

### Background

- Opioid overdoses have increased 70% over 2016-2017 in the Midwest.
- In 2018, over 1,000 people died from opioid overdose in the St. Louis region.
- Polysubstance use is common in this population.
- World Health Organization guidelines recommend symptom-triggered treatment of withdrawal with either clonidine, buprenorphine, and/or methadone.
- An objective measure like Clinical Opioid Withdrawal Scale (COWS) can help identify and quantify withdrawal.
- Medication Assisted Treatment (MAT) is the gold standard for opioid use disorder.
- Healthcare providers are not always confident or uniform in their treatment of opioid use disorder.
- Order sets were created to standardize opioid withdrawal treatment and monitoring in the hospital setting.
- As part of the order set naloxone was to be ordered upon discharge.
- The primary outcome is to examine how the opioid withdrawal order sets impacted patient care.

### Methods

- Data collection:** Retrospective chart review of inpatient electronic health records from a primary care hospital in St. Louis, MO over 6 months from December 1, 2018 to May 31, 2019.
- Inclusions:** Patients admitted to two internal medical floors where the opioid order sets were released for piloting. Patients were between 18-90 years with diagnostic codes for opioid withdrawal, dependence, opioid abuse, opioid intoxication with or without perception disturbances, or a positive drug screen for opioids with no history of prescribed opioids.
- Data analysis:**
  - Microsoft Excel Pivot Tables
    - Descriptive statistics
    - Track patterns such as demographics, substances used, treatment used, etc.

### Results

- 51 patients met criteria for study inclusion
- 63% (32) Male, 69% (35) African American
- Average age 40 (±12) years old
- Concomitant substances used included nicotine (88%), cocaine (51%), and methamphetamine (25%).
- COWS performed on 43% of patients who met qualifications.

**Table 1: Hospital Admission Diagnosis**

	Number (%)
Overdose	7 (14)
Withdrawal Symptoms	4 (8)
Infection	14 (27)
COPD	6 (12)
Pain	9 (18)
Diabetic Ketoacidosis	3 (6)
Other	8 (16)

**Table 2: Withdrawal Treatment with Order Set**

	Number (%)
None	15 (29.4)
MAT	28 (54.9)
Clonidine taper	8 (15.7)

**Table 3: Withdrawal Treatment without Order Set**

	Number (%)
None	1154 (71)
Clonidine	313 (19)
Methadone	122 (7)
Buprenorphine	43 (3)

**Table 4: Type of MAT Initiated**

	Number of Patients (%)
None	23 (45.1)
Buprenorphine	17 (33)
Methadone	11 (21.6)

**Table 5: Discharge Disposition**

	Number (%)
Discharged home	34 (70)
Discharged to another facility	6 (12)
Against Medical Advice	8 (16)

**Table 6: Naloxone at Discharge**

	Number (%)
None	21 (52.9)
Yes	22 (43.1)
Home med	2 (3.9)

### Discussion

- Treatment was given to 71% of patients
- MAT initiated in 55% of patients (61% buprenorphine and 39% methadone).
- Initiation of MAT increased 45% compared to hospital data prior to order set initiation.
- 38% fewer patients were discharged against medical advice after order set implementation.
- It is possible more patients received naloxone than recorded considering 35% patients had a peer support specialist consult in which they receive grant funded naloxone and instructions for use.

### Conclusion

- The order set improved patient care by helping more patients receive MAT and naloxone. There were also less patients who left AMA.