# Intravenous Lidocaine: An Adjunct Treatment of Operative Pain



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# PROBLEM

Administration of opiates has fallen under intense scrutiny as a growing epidemic of narcotic dependency plagues America. Anesthesia providers nationwide are making efforts to decrease opiate use in the peri-operative period. It is important for anesthesia providers to be aware of not only the side effects caused by narcotic use, but also the potential for reducing both the patient's need for narcotics and the amount of unwanted side effects from narcotics. The purpose of this project was to increase Student Registered Nurse Anesthetists (SRNA's) enrolled at Adventist University of Health Sciences (ADU) knowledge of intravenous lidocaine in the treatment of operative pain.

# LITERATURE REVIEW & OUTCOMES

Four major themes of lidocaine use intraoperatively were identified with the literature review: Decreased post-operative pain, decreased narcotic use, decreased opioid side-effects, and shorter length of stay.

The literature review demonstrates that intravenous lidocaine combined with opioid use outperforms the use of opioids alone in controlling post-operative pain (Grady et al., 2012), reduces the negative side effects caused by opioids (McCarthy et al., 2010), and outperforms placebo drugs used to control pain (Farag et al., 2013 and Kranke et al., 2015).

# ANALYSIS & CONCLUSION

### **Paired Samples Statistics**

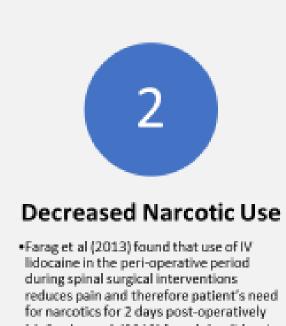
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre-Test	3.8750	48	1.85226	.26735
	Post-Test	7.8542	48	1.83337	.26462

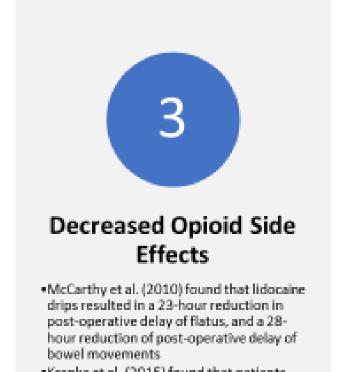
#### Paired Samples Test

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	Paired Differences					t	df	Sig. (2-tailed)					
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the									
				Difference									
				Lower	Upper								
Pair 1 Pre-Test - Post-Test	-3.97917	2.44505	.35291	-4.68914	-3.26920	-11.275	47	.000					

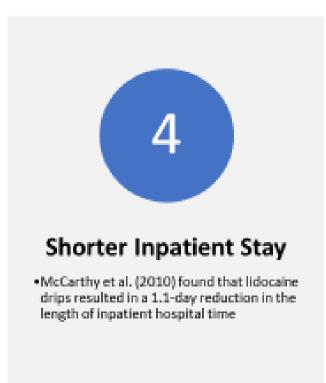
## Benefits of Perioperative Lidocaine







receiving lidocaine peri-operatively had



# METHODS

<u>Design:</u> Educational presentation for SRNAs, assessment of their baseline knowledge, and comparison of post-presentation test scores to assess the level of knowledge increase

**Setting:** The SRNA classroom per ADU faculty

Targets: SRNAs

Inclusion Criteria: The 50 SRNAs in the 2017/2018 cohorts present

in class that day

Implementation: After administering an informed consent, the SRNAs completed a pre-test to assess baseline knowledge, listened to an educational presentation, and then took a post-test to assess their knowledge after the lecture

# REFERENCES

References are available upon request.

# IMPACT OF FINDINGS

- Although opioids remain an integral part of operative management, adverse side effects associated with their use can affect the immediate and long-term postoperative course.
- Studies suggest intravenous lidocaine may have benefit in peri operative pain.
- A perioperative multimodal approach often provides more effective pain relief than opioid treatment alone with a more favorable side effect profile.
- The educational offering to SRNA's enrolled at ADU on the benefits and use of intravenous lidocaine resulted in an increase in knowledge; preparing future anesthesia providers with alternative modalities in pain management and subsequently impacting the opioid epidemic plaguing America.
- This scholarly project will be converted into a Continuing Education (CE) Module to be submitted to the American Association of Nurse Anesthetist (AANA) CE department for approval and made available to Certified Registered Nurse Anesthetists.



# ACKNOWLEDGEMENTS

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