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OPIOIDS AND ALTERNATIVES

DEFINING THE PROBLEM

What serious adverse event occurs after surgery with a 6% incidence that we don’t mention to our patients preoperatively?

Answer:

Opioid Naive Patients Becoming Chronic Opioid Users

Postsurgical Opioid Use Linked to Long-term Opioid Use

1 in 16 opioid-naïve surgical patients become chronic users

Longer initial exposure increases risk of long-term use

What is our Goal?

Improved pain scores with less opioids and improved patient satisfaction

Prevent Opioid HARMS

Nausea, OSA Related Death, Constipation, Delirium, Dizziness, Dependence, Immobility

Opioids are necessary……

but they are not the solution for all pain

TOLERABILITY

FUNCTIONALITY

TIME FRAME

Alternatives to Opioids Movement

Comprehensive PAIN MANAGAMENT PROTOCOL

The Multi-Modal Approach

More than just morphine to choose from

INPATIENT PAIN MANAGAMENT
The Multi-Modal Approach

This protocol is **optional** and can be utilized by **any clinician**

Use **STOP BANG** to determine risk level

SNORE?	BMI >35
TIRED throughout the day?	AGE >50
OBSERVED APNEA?	Neck circumference >40 cm
blood PRESSURE?	Gender is male?

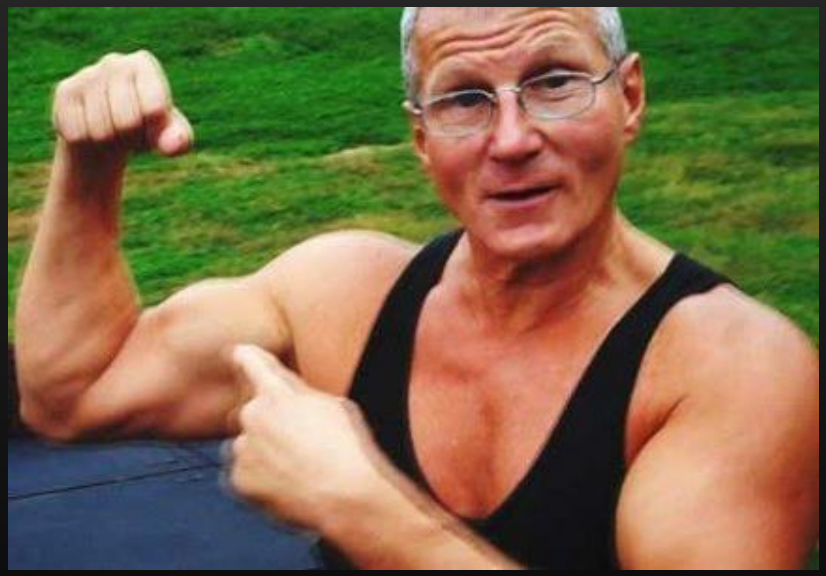
*The sensitivity of STOP-Bang score ≥ 3 to detect moderate OSA **93%***
*Severe OSA **100%***

ALTO Inpatient Pain Protocol

Four Risk Categories in Cerner




Normal Risk Recognition



- Age < 70
- Negative OSA Risk Screen
  - (stop bang < 3)
- No Severe Decompensated Systemic Illness
- Creatinine <1.2

