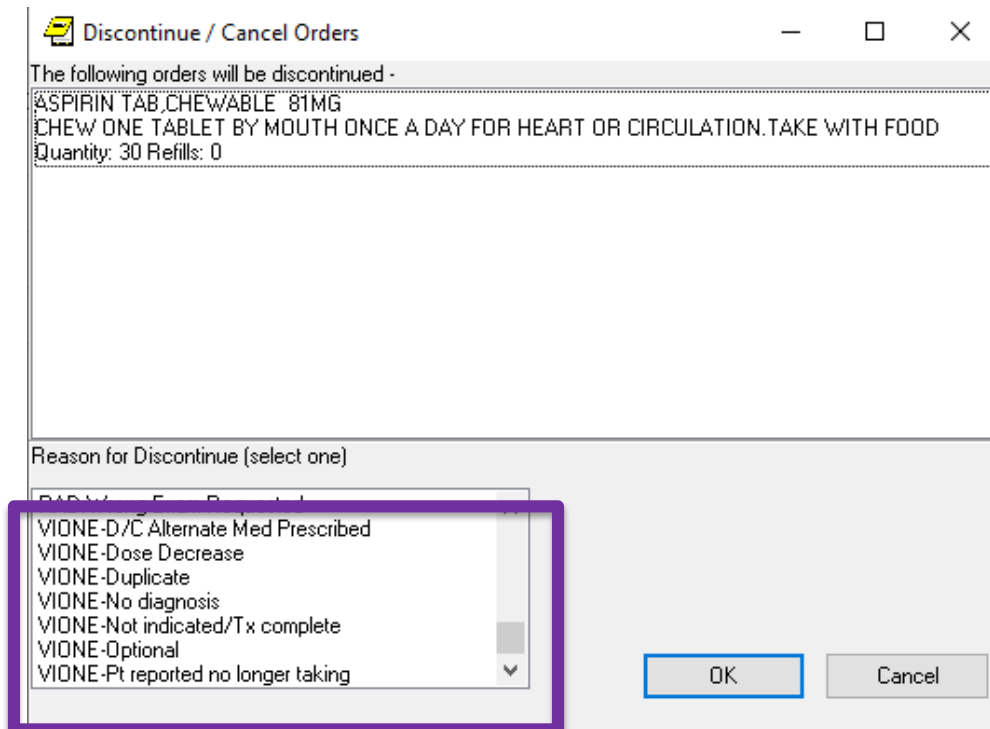
- Illnesses
("Do you have any of these illnesses: hypertension, diabetes, cancer (other than a minor skin cancer), chronic lung disease, heart attack, congestive heart failure, angina, asthma, arthritis, stroke, and kidney disease?")
Five or greater = 1, fewer than 5 = 0

- Loss of weight
("Have you lost more than 5 percent of your weight in the past year?")
Yes = 1, No = 0

- Frail scale scores range from 0 to 5 (0 = best, 5 = worst) and represent frail (3 to 5), pre-frail (1 to 2), and robust (0) health status.

Based on the above Frailty Scale patient meets the "Frail" definition. Please consider addition of Frailty on the patients problem list. Thank you.

Methods: VIONE Discontinuation Reasons



Pharmacist utilized VIONE Discontinuation reasons in CPRS medical record for purposes of VIONE Dashboard tracking.

Methods: Statistical Analysis

- Outcomes analyzed and recorded using VIONE dashboard and descriptive statistics.
- Secondary outcome “annualized cost avoidance” was automatically calculated using below formula on dashboard.

$$\text{Annualized Cost Avoidance} = \frac{\text{Price Per Dispense Unit} \times \text{Quantity Dispensed}}{\text{Days Supply}} \times \text{Days of Cost Avoidance Achieved}^*$$

* - max of 365 days

Results: Baseline Characteristics

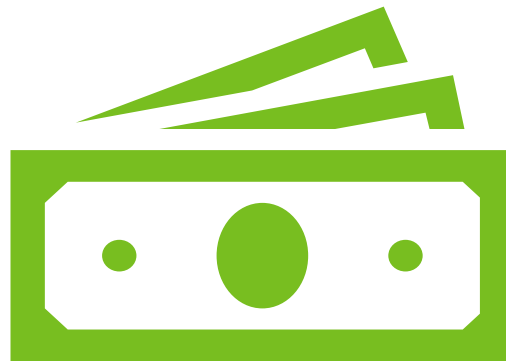
Baseline Characteristics	Cohort (N=25)
Male (%)	96% (24)
Age (years)	80.88 (25)
Number of Medications	21.8 (25)
Frail Scale	
• Frail (%)	52% (13)
• Pre Frail (%)	28% (7)
• Not Frail (%)	8% (2)
• Unable to assess (%)	12% (3)

Results: Primary Outcome



2.8 medications discontinued per patient with **71** unique deprescribed medications. Average number appointments conducted were **1.8** visits per patient.

