

# Retrospective Chart Review of Advanced Practice Pharmacist Prescribing of Controlled Substances for Pain Management in Veterans

Courtney M. Kominek, PharmD, BCPS



U.S. Department of Veterans Affairs  
Veterans Health Administration  
Harry S. Truman Memorial Veterans' Hospital

## BACKGROUND

There is high demand for pain management services with limited number of healthcare professionals appropriately trained to deliver care.<sup>1</sup> Pharmacists are integral members of the interdisciplinary pain team and meet this demand. According to the Drug Enforcement Agency (DEA) as of 2/10/2020, 8 states (California, Idaho, Massachusetts, Montana, New Mexico, North Carolina, Ohio and Washington) allow pharmacists to prescribe controlled substances.<sup>2</sup>

## OBJECTIVES

The aims of this project included the pharmacist impact on morphine milligram equivalent (MME) and compliance with opioid risk mitigation strategies.

## METHOD

This was a retrospective, single-center, chart review project. The project was reviewed and approved by the University of Missouri-Columbia Institutional Review Board used by the Harry S. Truman Memorial Veterans' Hospital as a quality improvement project on 1/31/2020.

The author applied for controlled substance registration through the DEA and was issued registration 4/30/2018. The State of Ohio Board of Pharmacy was contacted as required by Ohio Administrative Code.<sup>3</sup> The author then submitted paperwork to update her SOP to allow controlled substance prescribing 6/29/2018 which was approved 7/23/2018.

The CPS functions as an advanced practiced provider (APP) within an interdisciplinary pain management team. Referrals to Pharmacy Pain Clinic are primarily through electronic consult in the electronic medical record. The consult is reviewed for appropriateness and once approved is scheduled by support staff. Once the patient is stabilized, the patient is discharged back to their primary care provider or referring provider for continued care. The taper strategy for each patient was individualized. Patients were generally tapered on their existing opioid medication unless they were new to the VA and on nonformulary medications or experiencing a significant adverse reaction. The CPS is able to refer patients to other services including behavioral health for substance use disorder treatment including medication assisted treatment if concerns were identified.

Initial data was collected from the Veterans Integrated Service Network (VISN) 15 Corporate Data Warehouse by the VISN Pharmacy Analytics Program Manager. The original report included patients prescribed a schedule II-V controlled substance by the author from 7/1/2018-1/31/2020.

Chart review was conducted on each patient to obtain additional data. Opioid medication, MME, use of opioid risk mitigation strategies urine drug screens (UDS), informed consent, naloxone, risk assessment via stratification tool for opioid risk mitigation (STORM), prescription drug monitoring program (PDMP) checks), nonopioid medication number and classes were collected both at time of consult and at discharge from pharmacy pain clinic.

Patients were included in the review if they were prescribed an opioid schedule II or III controlled substance from July 1, 2018 – January 31, 2020. Patient were excluded from the review if they were prescribed an opioid schedule II or III controlled substance primarily as coverage for another provider. Patients prescribed only pregabalin, tramadol, or a benzodiazepine were also excluded.

The primary endpoint was change in MME from baseline to discharge from clinic. Secondary endpoints included change in opioid risk mitigation strategies and change in opioid medications prescribed from baseline to discharge.

## STATISTICS

Descriptive statistics were used to analyze the data. Percent change in MME was calculated for each patient prescribed opioids then averaged to determine the mean percent change in MME. A two-sided t-test was done to compare baseline and discharge MME. Fisher's exact test was used to compare nominal data of opioid risk mitigation strategies.

## RESULTS

A total of 75 patients were included in this review. The average age of patients included was 66 years and 88% of patients were male (n=66) and 12% female (n=9) (Table 1). Sources of consults were primarily from the primary care provider (PCP) (44%, n=33) or Pain Clinic (43%, n=32). Reason for consultation to the Pharmacy Pain Clinic were opioid tapering 48% (n=36), opioid optimization or monitoring 37% (n=28), and nonopioid optimization 19% (n=14). Primary diagnosis at consultation was chronic low back pain 56% (n=42), chronic neck pain 20% (n=15), and osteoarthritis 16% (n=12).

The average MME at time of consult was 93 MME compared to 31 MME at discharge which was statistically significant ( $p < 0.00001$ ) (Figure 1). The mean percent change in MME was 46% including methadone and 42% excluding methadone. There was a 26% change in UDS, 28% change in informed consent, 85% change in PDMP, 194% change in naloxone, and 357% change in STORM reviews from baseline to discharge with all demonstrating statistical significance ( $p < 0.00001$ ) (Figure 2). At time of discharge, the most common opioid prescribed was morphine SA (n=10, 13%, 44 average MME) and oxycodone/acetaminophen (n=10, 13%, 28 average MME)

The average number of days from consult to initial visit was 23 days. Face-to-face was the primary means of initial visit with 92% (n=69) of visits but phone was the primary mode of follow-up with 73% of visits (n=55). The average number of follow-up visits was 7 representing 176 average days of time in Pharmacy Pain Clinic. Consultation to behavioral health performance program was the most common referral made (n=13, 17%).

