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2023 Annual QUALITY Conference

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March 1-3, 2023 - Lexington, Kentucky



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Health Care Quality Improvement Continues



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INTERPROFESSIONAL CONTINUING EDUCATION

Perioperative Opioid Stewardship: Changing the Culture

Moderator: John M. Edwards III, DNAP, CRNA

Expert Panel Members:

Lindsay Bowles BSN, RN

Emily Sacca PT, DPT, CFPS

James Borders, MD



None of the planners or faculty for this educational activity have relevant financial relationship(s) to disclose with ineligible companies.

Objectives

- Describe the use of enhanced recovery after surgery protocols to reduce the primary reliance on Opioids in the perioperative arena
- Discuss outcomes associated with enhanced recovery after surgery protocols in use at Baptist Health Lexington
- Describe efforts related to reductions in postoperative opioid prescribing at Baptist Health Lexington

Baptist Health Lexington



Opioid Epidemic

“...without new action or initiatives to address the opioid epidemic, the next decade would bring 1.22 million deaths or an average of nearly 336 people dying every day from opioid overdoses”

Responding to the opioid crisis in North America and beyond: recommendations of the Stanford–Lancet Commission

Keith Humphreys, Chelsea L Shover, Christina M Andrews, Amy S B Bohnert, Margaret L Brandeau, Jonathan P Caulkins, Jonathan H Chen, Mariano-Florentino Cuéllar, Yasmin L Hurd, David N Juurlink, Howard K Koh, Erin E Krebs, Anna Lembke, Sean C Mackey, Lisa Larrimore Ouellette, Brian Suffoletto, Christine Timko

Executive summary

The Stanford–Lancet Commission on the North American Opioid Crisis was formed in response to soaring opioid-related morbidity and mortality in the USA and Canada over the past 25 years. The Commission is supported by Stanford University and brings together diverse Stanford scholars and other leading experts across the USA and Canada, with the goals of understanding the opioid crisis, proposing solutions to the crisis domestically, and attempting to stop its spread internationally. Unlike some other *Lancet* Commissions, this one focuses on a long-entrenched problem that has already been well characterised, including in several reviews by the National Academies of Sciences, Engineering, and Medicine. This Commission therefore focused on developing a coherent, empirically grounded

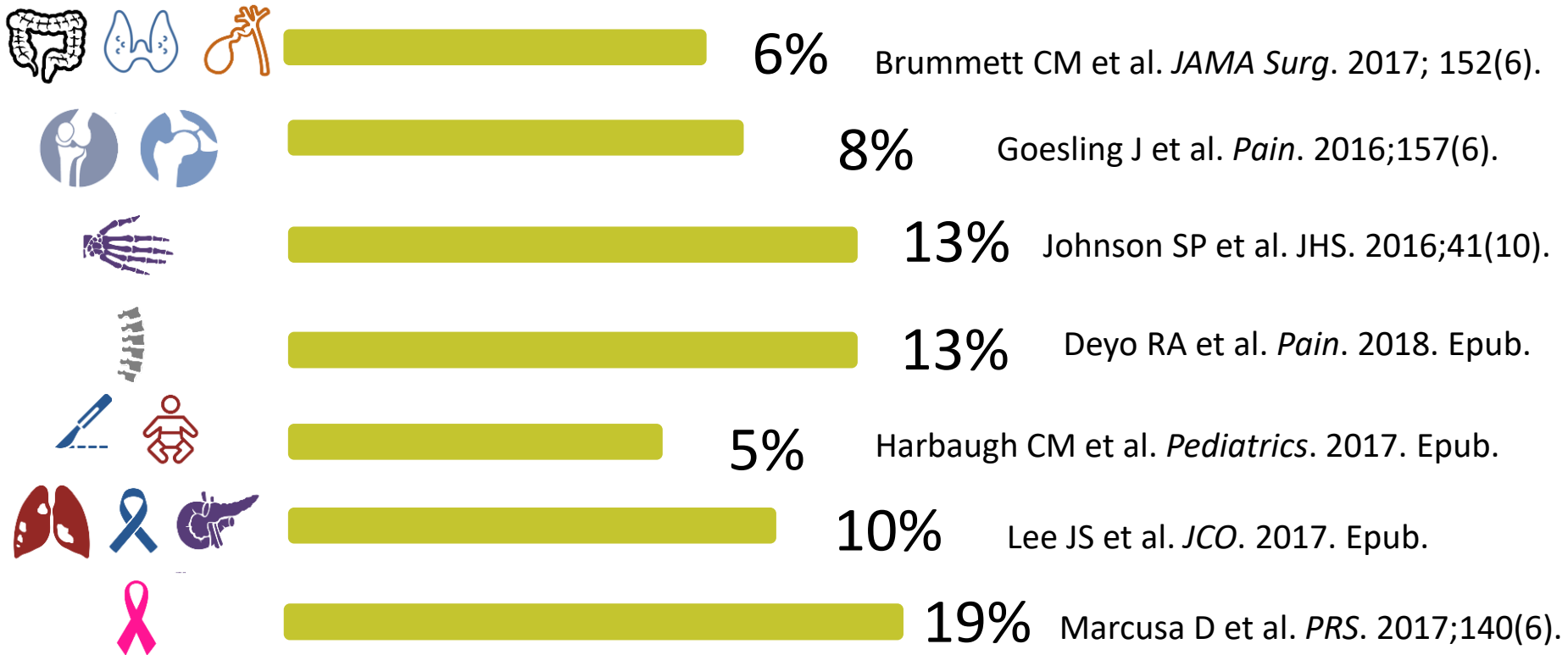
Canada. An unusually high number of middle-class people and people living in selected rural areas (eg, Appalachia in the USA, the Yukon in Canada) were affected in this wave of the crisis compared with previous epidemics of opioid addiction and overdose. The second wave, as heroin markets became resurgent in response to demand from people addicted to prescription opioids, began around 2010 and led to rapidly rising mortality among African Americans in the USA, and more generally in urban areas in the USA and Canada. These demographic shifts persisted into the third wave of the crisis, which began around 2014 and was characterised by rising addiction and fatal overdoses linked with synthetic opioids such as fentanyl. In 2020, fatal opioid