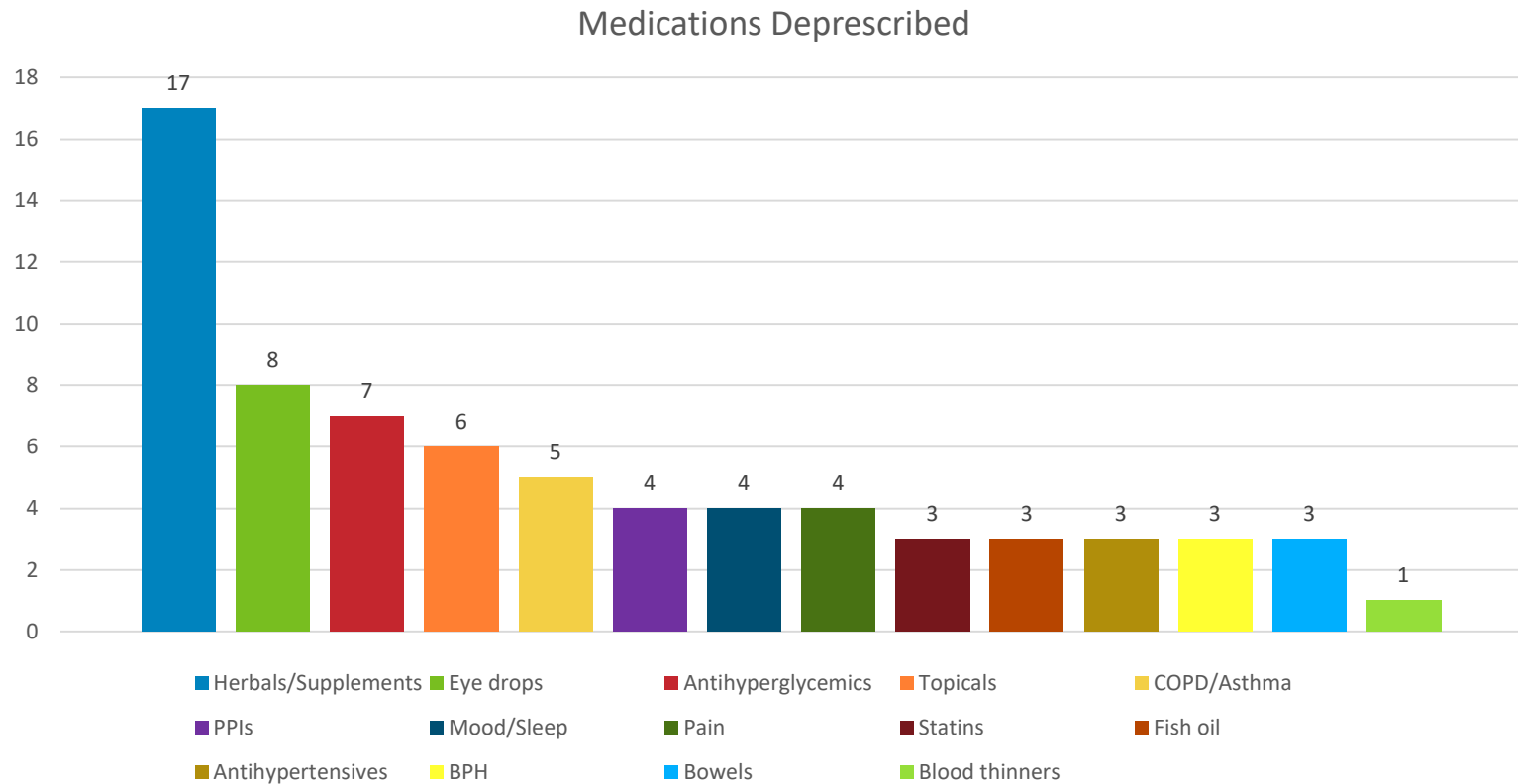
Results: Secondary Outcome



\$3,599.56

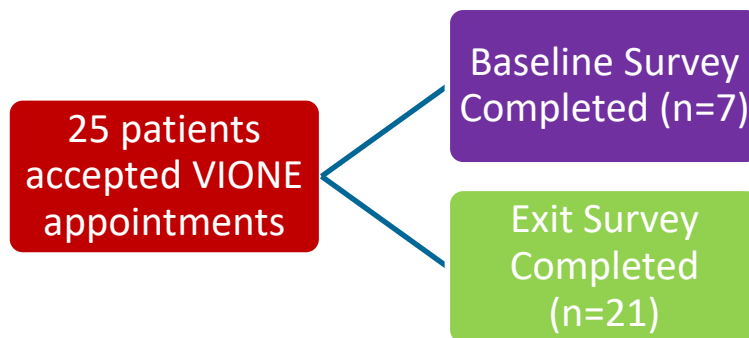
Annualized Cost Avoidance

Results: Secondary Outcome



Results: Secondary Outcome

- Patient/Caregiver satisfaction Survey
 - Average exit survey score at least 1 month after pharmacist appointment was 26.7 points out of 30.
 - Satisfaction scores improved by 5.3%
 - 16% of patients were loss to follow up