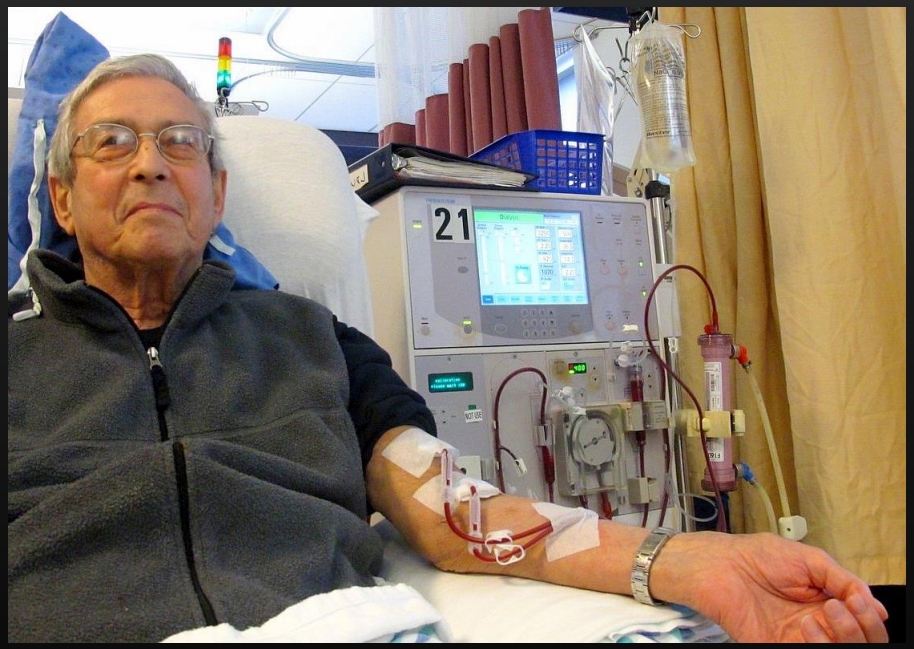
Frail
Recognition

- Age >70
- Weight <70 kg
- Risk factors for Delirium
- Fall risk

OSA
Recognition

- STOP BANG >3
- KNOWN OSA
  - If not known, discuss getting formally tested

Dialysis
Recognition



- Severe Reduction of CrCl < 29
- Receives Dialysis

NSAIDS
Scheduled NOT prn

ALTO MEDS	Non-Frail	Frail	ESRD	OSA
Ketorolac	15 mg IVP q 6	15 mg IVP q6	NO	15 mg IVP q6
OR				
Ibuprofen	400 mg PO q6	200 mg PO q6	NO	400 mg PO q6
OR				
Celecoxib	200 mg BID	200 mg PO daily	200 mg PO daily	200 mg PO BID

Everyone should get….

Acetaminophen

Non-Frail	Frail	ESRD	OSA
1000 mg q 6	650 mg q 6	1000 mg q6	1000 mg q6

Chang 2017
McQuay 2007

NEUROPATHIC PAIN
The Multi-Modal Approach

ALTO med	Non-Frail	Frail	ESRD	OSA
Gabapentin	300 mg PO qhs	100 mg PO qhs	100 mg PO qhs	100 mg PO qhs
MUST TITRATE	Side effect somnolence Benefit > Risk			

MSK PAIN
The Multi-Modal Approach

ALTO med	Non-Frail	Frail	ESRD	OSA
Cyclobenzaprine	5 mg PO TID	5 mg PO qhs	5 mg PO qhs	no
10 mg as effective as 5 mg	Side effect somnolence/fall Benefit > Risk			

Topicals

ALTO MEDS	Non-Frail	Frail	ESRD	OSA
Diclofenac 1.3% patch	1 patch BID	1 patch BID	1 patch BID	1 patch BID
Lidocaine 5% patch	1-3 patch(es) for 12 hours	1-3 patch(es) for 12 hours	1-3 patch(es) for 12 hours	1-3 patch(es) for 12 hours
Methyl Salicylate 15%	1 inch cream QID	1 inch cream QID	1 inch cream QID	1 inch cream QID

Reassess with POSS before next dose

Weight based dosing of

Morphine is 0.1 mg/kg

Hydromorphone is 0.015 mg/kg

Start low and go slow WITH EVERYONE

OPIOIDS BASED ON RISK CATEGORY

Minimizing Opioids and Improving Safety

BTP NRS >7	Non-Frail	Frail	ESRD	OSA
	PICK ONE	PICK ONE	PICK ONE	PICK ONE
Hydromorphone	0.5 mg IV q3	0.25 mg IV q3	0.5 mg IV q3	0.25 mg IV q3
Morphine	4 mg IV q4	2 mg IV q4	4 mg IV q4	2 mg IV q4

Opioids

- Switch to PO within 24 hours of acute injury or operative intervention
- Use scheduled non-opioid analgesics along with opioids together
- Use single agent preparation such as oxycodone NOT oxycodone/APAP

Dependence

- Opioid dependence can occur with as little as 7-10 days of exposure
- Do not send a patient home after prolonged opioid use without a plan to wean them
- Patients on opioids + benzos have 10x the risk of fatal OD than patients on opioids alone

Nonpharm Options

- Physical Therapy Consult
- Transcutaneous Electrical Nerve Stimulation
- Acupuncture
- Complementary Alternative Medicine Consult