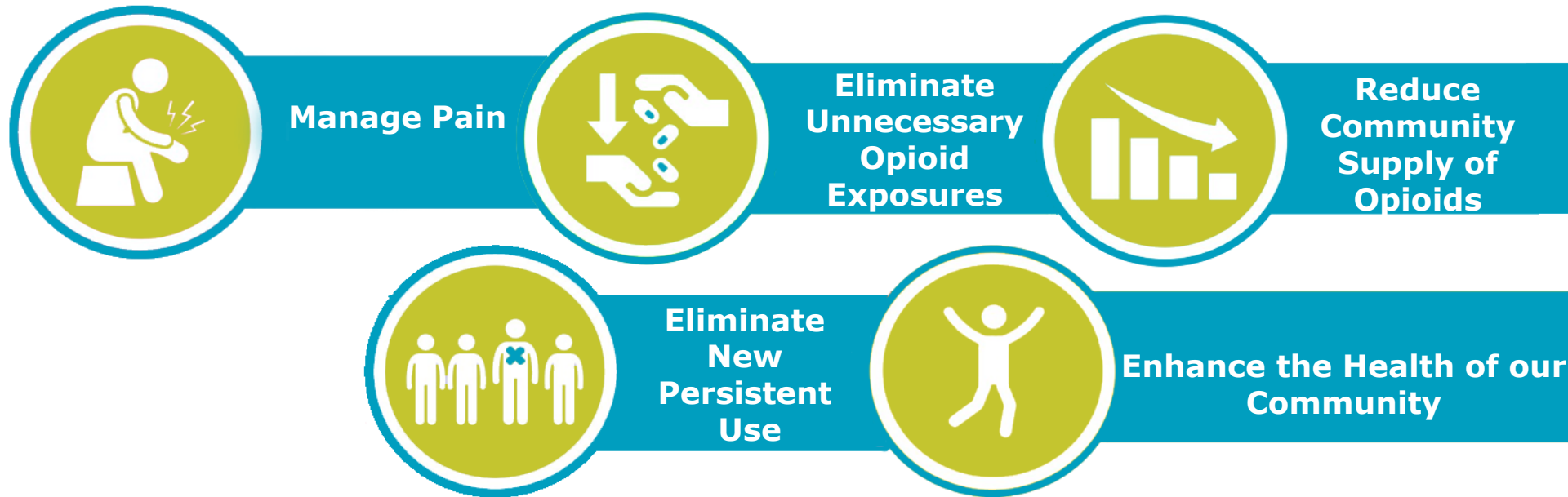
Published Online
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Department of Psychiatry and Behavioral Sciences (Prof K Humphreys PhD, Prof A Lembke MD, Prof C Timko PhD), Stanford Center for Biomedical Informatics Research (J H Chen MD), Division of Hospital Medicine (J H Chen), and Department of Emergency Medicine (B Suffoletto MD), Stanford University School of Medicine, Stanford, CA, USA; Veterans Affairs Palo Alto Health Care System, Palo Alto,

New Persistent Opioid Use



Perioperative Opioid Stewardship: Our Goals





BAPTIST HEALTH®

Enhanced Recovery After Surgery (ERAS)

Baptist Health Lexington



BAPTIST HEALTH®

ERAS

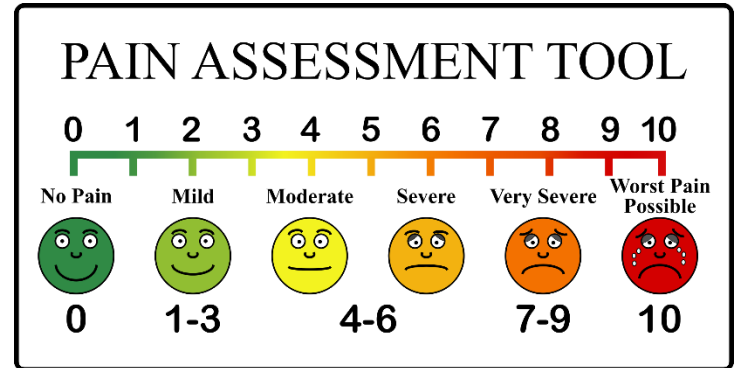
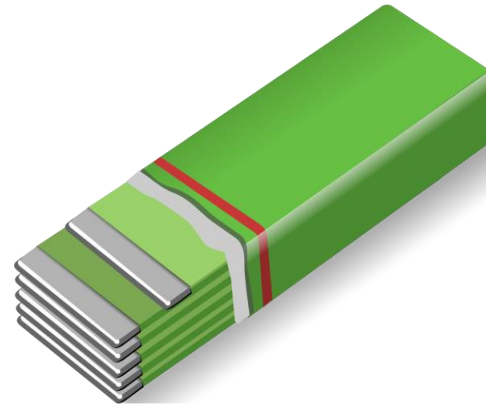
Enhanced Recovery protocols are Evidence-based and designed to standardize medical care, improve outcomes, and achieve early return to activities of daily living.

The Enhanced Recovery program serves as a pathway. When all the key components of the pathway come together this leads to greater benefits for our patients.



BAPTIST HEALTH®

Why ERAS?





BAPTIST HEALTH®



Empower our patients

The key is to empower our patients to do the right thing for themselves. Make them a key part in their own recovery. Our job is to give them the tools to do so!

The Enhanced Recovery Pathway:



Begins from surgical consult and continues through discharge.





Goals for Enhanced Recovery

- ❖ Prepare you for surgery (physically and emotionally)
- ❖ Better pain control with fewer side effects
- ❖ Eat sooner after surgery
- ❖ Increase early movement and walking
- ❖ Shorten hospital stay and return to “normal” activities



Enhanced Recovery Journey

Preoperative

Office education

Screen in PAT/Pre-op

Nutrition teaching

Promote compliance!!

