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Evaluation of Opioid Prescribing Behaviors and Consumption following Coronary Artery Bypass Grafting

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Evaluation of Opioid Prescribing Behaviors and Consumption following Coronary Artery Bypass Grafting

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- overdose deaths in 2018 more than four times greater than in 1999.¹
- Physicians' opioid prescribing behaviors are among the first areas of scrutiny, specifically post-operative setting.²⁻¹⁰
- Many QI projects have reduced opioids prescribed in the post-operative setting, but few literature focuses on cardiac surgery. ¹¹⁻¹⁶
- This QI project sought to identify opioids prescribed in excess and implement standardized order sets for opioids following cardiac surgery.

Problem Statement

The absence of standardized opioid prescribing protocols post-coronary artery bypass grafting at LVHN may result in opioids prescribed in excess to CABG patients, increasing opportunity for opioid diversion into the community.

TOC Post-op Data: CABG

- 8/2019-6/2020: 54 CABG patients
- Mean opioid pills prescribed: 17.92
- Mean opioid pills used by patients: 3.57
- Percent of pills utilized < 20%</p>
- Mean refills prescribed: 2.2/patient
- I CABG patient filled a refill

Intervention Results

• 7/2020-12/2020: 261 consecutive cardiothoracic surgery patients

Pre-Intervention	2 Months Post-Intervention				
23.33 opioid pills per	19.88 opioid pills per				
prescription	prescription				
44.24 MMED per	38.75 MMED per				
prescription	prescription				
0% opioids ordered using	14.49% opioids ordered				
order set	using order set				
24.24% 30-day opioid refill	7.14% 30-day opioid refill				
12.12% 30-day return to	4.70% 30-day return to				
emergency department	emergency department				

prescribing in excess to encourage physician participation in opioid stewardship.

- Patient data and standardized opioid prescriptions with tapers allowed cardiothoracic surgeons to successfully reduced quantity of opioid prescribed.
- Utilization of order sets by physicians remained low

SELECT Principles

- Focused on patient values by utilizing nurses to elicit patients' opioid utilization and pain data.
- Required leadership skills to create urgency and communicate the vision for change to cardiothoracic department.
- Utilized a health systems approach to reduce opioid diversion through implantation of standardized order sets

Methods

Needs Assessment

- Nurses from Transition of Care (ToC) team contacted patients after discharge following admission for CABG to assess patient opioid utilization.
- Data including opioid pill quantity prescribed and 30-day opioid refills were collected using chart review on the electronic medical records system.

Intervention

 A meeting between the project team and the cardiothoracic surgery department leadership to share the data discovered in the needs assessment.

Standardized Order Sets Screenshot

Opioid Weaning Protocol: 3 day (Recommended for minor or laparoscopic surgery)	
Buprofen (ADVIL, MOTRIN) 800 MG tablet Take 1 tablet by mouth 3 times a day for 3 days, then 3 times a day as needed for pain for 4 days. Normal, Dec-21 tablet, R-0.	
> This medication will not be e-prescribed. Invalid items. Pharmacy Details	
Acetaminophen (TYLENOL) 650 MG CR tablet Take 1 tablet by mouth 4 times a day for 3 days, then 3 times a day as needed for pain for 4 days. Normal, Disp-28 tablet, R-0	
This medication will not be e-prescribed. Invalid doms: Pharmacy. Details	
famobdine (PEPCID) 20 MG tablet Take 1 tablet by mouth 2 times a day for 3 days, then 2 times a day for 4 days if taking ibuprofen. Normal, Disp-14 tablet, R-0	
This medication will not be e-prescribed. Invalid items: Pharmacy_Details	
senna (SENOKOT) 8.6 mg tablet Take 2 tablets by mouth 2 times a day for 3 days, then 2 times a day as needed for constipation for 4 days. Normal, Disp-28 tablet, R-0	
This medication will not be e-prescribed. Invalid items: Pharmacy Detaits	
polyethylene glycol (MIRALAX) 17 gram packet Take 1 packet by mouth 1 time a day for 3 days, then 1 time a day as needed for constipation for 4 days. Normal, Disp-7 packet, R-0	
This medication will not be e-prescribed. Invalid items. Pharmacy Details	
CODONE (ROXICODONE) 5 MG immediate release tablet Take 1-2 tablets by mouth every 6 hours as needed for pain on day 1, 1 tablet every 6 hours as needed for pain on day 2, then 1 tablet every 12 hours as needed for pain on day 3. Normal, Disp-14 tablet, R-0	
This medication will not be e-prescribed. Invalid items. Pharmacy Details,	
Opioid Weaning Protocol -Day '3' (AVS use, DO NOT unselect) Routine, Clinic Performed	
Opioid Weaning Protocol: 7 day (Recommended for major or open surgery) Opioid Weaning Protocol: 14 day	
Opioid Weaning Protocol: 28 day	

Opioid Dashboard Screen Shot

lian Beauchamp	weaning protocols for		, outpa	tient surgery, and emergency ro	oom visits since Ju	ly 1, 2017	0		ted: 1/1/2021 ated Monthly
Fiscal Year Month-Year FY 2021 All		Location Multiple values		Patient Class Multiple values			Quick Filter 🦁 Cardiothoracic Surgery		
			Attending Specialty		Attending Division		Attending Department Heart Institute		t
Total Discharges per Mo	nth	d with Opicid Script		Average LOS (days)					
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and a dashboard.

Conclusions

- Utilizing patient data and implementing standardized order opioid order sets are effective strategies for reducing the quantity of opioids prescribed post cardiac surgery
- Electronic medical record dashboards with de-identified data allow continued quality improvement.
- Future projects could explore developing order sets in collaboration with the surgeon to increase order set utilization.

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- Design and implementation of standardized opioid taper order sets.
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