Chronic Pain

Multimodal analgesia

- Ketorolac or Ibuprofen
- Acetaminophen
- Gabapentin
- Interventions (trigger point injection, soft tissue or joint injection, ESI)

TREATMENT OF OPIOID USE DISORDER

Buprenorphine (BYOO-pre-NOR-feen)

- Partial agonist/antagonist, high affinity to the mu receptor

- ***Treats*** opioid withdrawal
  - Reduces cravings
  - Prevents relapse

- **Anyone with a DEA can ORDER it INPATIENT**

How to Use it

- H/O heroin or non-Rx opioid abuse
- Develops withdrawal
- Perform COWS scale
  - If COWS>10 order Buprenorphine 8 mg SL
  - Re-evaluate in 45 minutes
  - If COWS<9 you are done, order 8 mg **DAILY**
  - If COWS>10 give another 8 mg
    - Give total dose (for COWS<9) **DAILY**

Opioid Withdrawal Inpatient

- Any patient can receive buprenorphine while being treated in the inpatient setting for a primary medical condition
  - Dx 1- Bacteremia and cellulitis
  - Dx2- Opioid withdrawal
- Reduce rate of AMA, increase retention for appropriate care, actually TREATS withdrawal

Partnership

- We need outpatient partnerships for transition of care.
- Must find out who has MAT Rx license ideally with recovery support services

ALTO HARM REDUCTION

Harm Reduction

- Naloxone prescribing and dispensing
  - Very little harm
  - ***Benefits >>> Risks***
- No serious adverse effects in opioid naïve people
- Should be dispensed or prescribed in patients on high dose daily Rx opioids

STATE AND FEDERAL LAW

WV Opioid Reduction Act

- Exceptions:
  - Current cancer treatment
  - Receiving hospice care from a licensed hospice provider or palliative care provider
  - Resident of a LTC facility
  - Medications for the treatment of substance abuse or opioid dependence
  - A patient being prescribed, or ordered, any medication in an inpatient setting at a hospital.

Exemption – Post-Surgery

- No more than a 7-day supply immediately following a surgical procedure - *exempted from initial opioid prescription requirements*
  - Adults and minors
- Subsequent post-surgical prescriptions are subject to the requirements for issuing subsequent opioid prescriptions

Opioid Prescription Limitations- ED

- No more than a 4 day supply – *not considered an initial prescription*
- Prior to issuing:
  - Advise patient regarding the quantity and their option to fill the Rx with a lesser qty
  - Inform the patient of the risks associated with the drug prescribed

Initial Opioid Prescription Limitations

- No more than a 7-day supply (3 days for a minor) for an Initial Opioid Rx
  - For minors - must advise parent/guardian of the risks and the reason(s) why the Rx is necessary
- Must follow the requirements for issuing an initial opioid prescription.

Initial Opioid Prescriptions

- Take and document thorough **medical history**
- Conduct and document the results of a **physical evaluation**
- Advise the patient regarding the quantity of the Schedule II Opioid Drug and the **option to fill the Rx for a lesser qty**
- Inform the pt of the **risks** associated with the drug prescribed
- Develop a **treatment plan,** with particular attention to determining the cause of the patient's pain
- Access the WV **Controlled Substance Monitoring Program Database (CSMPD)**

2nd Opioid Prescription

- May be issued, if:
  - It would not be deemed an initial Rx
  - Determined to be necessary and appropriate (documented)
  - Does not present an undue risk of abuse, addiction, or diversion (documented)
- Can be up to a 30-day supply

2nd Opioid Prescription cont'd

- Discuss and document the risks of the drug being prescribed with the patient (or patient parent/guardian if <18). Discussion shall include:
  - Risks of addiction and overdose
  - Dangers of taking opioid drugs with alcohol, benzodiazepines, and other CNS depressants
  - The reason for the prescription
  - Alternative treatments available
  - Risks associated with the use of the drugs being prescribed (highly addictive even when taken as prescribed, physical or psychological dependence, risk of taking more than prescribed, or mixing sedatives, benzodiazepines, or alcohol with opioids, can result in fatal respiratory depression).