Intraoperative

Multimodal Analgesia

Fluid Therapy

Antibiotics

Minimally invasive surgery

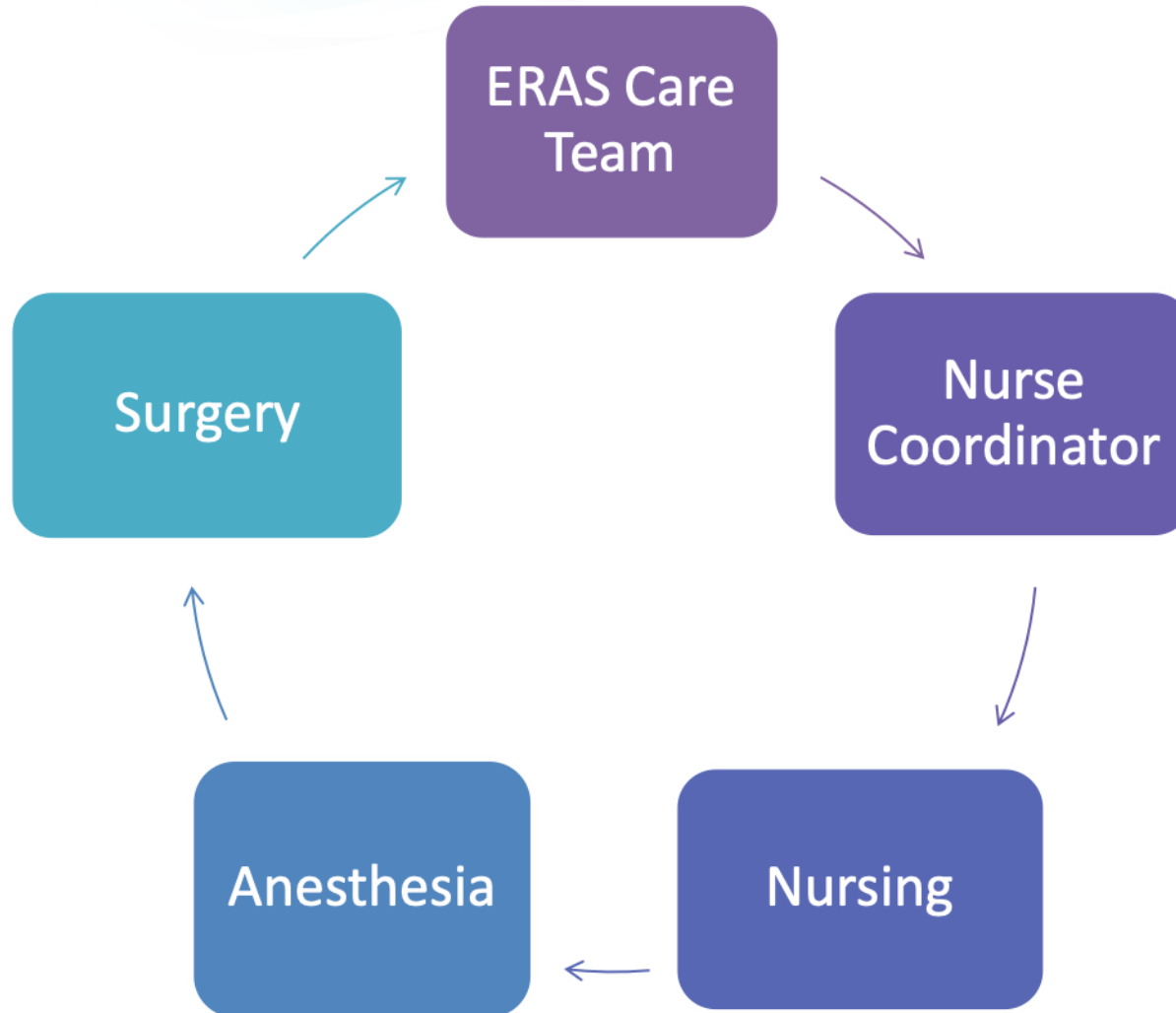
Postoperative

Early feeding

Early ambulation

Multimodal analgesia

Minimal lines & drains



Success at Baptist Health Lexington

Active ERAS Service Lines

- Orthopedics
- **Colorectal**
- **Breast**
- Bariatrics
- **Urology**
- Spine
- **OB C-section**
- GYN
- Cardiac

Baptist Health Colorectal ERAS Dashboard FY20

FY2018 non-ERAS Baseline LOS	FY 20 LOS Cost Savings	FY20Q1				FY20Q2-January				FY20YTD							
		ERAS Cases	ALOS	Var to baseline LOS	Cost Savings	% of Popul ation	ERAS Cases	ALOS	Var to baseli ne LOS	Cost Savings	% of Popul ation	ERAS Cases	ALOS	Var to baselin e LOS	Cost Savings	% of Popula tion	
BH COR*	6.88	\$ 632	-	-	\$ 0-	0%	14.00	2.88	\$ 1,820	100%	1	4.00	2.88	\$ 1,820	25%		
BH FLD	6.37	\$ 547	1	5.00	1.37	\$ 749	7%	64.00	2.37	\$ 7,778	56%	7	5.00	1.37	\$ 8,528	17%	
BH LAG	10.20	\$ 571	2	2.67	7.53	\$ 8,597	60%	0	-	\$ 10.20	-	2	2.67	7.53	\$ 8,597	12%	
BH LEX	8.59	\$ 519	83	4.64	3.95	\$ 170,127	77%	58	3.88	\$ 4,711	88%	141	4.64	3.95	\$ 311,884	85%	
BH LOU	6.04	\$ 562	15	9.69	(3.65)	\$ (30,769)	42%	27	9.13	(3.09)	\$ (46,887)	70%	42	9.69	(3.65)	\$ (77,655)	35%
BH MAD*	8.17	\$ 521	-	-	8.17	\$ -	0%	45.10	3.07	\$ 6,402		4	5.10	3.07	\$ 6,402	16%	
BH PAD	7.39	\$ 592	4	4.50	2.89	\$ 6,847	31%	6	7.12	0.27	\$ 960	29%	10	4.50	2.89	\$ 7,807	26%
BH RIC*	4.81	\$ 491	-	-	4.81	\$ -	0%	32.38	2.43	\$ 3,581	50%	3	-	4.81	\$ 3,581	18%	

