Diekelman, Allen, and Tanner (1989). Supporting approvals from the University IRB was obtained as well as approval from the sponsoring organization. The results of this study will be shared with ASPMN membership with the goal of receiving feedback, additional data, and consensus on findings.

RESULTS
20 expert (the average of 31 years nursing experience and 10 years working in PACU) PACU nurses from a Canadian suburban hospital were interviewed. Data collection occurred between September 2017 and January of 2018. Analysis is in process.

CONCLUSIONS
The results of this study will inform the development or refinement of sedation scales with the goal of improving sensitivity and specificity to capture all aspects of opioid induced sedation.

5D Investigation of Decision-making in Prescription Drug Monitoring Program Use: A Factorial Survey Experiment

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The National Institute on Drug Abuse has stated that the increase in availability of prescription opioids for the treatment of pain has contributed to the rise in opioid misuse and diversion. In response to this increase, states have implemented Prescription Drug Monitoring Programs (PDMPs) so that healthcare providers can access the controlled substance prescription history of their patients. There is some evidence that PDMPs have been successful in decreases in deaths from overdose. The goals of PDMPs are to reduce opioid abuse, decrease opioid diversion, and help identify when substance treatment is warranted. The purpose of this presentation is to provide preliminary data on a study is to determine what factors most influence a health care provider's decision to consult the Prescription Drug Monitoring Program database (PDMP). Currently, in most states, it is the provider's discretion on when to consult the PDMP for prescribing or dispensing controlled substances. There is a gap in knowledge about the circumstances that lead to PDMP use, including the role implicit biases plays in determining access of the PDMP prior to prescribing or dispensing opioids for pain. The clinical significance of this study is that implicit biases and other subconscious decision-making process could be contributing to health disparities in how controlled substances are prescribed and used. Basic research on patient and provider characteristics associated with PDMP, and provider decision-making is needed to identify if there are implicit biases and what they are. With this knowledge, training and policy changes could be implemented to address non-clinical variation in PDMP use.

5E.1. Associations between the Gut Microbiome and Migraines in 7-18-Year-Old Children: The American Gut Cohort Analysis

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PURPOSE
10% children suffer from migraine which result in more school absences and lower academic performance. Recent literature proposed that the gut microbiome may impact migraines through increased intestinal epithelial permeability and inflammation. This quantitative study examined the associations between the gut microbiome and migraines among a cohort of children aged 7-18 years from the American Gut Project (AGP). Findings can help understand biological mechanisms of migraines so that personalized interventions can be designed towards migraine control. IRB approval is not applicable for this secondary analysis.

METHODS
We analyzed a cohort of children from the AGP, an ongoing national initiative profiling gut microbiome across various populations using 16S rRNA V4 gene. Eligible participants were 7-18-year-old healthy children and had the gut microbiome data available. Raw 16S rRNA sequencing and metadata were obtained from the AGP Public Repository. After quality control of 16S data, alpha-diversity (observed-OTUs, Shannon, Faith's_PD) and beta-diversity metrics (weighted-, unweighted-UniFrac, Bray-Curtis distances), taxonomic and abundance analyses were conducted using QIIME2™.

RESULTS
381 children (341 without migraines and 40 with migraines) were analyzed. These children had mean age of 11.5 years and mean BMI of 18.0. Migraine children were more White ($p=0.04$), more boys ($p=0.01$), younger ($p=0.002$) and more underweight ($p<0.001$). Compared with those without migraines, children with migraines showed lower estimates in observed-OTUs, Shannon and Faith's_PD ($p<0.01$). All the weighted- and unweighted-UniFrac, and Bray-Curtis distances displayed the gut microbial dissimilarities between children with and without migraines ($p=0.001$). Children with migraines had higher abundances in genus of Actinobacteria (e.g., Bacteroides, Parabacteroides, Eggerthella, Odoribacter), Firmicutes (e.g., Lachnospira, Dorea, Veillonella), and Proteobacteria (e.g., Sutterella) than children without migraines.

CONCLUSION
Associations between gut microbiome diversity and abundances and migraines in children suggested potential biological mechanisms of migraines. Future work needs to examine how the metabolites of gut microbes impact migraines in children.

5E.2. How to Assess for Respiratory Compromise When Your Patient Is Using Supplemental Oxygen

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PURPOSE
Opioid analgesics are commonly administered to hospitalized patients to treat pain, but these drugs pose risks for serious adverse events such as unintended advancing sedation, respiratory depression, and even death. A study was performed to explore which of three types of electronic monitoring devices (pulse oximetry, capnography, or minute ventilation) were more feasible and effective at detecting OIRD in the PACU setting.

METHODS
A study was performed in the PACU at a community hospital in Buffalo NY. Nurse anesthesia students recruited 60 patients in the pre-operative admissions department. Forty-nine of the 60 patients wore three types of electronic monitoring devices while they were recovering from back, neck, hip or knee surgery in the PACU. All patients were on supplemental oxygen while in the PACU. Data was gathered every 2-5 minutes off the three electronic monitoring devices as well as time each dose of medication was delivered. Covariates included sex, age, medical diagnosis, type of anesthesia, STOP-Bang score.

RESULTS
The study found that in the setting of supplemental oxygen, pulse oximetry is not a reliable and effective method to assess respiratory compromise. Twenty-four of the 49 patients exhibited sustained signs of OIRD within minutes of receiving an opioid while in the PACU. While the pulse oximetry readings didn't change, end Tidal CO2 levels increased and Minute Ventilation decreased, representing hypoventilation. A tool commonly used to screen patients for OIRD is the STOP-BANG questionnaire. In this study, the STOP-BANG questionnaire was not predictive of the patients who exhibited signs of OIRD.

CONCLUSIONS
When using supplemental oxygen, capnography and minute ventilation devices are more sensitive and specific in detecting OIRD.

5E.3. Pain-Related Patient Satisfaction in Ambulatory Settings

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The purpose of this quality improvement initiative was to obtain baseline and ongoing monthly measurements of patient satisfaction related to pain in diverse ambulatory settings across an academic medical center. The goal was to utilize this innovative strategy to maintain or improve the pain-related care being delivered. While not a clearly defined concept, patient satisfaction has been linked to quality outcomes in the literature.