3rd Opioid Prescription

- Consider referral to a pain clinic or pain specialist
- 3rd Rx may be issued, if:
  - The patient declines treatment from pain clinic/specialist (document)
  - Review, at a min. of every 3 months, treatment, etiology of the pain, progress toward treatment objectives (document)
  - Assess for problems associated with physical and psychological dependence (document)
  - Unless clinically contraindicated, make reasonable efforts to stop/decrease opioid and/or try alternatives (document)
- Patient shall execute a Narcotics Contract and it shall be made part of the medical record

Controlled Substance Monitoring Program Database

- Must be checked:
  - at an initial opioid prescription
  - by a practitioner who acquires a patient who is currently being prescribed an opioid from another practitioner
- ED physicians are not required to check, but it is highly encouraged
  - CSMPD is integrated with EDie

Ideally…

- When prescribing for chronic pain …
  - Attempt to refer to pain clinic or pain specialist
  - Draft and sign a narcotics contract with the patient
  - Random Urine Drug Screening
  - Continual discussion about weaning down or adding alternatives

Medicare Part D

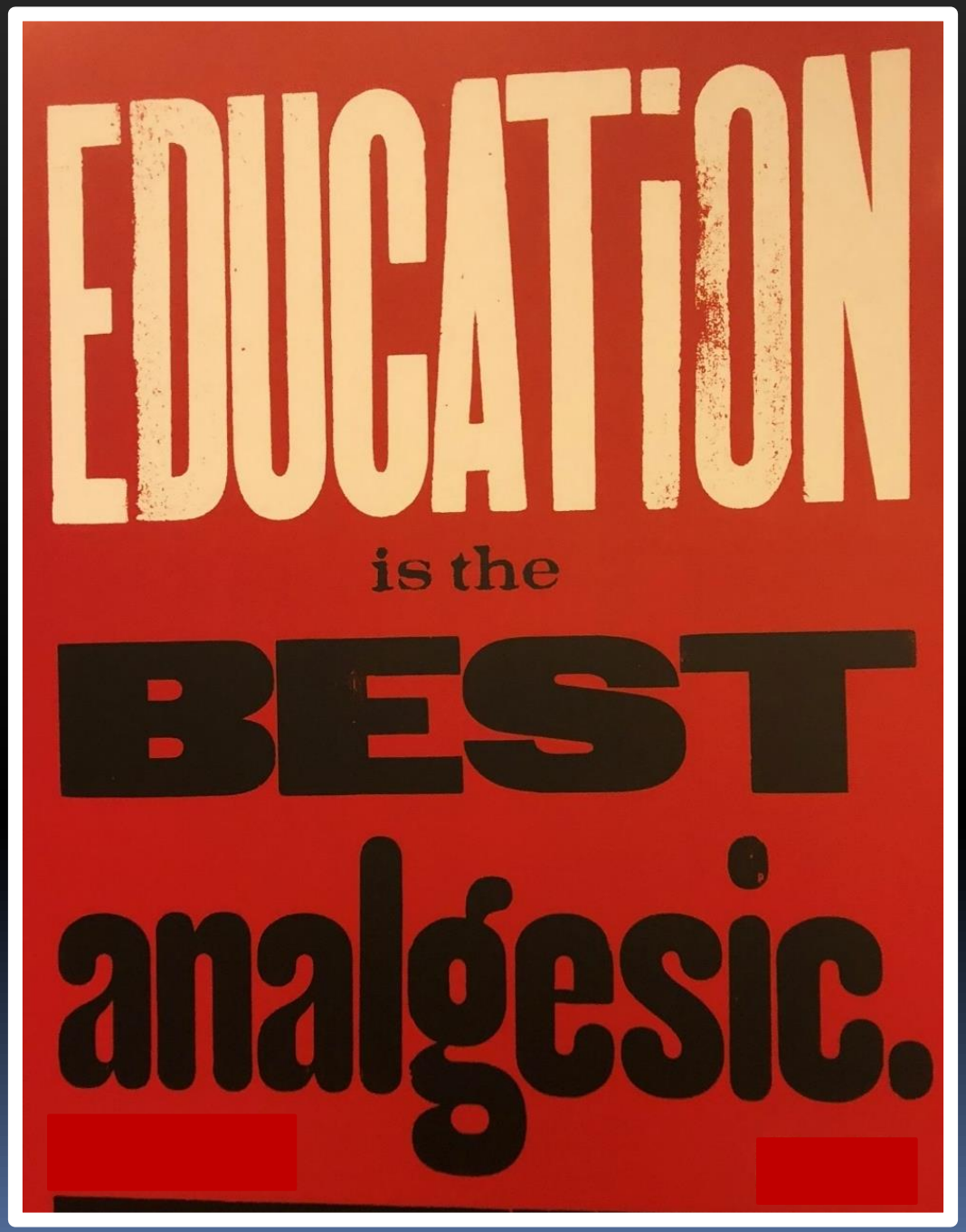
- No more than 7 days for new opioid Rx
- Chronic daily opioids patients
  - Pharmacy will check with Dr if >90 MME
- If patient is deemed "at risk" pharmacy will call to verify use and need

https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNMattersArticles/downloads/SE18016.pdf