OB C-section

ERAS go live date: 11/25/2020

- Patient Population: Inpatient C-Section DRGs 784-787
- MME: Morphine Medication Equivalent

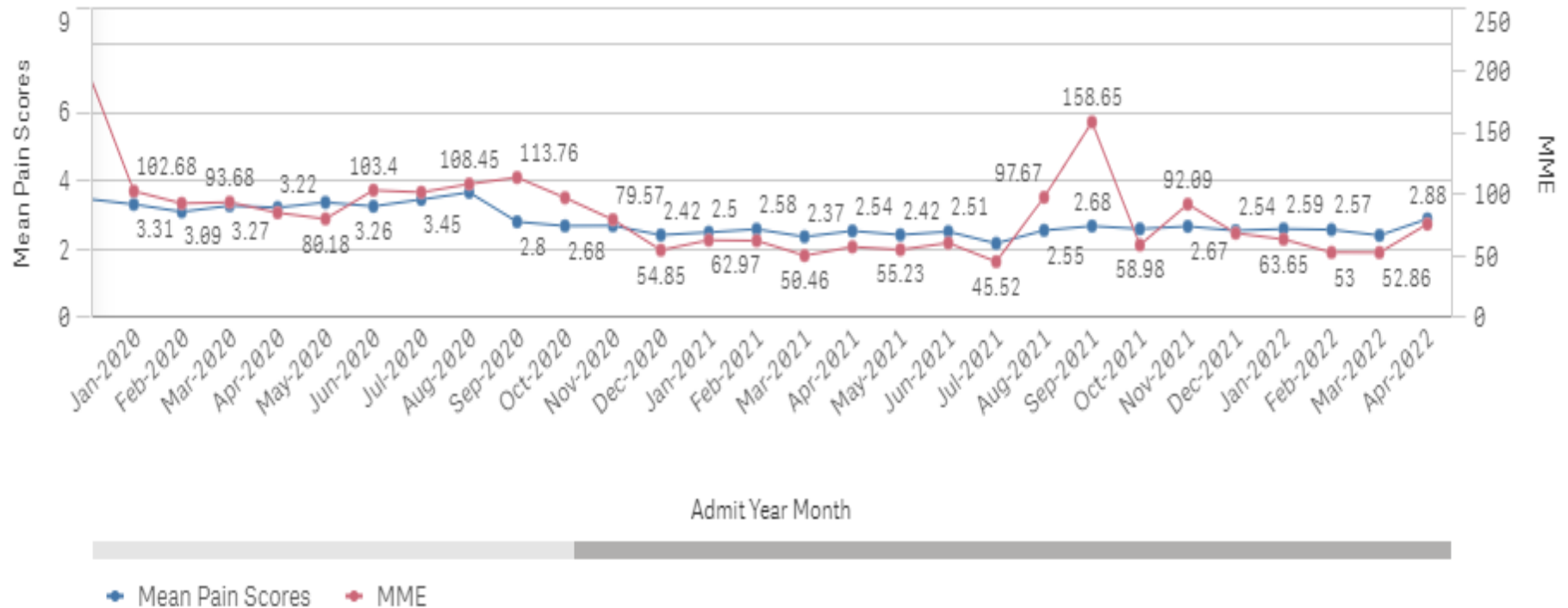
Admit Month	Patients	LOS	IV MME	PO MME	Total MME
Nov	101	3.45	11.97	65.68	77.65
Dec	120	3.08	7.06	39.39	46.44
Variance					

- MME
 - Decreased MME by **40%**
- LOS
 - Decreased LOS by **11%**
 - Additional 44 days of bed availability open to other patients & ~\$2,628 direct cost savings