Table 1: Demographic Data

Characteristic	Result n=75 (%)
Average age (years)	66
Sex	Male 66 (88) Female 9 (12)
Comorbidities at consult <sup>a</sup>	
COPD	28(37)
Sleep apnea	36(48)
Mental health diagnosis	41(55)
Constipation	10(13)
Overdose	2(3)
Substance use disorder <sup>b</sup>	10(13)
Source of consult	
Primary care provider	33(44)
Physical medicine and rehabilitation	8(11)
Pain Clinic	32(43)
Behavioral health performance program <sup>c</sup>	1(1)
Self	1(1)
Reason for consult <sup>a</sup>	
Nonopioid optimization	14(19)
Opioid monitoring or optimization	28(37)
Opioid conversion	6(8)
Opioid taper	36(48)
Performance program evaluation	1(1)
Pain Location/diagnosis at consult <sup>a</sup>	
Chronic low back pain	42(56)
Fibromyalgia	6(8)
Neck pain	15(20)
Spinal cord injury	4(5)
Osteoarthritis	12(16)
Peripheral neuropathy	9(12)

<sup>a</sup>May have more than 1 for each patient.

<sup>b</sup>Substance use disorders excluded tobacco use disorder and were not included in mental health diagnosis.

<sup>c</sup>Performance Program is the name of the facility's interdisciplinary intensive pain program involving cognitive behavioral therapy for chronic pain, physical therapy, occupation therapy, nutrition, pharmacy, yoga or tai chi, pain management physician, and battlefield acupuncture.