Incomplete Baseline survey due to:

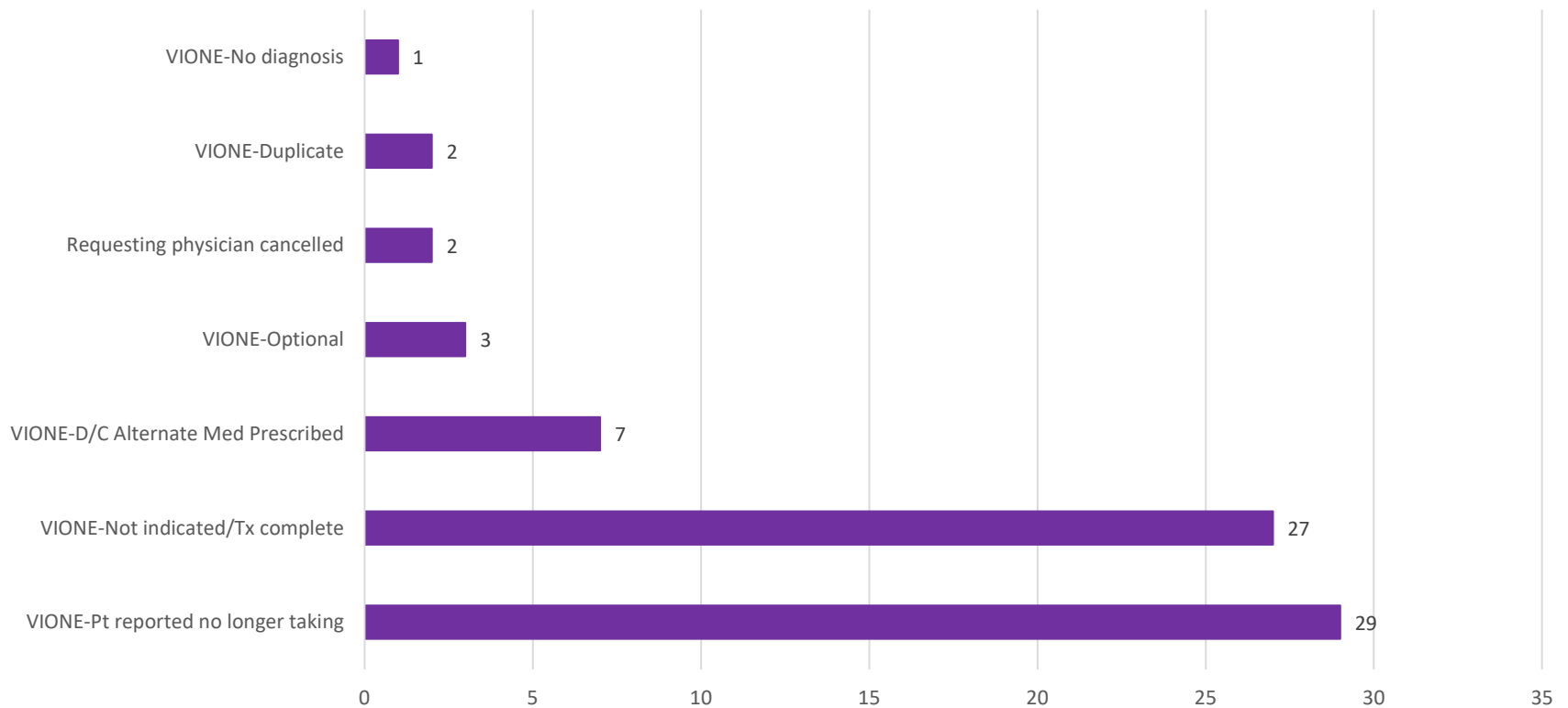
Hearing impaired, lack of time to administer in clinic, start date of survey administration different than VIONE start.