Medicare Part D

- Pharmacy can limit the amount of abuse prone meds dispensed to a single patient
- Patients can only use specific pharmacies to fill abuse prone meds
- Patient must use the same physician

https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNMattersArticles/downloads/SE18016.pdf


EDUCATION
is the
BEST
analgesic.

Reduce Opioid HARMS

- Use opioids sparingly
  - When you do use them make sure to EDUCATE and follow the law
- Review current literature on alternatives and indications for use
- Buprenorphine for opioid withdrawal
- Naloxone dispensing or prescribing and provide info on need exchange

Thank you!

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Bibliography

Aboumarzouk OM, Agarwal T, Syed nong chek SA, Milewski PJ, Nelson RL. Nitrous oxide for colonoscopy. Cochrane Database Syst Rev. 2011;(8):CD008506.

Andolfatto G, Willman E, Joo D, et al. Intranasal ketamine for analgesia in the emergency department: a prospective observational series. Acad Emerg Med. 2013;20(10):1050-4.

Atassi K, Mangiapan G, Fuhrman C, Lasry S, Onody P, Housset B. Prefixed equimolar nitrous oxide and oxygen mixture reduces discomfort during flexible bronchoscopy in adult patients: a randomized, controlled, double-blind trial. Chest. 2005;128(2):863-8.

Babl FE, Grindlay J, Barrett MJ. Laryngospasm With Apparent Aspiration During Sedation With Nitrous Oxide. Ann Emerg Med. 2015;66(5):475-8.

Becker DE, Rosenberg M. Nitrous oxide and the inhalation anesthetics. Anesth Prog. 2008;55(4):124-30

Chapman CR, Benedetti C. Nitrous oxide effects on cerebral evoked potential to pain: partial reversal with a narcotic antagonist. Anesthesiology. 1979;51(2):135-8.

Derry CJ, Derry S, Moore RA. Single dose oral ibuprofen plus paracetamol (acetaminophen) for acute postoperative pain. Cochrane Database Syst Rev. 2013 Jun 24;(6):CD010210.

Ducassé JL, Siksik G, Durand-béchu M, et al. Nitrous oxide for early analgesia in the emergency setting: a randomized, double-blind multicenter prehospital trial. Acad Emerg Med. 2013;20(2):178-84.

Ferrini R, Paice JA. .How to initiate and monitor infusional lidocaine for severe and/or neuropathic pain. *J Support Oncol.* 2004 Jan-Feb;2(1):90-4

Friedman BW, Dym AA, Davitt M, et al. Naproxen With Cyclobenzaprine, Oxycodone/Acetaminophen, or Placebo for Treating Acute Low Back Pain: A Randomized Clinical Trial. JAMA. 2015;314(15):1572-80.

Friedman BW, Irizarry E, Solorzano C, et al. Diazepam Is No Better Than Placebo When Added to Naproxen for Acute Low Back Pain. Ann Emerg Med. 2017;70(2):169-176.e1.

Furuya A, Ito M, Fukao T, et al. The effective time and concentration of nitrous oxide to reduce venipuncture pain in children. J Clin Anesth. 2009;21(3):190-3.

Gam AN, Warming S, Larsen LH, et al. Treatment of myofascial trigger-points with ultrasound combined with massage and exercise--a randomised controlled trial. Pain. 1998;77(1):73-9.

Herres J, Chudnofsky CR, Manur R, Damiron K, Deitch K. The use of inhaled nitrous oxide for analgesia in adult ED patients: a pilot study. Am J Emerg Med. 2016;34(2):269-73.

Klomp T, Van poppel M, Jones L, Lazet J, Di nisio M, Lagro-janssen AL. Inhaled analgesia for pain management in labour. Cochrane Database Syst Rev. 2012;(9):CD009351.