Figure 2: Opioid Risk Mitigation Data

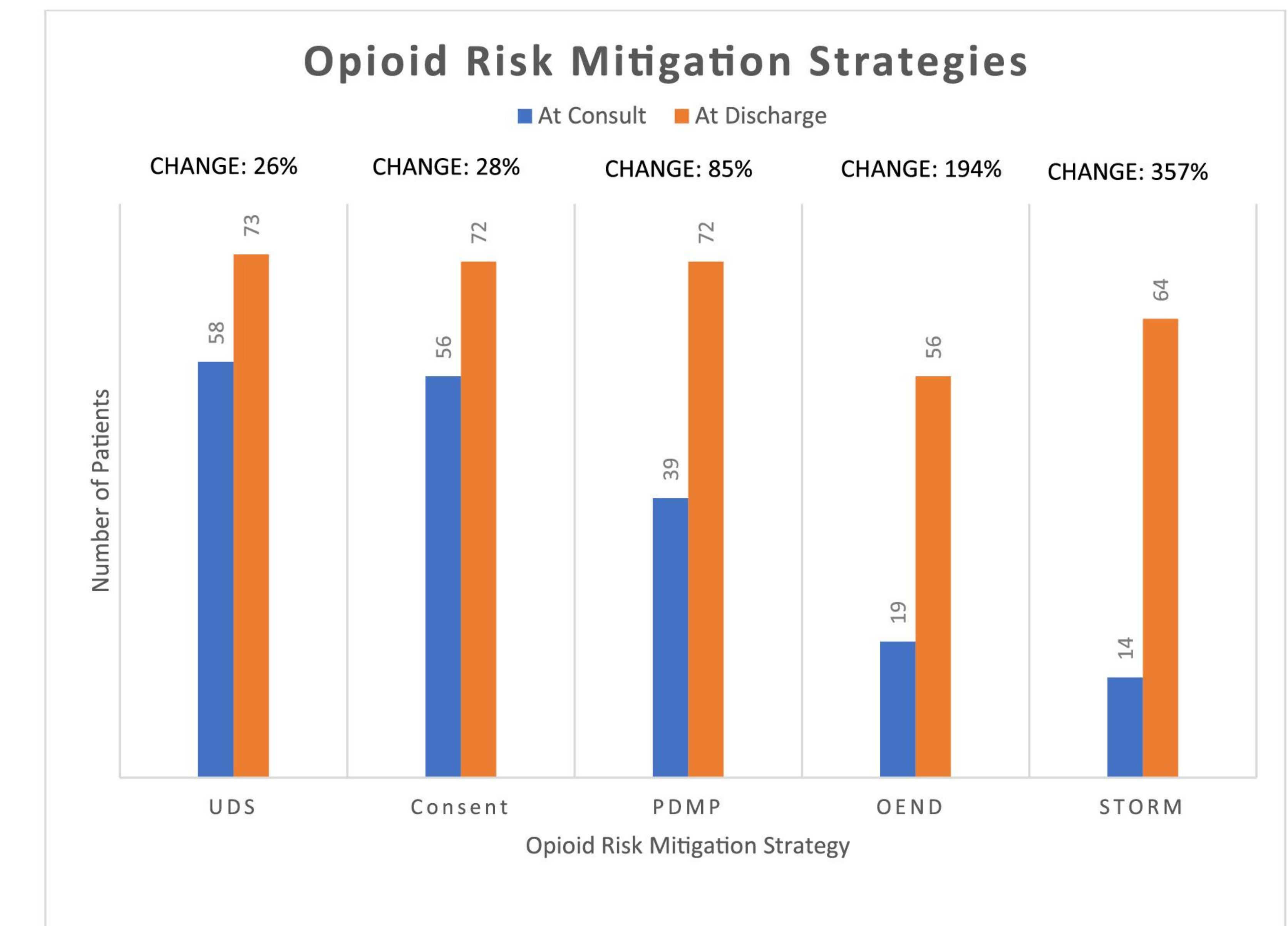


Figure 3: Opioid Medications at Consult and Discharge

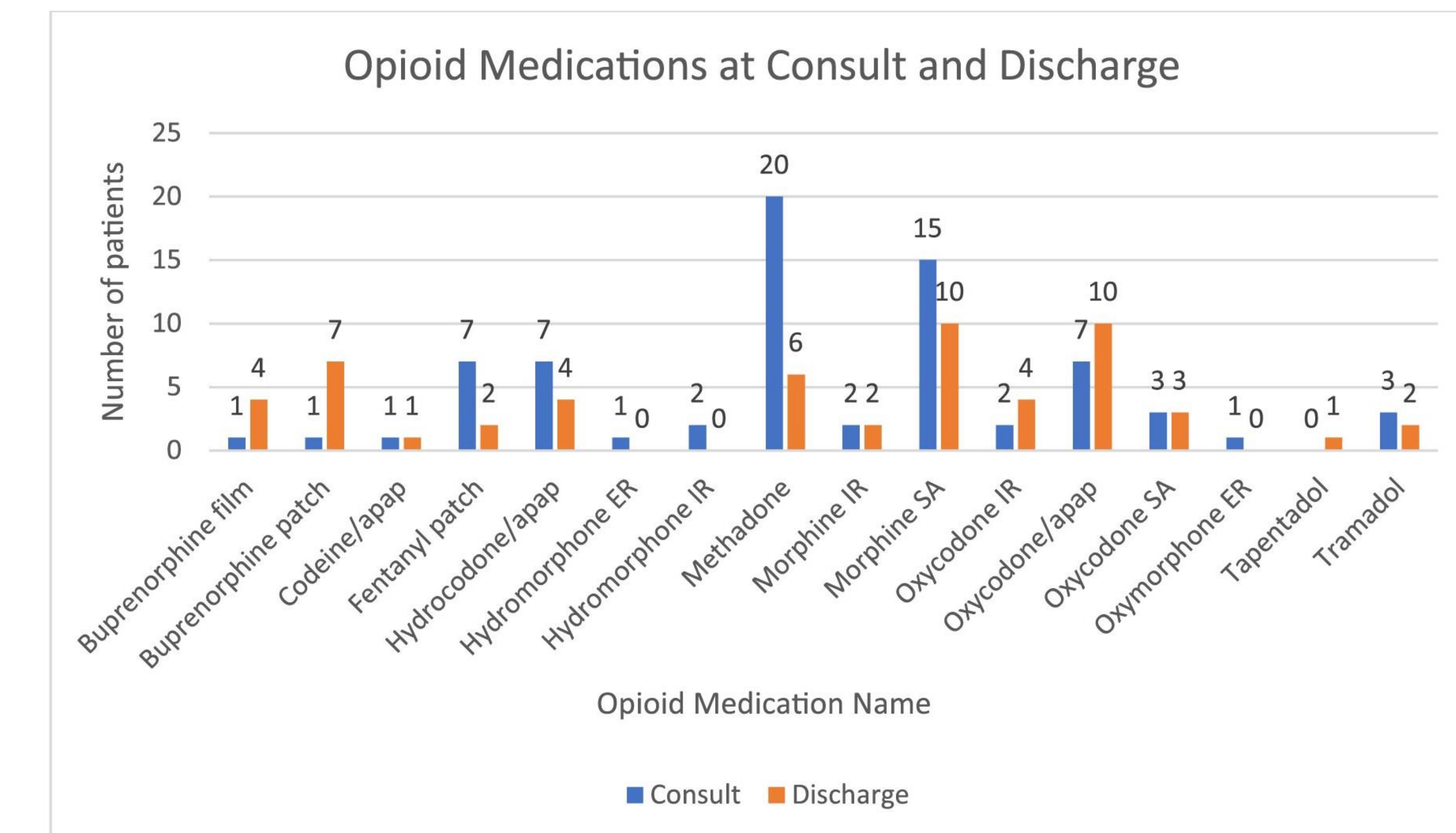
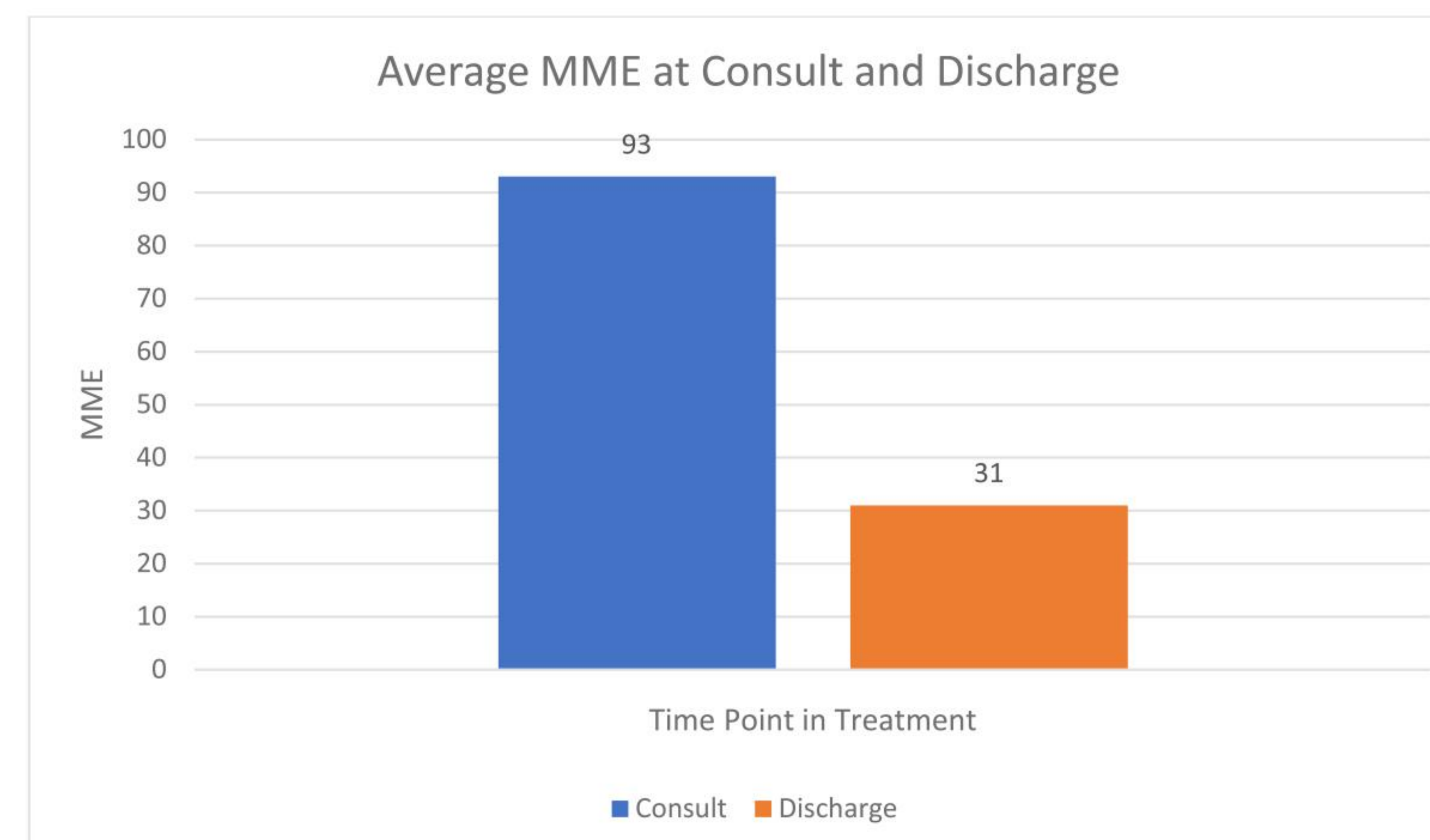


Figure 1: Opioid Morphine Milligram Equivalent Dose



## CONCLUSIONS

Pharmacists functioning as APP are key members of the pain management team. A review of a pharmacy-run pain clinic demonstrated statistically significant reduction in MME and improvement in opioid risk mitigation from consult to discharge. Patients enrolled in the pharmacy managed clinic also had improvements in compliance with opioid risk mitigation strategies. Future attention should be focused on further expanding training and positions for pharmacists as APP in pain management.

## REFERENCES

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