OB C-section

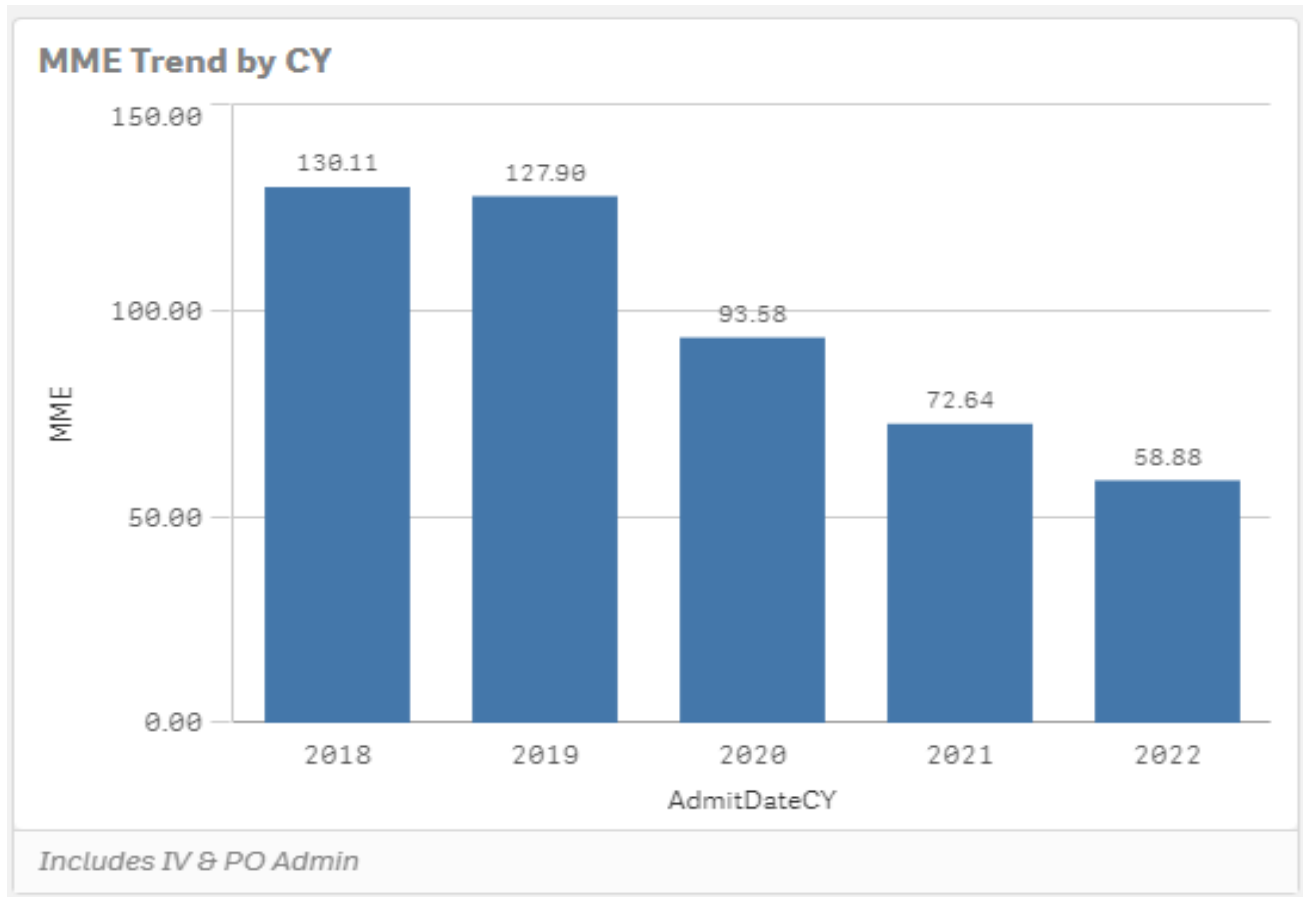
MME and Pain Score Trend by Month



Includes IV & PO Admin

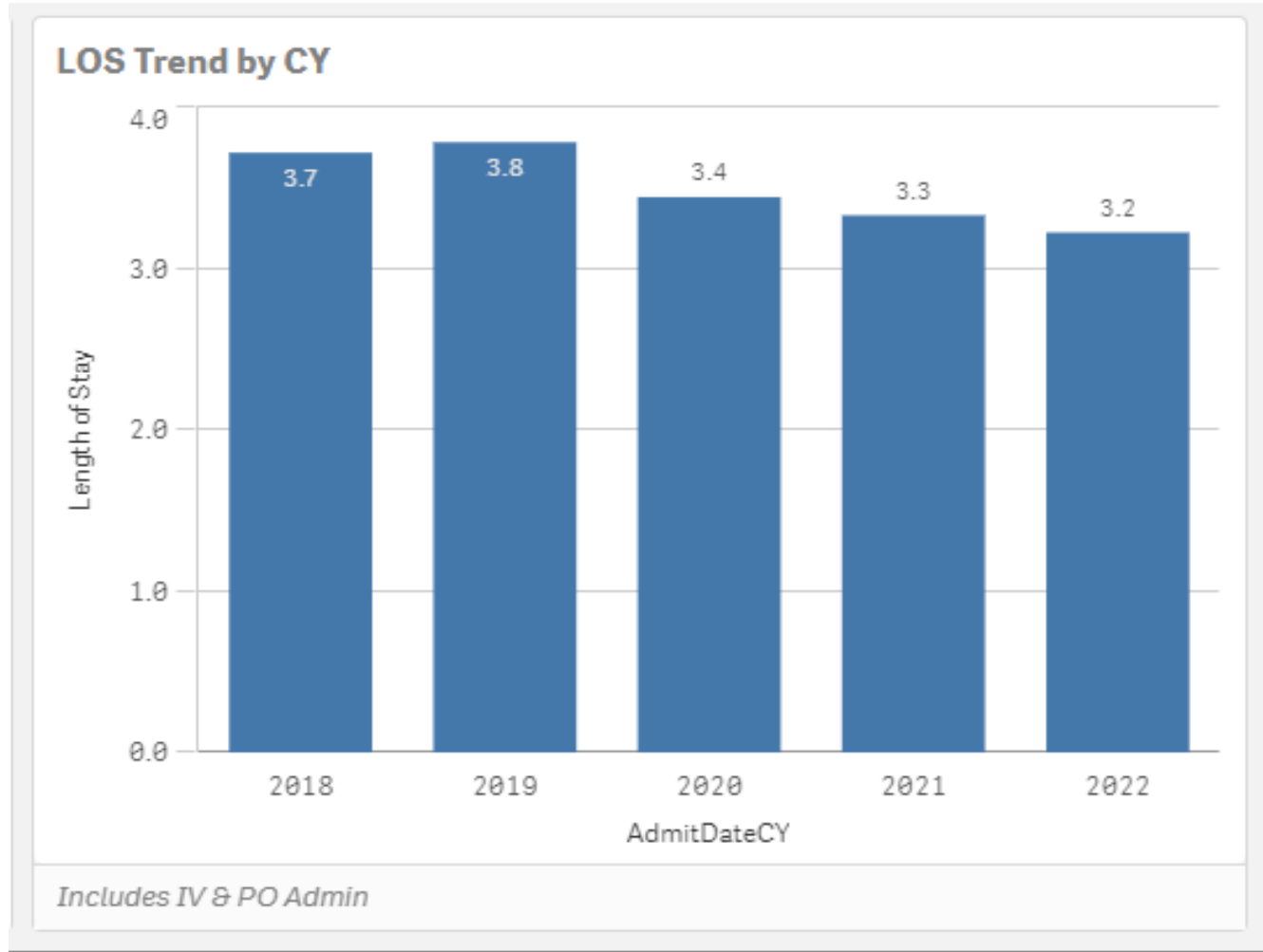


OB C-section



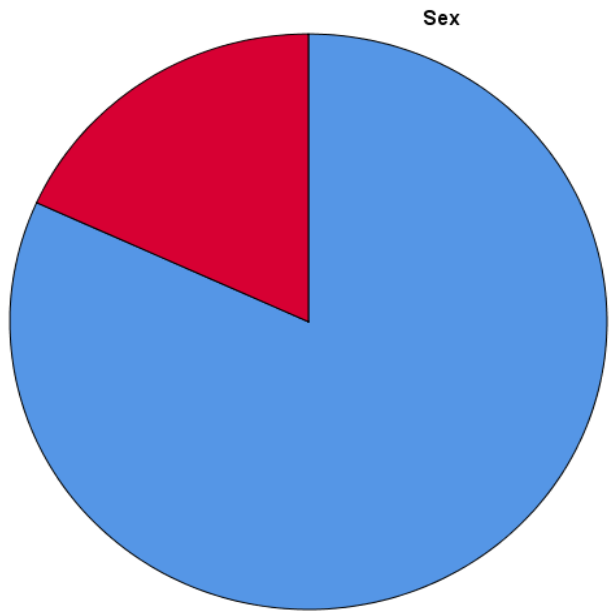


OB C-section

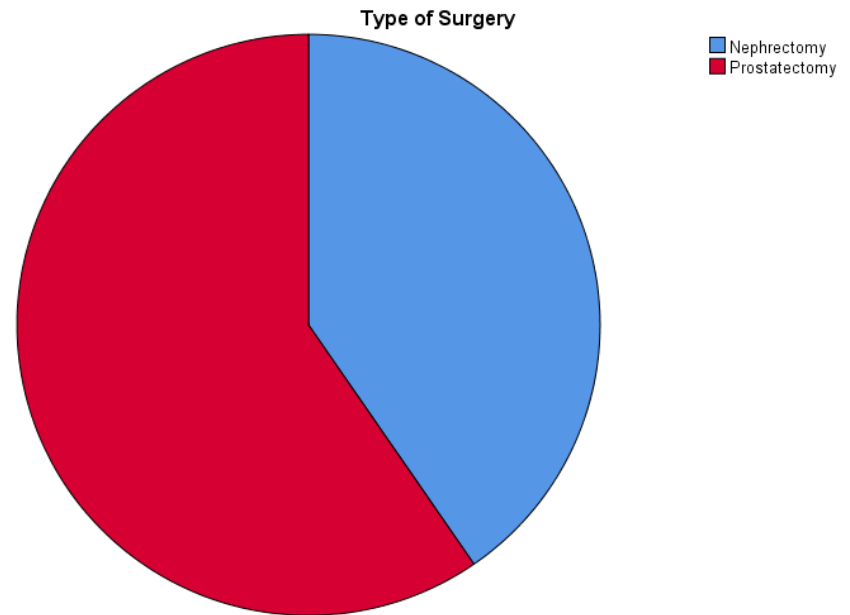




Urology Study 2019-Demographics



Sex
Male n=247
Female n=55



Type of Surgery
Nephrectomy n=122
Prostatectomy n=180

Urology

Total Morphine Equivalents consumed (N=303)				
	Mean	SD	t-value	p-value
Day of Surgery				
Pre-ERAS	46.3	32		
Post-ERAS	12	15.0	11.3	<.01
Day 1				
Pre-ERAS	35.9	29.2		
Post-ERAS	7.2	13.8	10.45	<.01
Day 2				
Pre-ERAS	12.2	21.3		
Post-ERAS	2.2	7.6	5.1	<.01
Length of Stay				
Pre-ERAS	97.2	71.5		
Post-ERAS	21.6	30.7	5.08	<.01

Urology-Results

Mean Pain Score Day of Surgery (N=303)				