Loss to follow up reasons:

Deceased, Hospitalized, unable to contact

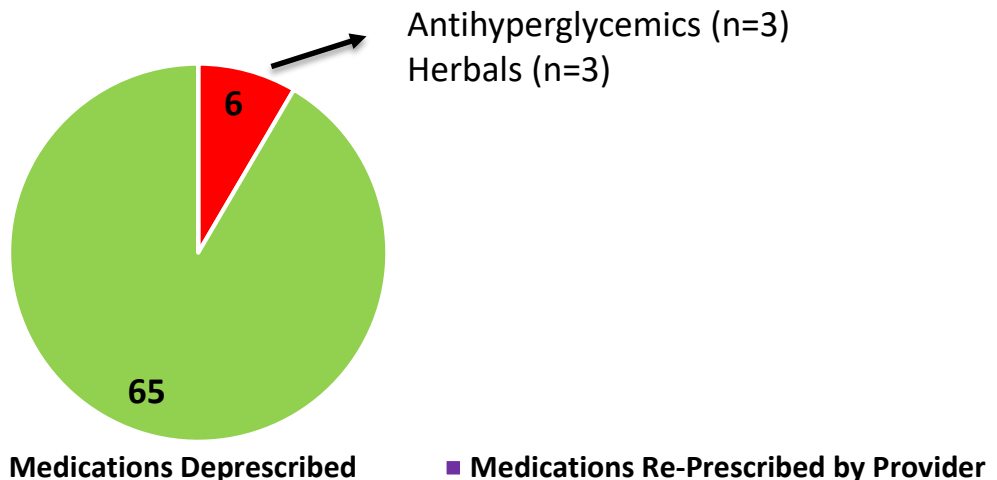
Results: Subgroup Analysis

VIONE Discontinuation Reasons



Results: Subgroup Analysis

Medications Restarted



- 5/25 patients (20%) restarted at least 1 deprescribed medication
- 6/71 medications (8.5%) were restarted by the patient that were initially deprescribed by pharmacist
- No medications deprescribed were re-prescribed by another provider
- Diabetes medication included: insulins and metformin
- Herbals include: garlic, COQ10, and fish oil

Conclusion

Implementation of the VIONE tool in the GeriPACT setting resulted in reduced number of unnecessary prescriptions and reduced healthcare costs.

Future Impact

- Based on the successful implementation of the VIONE deprescribing tool within the KCVA Hospice and GeriPACT setting, the team plans to diffuse the best practice to all primary care clinics within the KCVA health system
- Due to low completion rates of baseline survey and survey design, only a small improvement in patient satisfaction was captured. The team would consider an alternative process to capture patient satisfaction in the future.

Until then...

It's **YOUR** turn to document deprescribing using
VIONE!

VIONE DASHBOARD

https://vaww.fre.cdw.va.gov/sites/D03_VISN15/layouts/15/ReportServer/RSViewerPage.aspx?rv:RelativeReportUrl=/sites/D03_VISN15/Reports/VIONE%20Progress%20Report.rdl

ACADEMIC DETAILING-VIONE/POLYPHARMACY

<https://vaww.portal2.va.gov/sites/ad/SitePages/VIONE.aspx>



Acknowledgements

Project Contributors:

Beth Eickman, M.S., PharmD, BCACP
Sarah E. Will, Pharm.D., BCPS, BC-ADM
Amy Cummings, PharmD, BCACP

Authors would also like to thank the creators of the VIONE methodology and VIONE dashboard:

Sara S. Battar, MD, Associate Chief Of Staff, Geriatrics and Extended Care Service, Tim Cmelik, RPh, MBA, Chief of Pharmacy, Margie Scott, MD , Medical Center Director, Carl Anderson, PharmD, ADPAC, Rhonda Cox-Martinez, RN, CAC, Kimberly Dickerson, Pharm D, Academic Detail Pharmacist, and Christopher Sedgwick, Pharm D, BCPS.

References

1. Thomson, Cheryl. New medication review method cuts veterans' Rx load, saves millions. *AM J Health-Syst Pharm*. 2018 April 15; 75 (8): 502-503.
2. Battar, Sara, et al. Update- Vital, Important, Optional, Not Indicated, Every Medication has a diagnosis (VIONE): Assessing the Impact of an Innovative Deprescribing Approach to Medication Management at the Central Arkansas Veterans Healthcare System (CAVHS).
3. Watson, Kimberly , Battar, Sara, et. al. A VA Clinician's Guide to Reducing Polypharmacy Risk. *VA PBM Academic Detailing Service*. December 2019.
4. Joshi et al.; *BJAST*, 7(4): 396-403.2015. doi: 10.9734/BJAST/2015/14975
5. Abellan van Kan G, Rolland YM, Morley JE, Vellas BJ *Am Med Dir Assoc*. 2008 Feb; 9(2):71-2.

Questions?

Farrah Zonoozi, PharmD
PGY1 Pharmacy Practice Resident
Kansas City VA Medical Center
Farrah.Zonoozi@va.gov