Background

Tracking the administration of naloxone, an opioid antagonist, is a surrogate way of looking at safe opioid use. We did not have a standard method of tracking and reporting naloxone administrations to review for possible overtreatment with opioids. We have depended on the submission of safety events to review. To facilitate real-time tracking of naloxone administrations, the Department of Pharmacy generated a report with patient detail information based on the month that naloxone was actually administered.

Purpose

❖ To evaluate the response to naloxone administration using an implemented tracking and reporting system in the non-anesthesia setting

Methods

❖ The Pain Task Force created a multi-disciplinary ad hoc group to identify variables to be collected for each case of naloxone administration.
❖ A retrospective review was conducted on all naloxone administrations from January 2021 - May 2022 using data reported through the Naloxone Administration report found on the Pain Metric Dashboard.
❖ Naloxone administrations related to anesthesia or administered in the emergency department were excluded.
❖ The first dose of naloxone administered was used as the reference for the event.
❖ If multiple doses of naloxone were administered, the administrations were reviewing to determine if they were related to one event.
❖ Other variables included the following:
  ❖ Location of first naloxone administration (floor vs ICU)
  ❖ Response to naloxone based on documentation from providers, nurses, and/or MERIT
  ❖ Naloxone Non-responders:
    ❖ Reason for administration
    ❖ Opioid Overtreatment or not
  ❖ Naloxone Responders:
    ❖ Reason for administration
    ❖ Involvement of pain service (prior to admission, prior to naloxone, after naloxone)
    ❖ Opioid tolerance as defined by the FDA
    ❖ If not opioid tolerant, opioid naïve or not
    ❖ Timing of naloxone from admission
    ❖ Other sedating medications in prior 24 hours
    ❖ Number of naloxone doses per event
    ❖ Outcomes

Results

Non-Anesthesia Naloxone Administration Cases and Responses by month
N=90 over the past 17 months

❖ 90 total cases of naloxone administrations not related to anesthesia and not first given in the ACCC. 16 cases were in the ICU and 74 cases were on the floor.
❖ 43/90 (48%) of the cases responded to naloxone
❖ 77% of naloxone responders were being followed by a pain service prior to naloxone administrations
❖ 56% of naloxone responders were opioid tolerant
❖ 12% of naloxone responders were opioid naïve
❖ 58% of naloxone responders were deemed related to opioid overtreatment
❖ 42% of naloxone responders with multiple other factors which prevented ruling out opioid safety-related event
❖ 63% of naloxone responders had received other sedating medications within the 24 hour prior to naloxone administration
❖ Of the sedating medications, anti-seizure medications (e.g., levetiracetam, gabapentin) were the most commonly co-administered

Findings

❖ Multiple factors to explain sedation in patients include metabolic disturbances and disease progression/end of life
❖ Changes in opioid management may need to occur in patients with changes in organ function
❖ Naloxone administrations involved patients on multiple sedating medications
❖ Majority of cases were medical patients and being followed by a pain service
❖ Limitations include retrospective review of data and determination of opioid-related events were limited by documentation

Conclusion

❖ Continue monitoring each event
❖ Report events related to opioid overtreatment to respective service Quality Officers
❖ Summarize findings and report quarterly to the Pain Task Force and Medication Safety Committee
❖ Develop triggers to highlight patients more at risk for opioid-related events
❖ Other sedating medications in combination with opioids
❖ Changes in organ function (respiratory, hepatic, renal, etc.)

Next Steps

❖ Naloxone Responders N = 43/90 (48%)
❖ Tying of Naloxone Administration

❖ Naloxone Responders N = 43/90 (48%)
❖ Number of Naloxone Doses

❖ Naloxone Responders N = 43/90 (48%)
❖ Outcomes

Evaluation of Naloxone Administration in the Non-Anesthesia Setting at a Comprehensive Cancer Center

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