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Evaluating implementation of a combination opioid and benzodiazepine new start consult at the San Francisco Veterans Affairs Health Care System

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PURPOSE

National guidelines recommend against concurrent use of opioids and benzodiazepines due to increased risk for morbidity and mortality. San Francisco Veterans Affairs Health Care System (SFVAHCS) implemented a combination opioid and benzodiazepine consult December 2015 to reduce new combination treatment.

Consults are evaluated by clinical pharmacy specialists (CPSs) and required for >15 days of concurrent therapy in 2 consecutive months. CPSs often provide recommendations for alternative medication and non-medication therapies and strategies to enhance safety.

The following are excluded from consult requirements:

- Hospice/end of life care (<12 months)
- Previously prescribed combination from a VA provider
- New request from a VA palliative care provider
- Discharges from inpatient, Community Living Center
- Benzodiazepines for treatment of alcohol withdrawal

We completed a medication use evaluation (MUE) to assess outcomes of the combination opioid and benzodiazepine consult at the SFVAHCS.

METHODS

- List of consults completed February 19, 2016 – June 25, 2019 obtained from CPSs (N=128).
- Consults discussed with CPSs but not placed in the electronic record were excluded (N=7).
- Retrospective reviews in the electronic medical record completed July – September 2019 included:
  - Prescriber demographics
  - Consult request and outcome
  - Treatment indication
  - Individualized recommendations by pharmacist
  - Outcome of recommendations after one month
- Descriptive statistics evaluated consult request, treatment indication, and consult outcome.
- Chi-square tests compared frequency of CPS recommendation and number of recommendations implemented.
- A linear regression model evaluated the relationship between number of CPS recommendations and number of recommendations implemented.
- SFVAHCS Research and Development Committee evaluated as a non-research quality improvement project.

RESULTS

- Number of consults placed per year increased from 2016 to 2017, then reduced 3-fold in 2018 (**Figure 1**).
- 121 consults were placed primarily by primary care (N=80, 66.1%) and mental health providers (N=28, 23.1%) for new benzodiazepines (N=55, 45.5%), new opioids (N=44, 36.4%), or both (N=22, 18.2%).
- Common treatment indications included anxiety (new benzodiazepines) and musculoskeletal pain (new opioids), **Table 1**.
- Most consults were most were not approved (N=50, 41.3%), and the remaining were discontinued (N=37, 30.6%), short-term approved (N=28, 23.1%), or approved (N=6, 5.0%), **Figure 2**.
- CPSs provided recommendations for 95 consults, and among those, 48 (50.5%) had ≥1 implemented (**Figure 3**).
- There was a significant difference in frequency in type of recommendation ($p < 0.001$). There was a non-significant trend for difference in rate of implementation when comparing by recommendation type ($p=0.080$).
- Linear regression indicated that the number of recommendations made significantly predicted the number of recommendations implemented by providers ($p < 0.001$, $R^2=0.24$), as shown in **Figure 4**. Results did not change when cases with ≥5 recommendations were omitted ($p=0.003$, $R^2=0.11$).

Figure 1. Number of Consults Placed per Year (N=121)

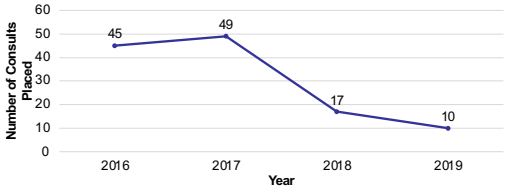


Table 1. Treatment Indication

Indication for New Benzodiazepines	No. (%) N=77	Indication for New Opioids	No. (%) N=66
Anxiety	44 (57.1)	Musculoskeletal pain	35 (53.0)
Insomnia	18 (23.4)	Acute pain	10 (15.2)
Muscle spasm/pain	8 (10.4)	Cancer pain	8 (12.1)
PTSD	3 (3.9)	Neuropathic pain	6 (9.1)
Anxiety with tremors	1 (1.3)	Chronic abdominal pain	3 (4.4)
Anxiety with seizures	1 (1.3)	Migraines	2 (3.0)
Tremors	1 (1.3)	Opioid use disorder	1 (1.5)
Bereavement	1 (1.3)	Anxiety with shortness of breath	1 (1.5)

Figure 2. Overall Consult Outcome

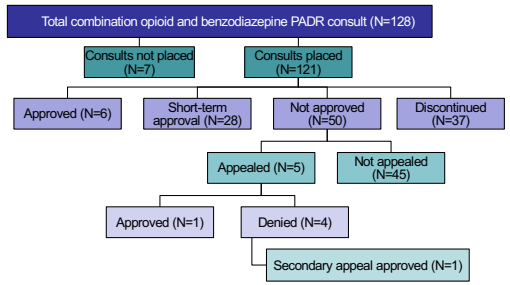


Figure 3. Outcomes of Recommendations by Type (N=95)

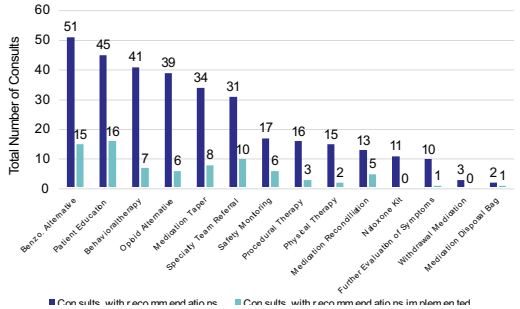
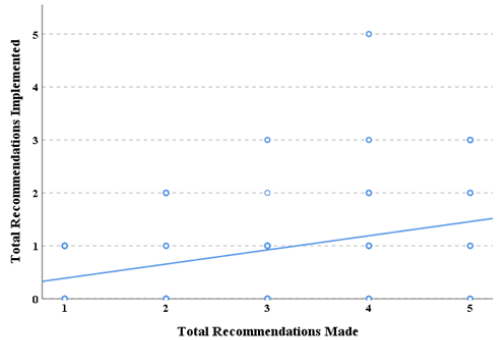


Figure 4. Linear Relationship Between Number Recommendations Made and Implemented



LIMITATIONS

- Single VA healthcare system study.
- Did not evaluate:
  - Outcomes of pharmacist recommendations beyond one month of consult placement
  - Longer-term safety outcomes
  - Impact of potentially contributing factors such as pain severity, mental health conditions, and substance use disorders

CONCLUSIONS

- Implementation of an opioid and benzodiazepine new start consult evaluated by CPSs resulted in an overall low rate of approval, thus reducing use of this risky combination at SFVAHCS.
- CPSs recommended medication and non-medication treatment alternatives and strategies to enhance safety for 78% of consults.
- Recommendation implementation rate was >50%.
- Recommendation type did not significantly impact likelihood of implementation
- Prescribers were more likely to implement recommendations for consults with if ≥5 recommendations were provided.

RECOMMENDATIONS

- Standardized checklist of ≥5 recommendations that can be individualized for each patient consult.
- Automatically offer opioid overdose education and naloxone when indicated.
- Future research should examine the impact of similar interventions on reducing opioid-related morbidity and mortality, patient and prescriber perspectives, and impact of engaging in recommended alternatives.

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