Kranke P, Jokinen J, Pace NL, Schnabel A, Hollmann MW, Hahnenkamp K, Eberhart LH, Poepping DM,

Lee, Sharon S. et al. Extent and Impact of Opioid Prescribing for Acute Occupational Low Back Pain in the Emergency Department Journal of Emergency Medicine , Volume 50 , Issue 3 , 376 - 384.e2

Lovell SJ, Taira T, Rodriguez E, Wackett A, Gulla J, Singer AJ. Comparison of valdecoxib and an oxycodone-acetaminophen combination for acute musculoskeletal pain in the emergency department: a randomized controlled trial. Acad Emerg Med. 2004;11(12):1278-82.

Maizels M, Scott B, Cohen W, Chen W. Intranasal lidocaine for treatment of migraine: a randomized, double-blind, controlled trial. JAMA. 1996;276(4):319-21.

Maizels M, Geiger AM. Intranasal lidocaine for migraine: a randomized trial and open-label follow-up. Headache. 1999;39(8):543-51.

Mcquay HJ, Moore RA. Dose-response in direct comparisons of different doses of aspirin, ibuprofen and paracetamol (acetaminophen) in analgesic studies. Br J Clin Pharmacol. 2007;63(3):271-8.

Miller JP, Schauer SG, Ganem VJ, Bebarta VS. Low-dose ketamine vs morphine for acute pain in the ED: a randomized controlled trial. Am J Emerg Med. 2015;33(3):402-8.

Motov S, Rockoff B, Cohen V, et al. Intravenous Subdissociative-Dose Ketamine Versus Morphine for Analgesia in the Emerg

Motov S, Rosenbaum S, Vilke GM, Nakajima Y. Is There a Role for Intravenous Subdissociative-Dose Ketamine Administered as an Adjunct to Opioids or as a Single Agent for Acute Pain Management in the Emergency Department?. J Emerg Med. 2016;51(6):752-757

Roldan CJ, Hu N. Myofascial Pain Syndromes in the Emergency Department: What Are We Missing?. J Emerg Med. 2015;49(6):1004-10.

Schaffer JT, Hunter BR, Ball KM, Weaver CS. Noninvasive sphenopalatine ganglion block for acute headache in the emergency department: a randomized placebo-controlled trial. Ann Emerg Med. 2015;65(5):503-10.

Seymour RA, Ward-booth P, Kelly PJ. Evaluation of different doses of soluble ibuprofen and ibuprofen tablets in postoperative dental pain. Br J Oral Maxillofac Surg. 1996;34(1):110-4.

Soleimanpour H, Hassanzadeh K, Vaezi H, Golzari SE, Esfanjani RM, Soleimanpour M. Effectiveness of intravenous lidocaine versus intravenous morphine for patients with renal colic in the emergency department. *BMC Urol.* 2012 May 4;12:13.

Shrestha R, Pant S, Shrestha A, Batajoo KH, Thapa R, Vaidya S. Intranasal ketamine for the treatment of patients with acute pain in the emergency department. World J Emerg Med. 2016;7(1):19-24.

Vigneault L, Turgeon AF, Côté D, Lauzier F, Zarychanski R, Moore L, McIntyre LA, Nicole PC, Fergusson DA. Perioperative intravenous lidocaine infusion for postoperative pain control: a meta-analysis of randomized controlled trials. *Can J Anaesth*. 2011 Jan;58(1):22-37.

Weibel S. Continuous intravenous perioperative lidocaine infusion for postoperative pain and recovery. *Cochrane Database Syst Rev.* 2015 Jul 16;7.

Yeaman F, Oakley E, Meek R, Graudins A. Sub-dissociative dose intranasal ketamine for limb injury pain in children in the emergency department: a pilot study. Emerg Med Australas. 2013;25(2):161-7.

Yeaman F, Meek R, Egerton-warburton D, Rosengarten P, Graudins A. Sub-dissociative-dose intranasal ketamine for moderate to severe pain in adult emergency department patients. Emerg Med Australas. 2014;26(3):237-42.

Zhang C, Davies MF, Guo TZ, Maze M. The analgesic action of nitrous oxide is dependent on the release of norepinephrine in the dorsal horn of the spinal cord. Anesthesiology. 1999;91(5):1401-7.