

Introduction

- ❖ Accidental **DEATHS** related to opioid use reached an all-time **HIGH**
- ❖ Medication Assisted Treatments: Buprenorphine (BUP) or Buprenorphine with naloxone (BUP/N) are increasingly used to combat opioid use disorder
- ❖ **CRNAs** and **RRNAs** are responsible to maintain familiarity with the latest literature while optimizing pain control and patient safety for the BUP or BUP/N patient undergoing surgery



Purpose

- ❖ An online learning module will contribute practice recommendations that will encourage anesthesia providers to improve upon their current practices by specifically tailoring the anesthetic needs of the patient dependent upon BUP or BUP/N
- ❖ The goal of the online learning module is to increase the perceived confidence level of the anesthesia provider in the perioperative management of the patient on BUP or BUP/N

Background and Significance

National & State level

- ❖ According to SAMSHA the nationally estimated and increasing figure for the opioid use disorder population was **2.4 million** in 2015 (Alderks, 2017)
- ❖ Since 2004 there has been 14,000 deaths due to drug overdose in NJ; Heroin overdose is **3X** the national rate (CDC, 2018, New Jersey Public Media, 2020)
- ❖ Effective treatment strategies include BUP or BUP/N

Significance

- ❖ With the exponential growth of BUP or BUP/N prescriptions, as anesthesia providers it is imperative to appreciate anesthetic implications and clinical impact on the perioperative care of the BUP or BUP/N patient
- ❖ Increasing patient population may undergo surgery and receive anesthesia
- ❖ Choice in anesthetic plan can ultimately effect clinical outcomes of the patient: Pain, potential relapse, length of stay and satisfaction
- ❖ Those affected include anesthesia providers and patients on BUP or BUP/N therapy undergoing surgery

Methodology

- ❖ Design: Quantitative correlation prospective sample
- ❖ Sample: All CRNAs and RRNAs who utilize NJANA online education (n = 22)
- ❖ Intervention: Pre and post perceived confidence intervention survey
 - Online module highlighting point-of-care practice recommendations directed at anesthesia providers
- ❖ Measures/Analysis: Perceived confidence of the learner in the perioperative management of BUP or BUP/N patients
 - Pre and post module survey using Qualtrics: Five questions utilizing Likert scale
 - Survey adapted from the General Efficacy Scale (Schwarzer & Jerusalem, 1995)

1. I am confident in my ability to find a resource that provides suggested practice recommendations in the care of the BUP or BUP/N patient undergoing surgery.	[Not at all true]	1	2	3	4	[Exactly true]
2. I am confident in individualizing the anesthetic plan based on the BUP or BUP/N patient that has discontinued their medication day of surgery.	[Not at all true]	1	2	3	4	[Exactly true]
3. I am confident in individualizing the anesthetic plan for the BUP/N or BUP patient that has continued their medication day of surgery.	[Not at all true]	1	2	3	4	[Exactly true]
4. I am confident in choosing opioids that would most benefit the BUP or BUP/N patient.	[Not at all true]	1	2	3	4	[Exactly true]
5. I am confident in suggesting non-opioid modalities that would best benefit the BUP or BUP/N patient.	[Not at all true]	1	2	3	4	[Exactly true]

Survey questions adapted from the General Perceived Self-Efficacy Scale (Schwarzer & Jerusalem, 1995).

Data Analysis and Results

Resident Registered Nurse Anesthetists

- ❖ n = 40
- ❖ Normal distribution of data; paired t-test employed to compare means within this group
- ❖ Statistically significant difference between pre-module and post-module perceived confidence scores with a $p = 0.000$
- ❖ Post-confidence scores were higher than pre-confidence scores

Tests of Normality						
Statistic	df	Sig.	Statistic	df	Sig.	
						Kolmogorov-Smirnov ^a
PostPreDiff	.072	40	.200 [*]	.983	40	.784

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

Descriptives						
PostPreDiff	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval for Mean	Lower Bound	Upper Bound
	25.9250	11.49668	1.81779	22.2482	19.6018	26.0833
	26.5000	132.174	11.49668	2.00	49.00	47.00
	17.50	17.50	1.750	17.50	17.50	17.50
	-.168	-.374				
	-.595	.733				

Paired Samples Test									
Pair 1	PreConfidence Sum - Post Confidence Sum	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
		-25.92500	11.49668	1.81779	-29.60182	-22.24818	-14.262	39	.000

Certified Registered Nurse Anesthetists

- ❖ n = 24
- ❖ Normal distribution of data; paired t-test employed to compare means within this group
- ❖ Statistically significant difference between pre-module and post-module perceived confidence scores with a $p = 0.000$
- ❖ Post-confidence scores were higher than pre-confidence scores

Descriptives						
PostPreDiff	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval for Mean	Lower Bound	Upper Bound
	22.7917	11.97454	2.44429	17.7353	12.8481	23.5556
	25.5000	143.389	11.97454	-10.00	40.00	50.00
	14.50	14.50	1.450	14.50	14.50	14.50
	-1.076	.472				
	1.292	.918				

Tests of Normality						
Statistic	df	Sig.	Statistic	df	Sig.	
						Kolmogorov-Smirnov ^a
PostPreDiff	.124	24	.200 [*]	.926	24	.079

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

Paired Samples Test									
Pair 1	PreConfidence Survey - Post Confidence Survey	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
		-22.79167	11.97454	2.44429	-27.84807	-17.73526	-9.324	23	.000

Practice Implications

- ❖ To improve upon quality/safety by decreasing the gap in knowledge in the anesthetic management of BUP or BUP/N patients while promoting safe and effective care
- ❖ To bring awareness for the need of higher level of evidence in order to improve upon the quality/safety of care in the BUP and BUP/N patient population
- ❖ Analysis of the project's findings and feedback from the post-implementation survey may or may not allow for policy change to be inferred

References

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