Opioid use and naloxone prescribing upon discharge in a Metropolitan Health System

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Background

Prescribing of opioids upon patient discharge has come under increased scrutiny over the last 5-10 years due to its potential contribution to the increasing severity of the opioid epidemic. In 2021, the Iowa Department of Public Health cited that 258 Iowans died of an opioid overdose, which was an increase of 21% from 2020.[1]

Morphine milliequivalents (MME) remains a standardized value used to quantify the potency of opioids and allows for direct comparisons of opioids via conversion. Patients with greater than >50 MME/day are considered to be at greater risk for opioid overdose related death.[2]

Although the opioid epidemic has had a large impact on Iowans as well as the rest of the country, nasally administered naloxone (Narcan™) remains an efficient, effective, safe, and user-friendly way to prevent opioid overdose related death. Naloxone is an effective opioid reversal agent used in the event of overdose emergency, and it acts as a pure opioid antagonist that competes and displaces opioids at opioid receptor sites reversing the effects of the opioid.[3]

Determining the prescribing trends of naloxone for patients discharged on opioids after an inpatient admission by both the surgical team and medicine team may help identify areas for further education of prescribers regarding naloxone prescribing with opioids and needs for protocol changes for patients being discharged on opioids.

Methods

This retrospective study was approved by the Mercy Medical Center IRB.

Inclusion Criteria:
- Patients who were admitted between January 1- 31, 2022
- Patients 18 years or older
- Patients who are non-chronic opioid users *(defined as any previous opioid prescription filled in the month prior, as verified by the External RX History)*

Exclusion Criteria:
- Pediatric patients (<18 years old)
- Chronic opioid users
- Patients without an opioid prescription at discharge
- Patient died during hospitalization
- Patients prescribed a naloxone-containing product at discharge (e.g., buprenorphine/naloxone)

Methods, cont.

Sample Size:
A total of 1,547 patients were identified between MercyOne West Des Moines and MercyOne Des Moines campuses

Primary Outcome:
- Identify naloxone prescribing opportunities for adult patients discharged on opioids after inpatient admission

Secondary Outcomes:
- Identify the percentage of patients who would qualify for a naloxone prescription upon discharge
- Identify the percentage of patients who did not receive a naloxone prescription but were qualified to receive a prescription upon discharge
- Identify the most commonly prescribed opioids upon discharge

Results

Table 1: Patient demographics

Total Patients Eligible	N=1547
Patients Prescribed Opioid at Discharge	288 (18.6%)
Age (years) (mean ± std dev; range)	51 ± 19.7 (19 – 89)
Female gender	172 (60%)

Table 2: Naloxone prescriptions

Number of naloxone prescriptions	**0**

Table 3: MME Results

Median Total MME prescribed (IQR)	145 (75-210)
Median Daily MME prescribed (IQR)	45 (30-45)
>50 MME per day (patients)	33
>90 MME per day (patients)	23

Receipt of >50 MME per day qualifies for naloxone prescribing, according to the CDC

Results Cont.

Figure 1: Opioids prescribed at discharge

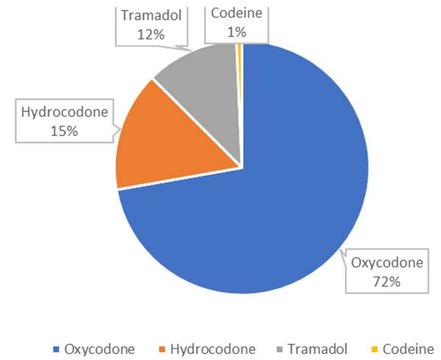

Figure 2: Opioid prescriptions by prescribing team

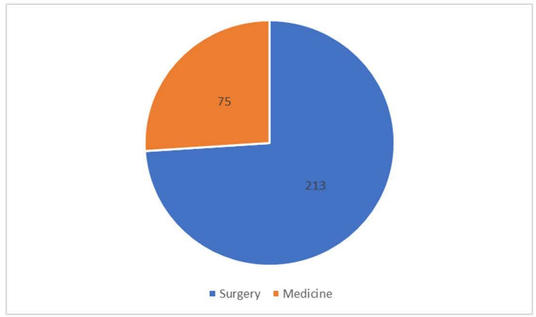

Table 4: MME per opioid

Opioid	Number of Prescriptions	Daily Median	Total Median
Oxycodone	208	45	150
Hydrocodone	44	30	75
Tramadol	34	20	100
Codeine products	2	9	54

Discussion and Conclusion

- Few patients were included in this study, largely due to lack of opioid prescribing at discharge
- There are many opportunities for enhancing naloxone prescribing at discharge.
  - n=33 (11.5%) received more than 50 MME daily
  - n=23 (7.9%) received more than 90 MME daily
- Decreasing the incidence of potential opioid overdoses is essential to improve patient outcomes after hospital discharge and to prevent rehospitalization
- Naloxone prescribing has been linked with stigma of the recipient; however, there are opportunities for increased prescribing within the health system

Limitations

- Small sample size (only one month)
- Reliance on external RX history to verify previous opioid use
- Challenge trying to determine what team was prescribing the opioid at discharge

Future Studies

- Continue to monitor and track naloxone prescribing habits
- Follow-up in 1 to 2 years to reassess opioid prescribing habits at MercyOne Des Moines and West Des Moines and compared with this project

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