	Mean	SD	t-value	<i>p</i> -value
Pre-ERAS	4	2		
Post-ERAS	2.2	1.9	7.8	<.01

Urology-Results

Length of Stay in Hours (N=303)

	Mean	SD	t-value	<i>p</i> -value
Pre-ERAS	57.4	25.4		
Post-ERAS	44.5	16.8	5.07	<.01



Reduction in opioid consumption, pain, and antiemetic use following use of an enhanced recovery after surgery protocol for breast cancer patients undergoing mastectomy

Walid Abou-Jaoude, John M. Edwards III, Susan G. Yackzan, Stacy Stanifer, Martha Monroe, Stace D. Dollar, Barbara Self, Heather Shearin, Thomas J. Young

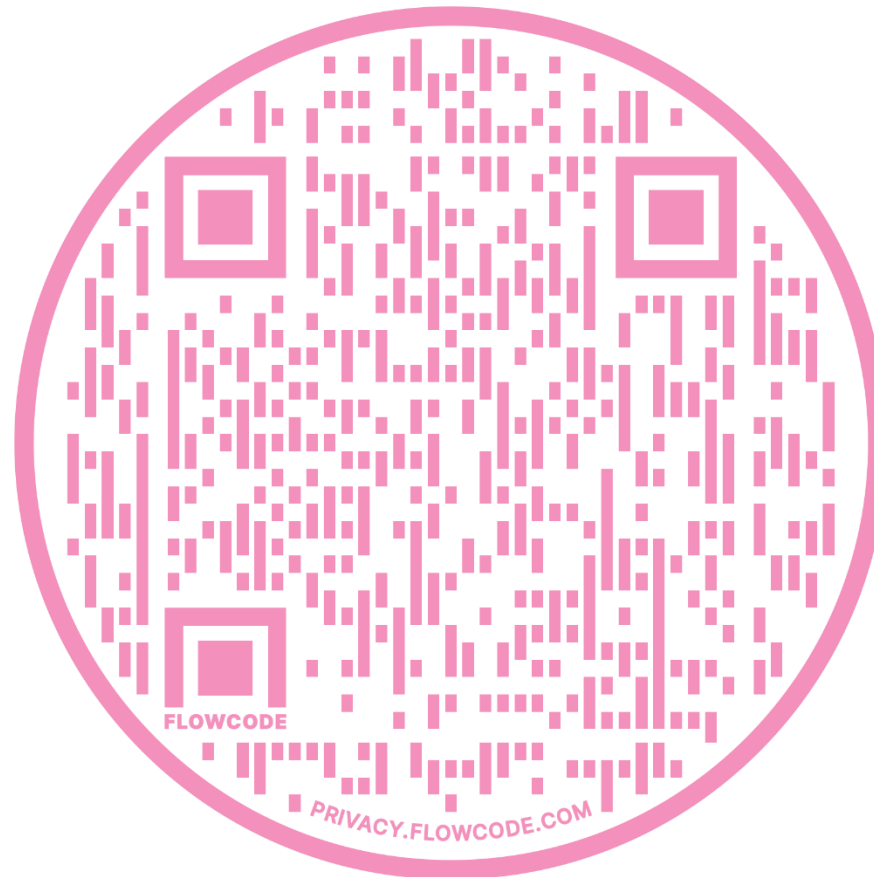


Table 3 Mean pain scores

Day	Traditional recovery		Enhanced recovery		P value
	Mean	SD	Mean	SD	
Day of surgery	3.45	1.28	2.07	1.28	<0.001
Post-operative day 1	2.8	1.76	1.6	1.7	<0.001

Table 4 Total morphine equivalents administered

Day	Traditional recovery		Enhanced recovery		P value
	Mean	SD	Mean	SD	
Day of surgery	53.9	30.3	24.2	23.7	<0.001
Post-operative day 1	28	23.5	8.1	11.5	<0.001

Table 5 Additional anti-emetic administered

Day	Recovery group				χ^2 value	P value
	Traditional recovery		Enhanced recovery			
	Yes	No	Yes	No		
Day of surgery	46 (45%)	56 (55%)	28 (27%)	74 (73%)	6.8	0.009
Post-operative day 1	16 (16%)	86 (84%)	4 (4%)	98 (96%)	7.98	0.005



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Conclusion:

- Results of this study provide evidence that use of this ERAS protocol can improve the management of pain, reduce opioid use, and diminish antiemetic intake in patients with breast cancer undergoing mastectomy with and without reconstruction

Recommendations for Practice:

- Provide an ERAS protocol for both patients who undergo mastectomy with reconstruction and without reconstruction
- A consistent approach to care outlined by this ERAS protocol is strongly supported



COLON AND RECTAL SURGERY | VOLUME 229, ISSUE 4, SUPPLEMENT 1, S58-S59, C

Effect of a Multimodal Prehabilitation Program Prior to Surgery on Postoperative Pain and Pain Medication

Angela Lee • Elizabeth Shelton • Serena Bidwell • ... Brooke Gurland, MD, FACS • Arden M. Morris, MD, MPH, FACS • Cindy J. Kin, MD, MS, FACS, FASCRS • Sh

October 27, 2021

Association of Physical Therapy Interventions With Long-term Opioid Use After Total Knee Replacement

Kosaku Aoyagi, PT, PhD¹; Tuhina Neogi, MD, PhD¹; Christine Peloquin, MPH¹; et al

» Author Affiliations | Article Information

JAMA Netw Open. 2021;4(10):e2131271. doi:10.1001/jamanetworkopen.2021.31271

Key Points

Question Are physical therapy (PT) interventions before and after total knee replacement associated with postoperative long-term use of opioids?

Journal of Applied Biobehavioral Research

RAPID COMMUNICATIONS IN BEHAVIORAL MEDICINE

SPECIAL ISSUE

A physical therapist's role in pain management: A biopsychosocial perspective

Kara Edgerton, Jarod Hall, Michelle K. Bland, Blaine Marshall, Ryan Hulla, Robert

First published: 06 June 2021 | doi.org/10.1111/jabr.12170 | Citations: 1

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Abstract

Increased quality of life in b... methods for a chro... city. O... n was to c... er

Physical therapy improves patient outcomes post-cesarean section

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Reviewed by [Emily Henderson, B.Sc.](#)

Feb 17 2021

Women who received physical therapy after undergoing a cesarean section had significantly improved outcomes compared to those who did not according to a new study from University of Missouri Health Care.

Mobility outside of Therapy Intervention

- 65% of older adults who are independent in their ability to walk will lose their capacity to walk during a hospital stay
- 3% of time on feet in hospital(*J Am Geriatr Soc* 2009;57:1660–5)
- 83% of time not moving - in bed (dementia and delirium excluded)
- only take about 15% of steps they would normally take when at home
- No “life-space mobility,” a scale measuring how often a person leaves the room where he sleeps
- 5% muscle loss daily – 6x more likely to discharge to post –acute stay(*Ann Intern Med* 1993;118:219–23)
- 30% of older adults who lose their ability to walk independently become permanently disabled because they do not regain their ability to walk
- Older adults who walk during their hospital stay are able to walk farther by discharge (Markey and Brown, 2002), are discharged from the hospital sooner (Baird, Maxson, Wrobleski, and Luna, 2010; Mundy, Leet, Darst, Schnitzler, and Dunagan, 2013)



Interdisciplinary AM-PAC

Johns Hopkins Daily Mobility Goal Calculator

Activity and Mobility Promotion (AMP)		
AM-PAC MOBILITY SCORE	JOHNS HOPKINS HIGHEST LEVEL OF MOBILITY SCORE (JH-HLM)	
24	8	WALK 250 FEET OR MORE
22-23	7	WALK 25 FEET OR MORE
18-21	6	WALK 10 STEPS OR MORE
16-17	5	STANDING (1 OR MORE MINUTES)
10-15	4	MOVE TO CHAIR/COMMODE
8-9	3	SIT AT EDGE OF BED
6-7	2	BED ACTIVITIES/DEPENDENT TRANSFER
	1	LYING IN BED



23 Home



19 Home with Home Health

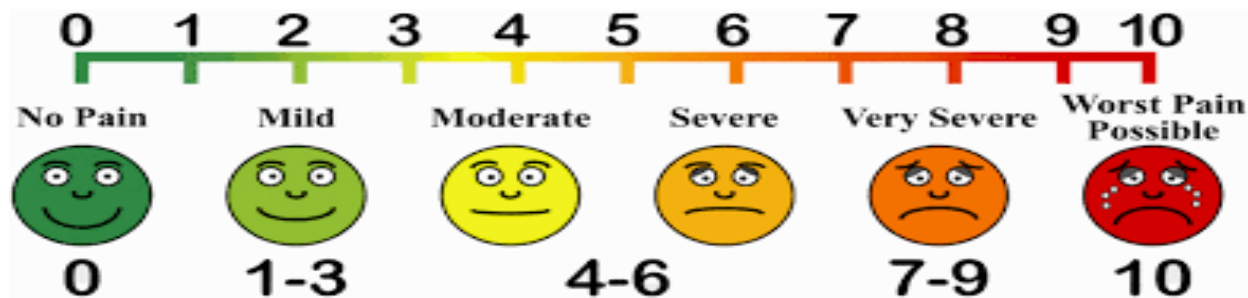


13, 14, 15 IRF, SNF, LTAC





Pain Rating and Mobility



- 0-3 Green means “Go!” Mild to no pain. This is not activity limiting. You are able to move and progress toward your goals
- 4-7 Yellow means “Slow down” pain is uncomfortable, troublesome to miserable and distressing. You are still able to participate in activity, but may need rest breaks, exercise modification and/or repositioning
- 8-10 Red means “STOP!” Your pain is the most intense, horrible or the worst pain possible. You are unable to participate in activity without pain control intervention. These interventions may include, but not limited to modalities such as ice, rescheduling physical therapy appointment, pain medication adjustment, or repositioning for comfort

Functional Mobility isn't just walking...



Perioperative Opioid Stewardship

- Opioid epidemic is a significant concern for healthcare facilities
- Opioid misuse by patients can lead to abuse, addiction, and overdose¹
- 67% to 92% of patients report leftover opioids after surgical procedures¹
- Leftover medications are the primary source of misuse and diversion for non-medical use²
- Individuals who have misused opioids obtained them from family members or friends with leftover prescription opioids in medicine cabinets as the primary source³
- Excess opioids after surgical procedures circulating in communities contribute to the opioid epidemic



1. Bicket MC, Long JJ, Pronovost PJ, Alexander GC, Wu CL. Prescription opioid analgesics commonly unused after surgery: a systematic review. *JAMA surgery*. 2017;152(11):1066-1071.

2. Brummett CM, Steiger R, Englesbe M, et al. Effect of an activated charcoal bag on disposal of unused opioids after an outpatient surgical procedure: a randomized clinical trial. *JAMA surg*. 2019;154(6):558-561.

3. Egan KL, Gregory E, Sparks M, Wolfson M. From dispensed to disposed: evaluating the effectiveness of disposal programs through a comparison with prescription drug monitoring program data. *Am J Drug Alcohol Abuse*. 2017;43(1):69-77.

Perioperative Opioid Stewardship

Strategies utilized to prevent opioid misuse and diversion

- Preventative strategies: legislation and education of prescribers
- Protective strategies focus: safe and timely opioid disposal to reduce leftover medications





Benefits of Reduced Opioid Prescribing for the Outpatient

Fewer leftover opioid medication

Improved patient satisfaction

Reduced risk for
dependency/addiction



Prevalence and Risk Factors Associated with Long-term Opioid Use after Injury

Large initial prescription quantity
Higher unit dose



Alternatives to Chronic Opioid Prescribing for Chronic Pain

- Respond quickly
- Numbing the nerves
- RICE
- Activity

Types of pain for which opioids are appropriate

- Acute episode of pain after surgery or injury
- Cancer-related pain
- In very selected cases, may be right choice if living with chronic, non-cancer pain

Perioperative Opioid Stewardship

Protective strategies focus: safe and timely opioid disposal to reduce leftover medications

- Opioid disposal methods
 - Opioid take-back events
 - Drug disposal kiosks
 - Flushing the medication down the toilet
 - Mixing the medications with unpalatable substances
 - Commercially available in-home drug disposal products
- Opioid take-back events and permanent drug donation boxes only accounted for the return of 0.3% of dispensed opioids



Perioperative Opioid Stewardship

Commercially available in-home drug disposal products

- Contain compounds that when mixed with water and the pills, irreversibly bind the opioid, deactivating the medications allowing them to be disposed in the garbage without the possibility of retrieval⁷
- Baptist Health Lexington Retail Pharmacy along with Wal-Mart and Walgreens now provide in-home opioid disposal products at reduced or no cost to patients





Surgical Patient Compliance With Healthcare Facility–Provided In-home Opioid Disposal Products: A Systematic Review

John M. Edwards, III, DNAP, CRNA
Hallie Evans, DNP, CRNA
Stace D. Dollar, DNAP, CRNA

OBJECTIVE: The aim of this study was to review the literature regarding the use of an in-home opioid disposal product on unused opioids after surgery.

BACKGROUND: The opioid epidemic in the United States is a major cause of concern for healthcare facilities. The misuse and diversion of retained opioids after a surgical procedure continues to contribute to this problem.

METHODS: A comprehensive search of the Cumulative Index of Nursing and Allied Health Literature, OVID, and PubMed databases with keywords including *opioid*, *analgesics*, *narcotics*, *medical waste disposal*, *medical disposal*, *refuse disposal*, and *opioid disposal* resulted in 286 articles. Articles were screened based on strict inclusion and exclusion criteria.

RESULTS: Eight studies determined that an in-home opioid disposal product provided by a healthcare facility

Jan Odom-Forren, PhD, RN, CPAN, FAAN
Bill Johnson, DNAP, CRNA

produced rates of opioid disposal between 19% and 71%.

CONCLUSIONS: The provision of an in-home opioid disposal product by a healthcare facility is likely to increase the disposal of unused opioid medications in the postoperative surgical patient population.

The opioid epidemic in the United States is a major concern for healthcare facilities involved in the perioperative care of surgical patients. Although opioids effectively manage surgical pain, the misuse of opioids, defined as taking medication for a purpose other than prescribed, can lead to opioid abuse, addiction, and life-threatening overdoses.¹ A 2017 systematic review evaluating prescription opioid use after 7 common surgeries revealed that 67% to 92% of patients



Recommendations for Practice:

Healthcare facility recommendations for opioid disposal:

1. A disposal product for patients to dispose of unused post-operative opioids such as a Deterra® bag, a DisposeRX® pouch, an Opioid Waste Management Disposal Kit or a Ziploc® bag with coffee grounds with every filled opioid prescription (Level I,II,V; Quality A,B,C)
2. Education on safe use, storage and how to dispose of unused opioids (Level I, II,V; Quality A,B,C)
3. A one-on-one consultation with a healthcare provider preoperatively about what to do with unused opioids postoperatively, specifically addressing opioid disposal (Level I, II, V; Quality A,B,C)
4. A post-operative follow up plan, implemented by a healthcare provider at a follow-up appointment to address unused opioid disposal (Level V; Quality B)



BAPTIST HEALTH®

Questions?