Final Order No. DOH-21-0486-DS-MQA

FILED DATE - APR 2 8 2021
Department of Health
By Amy L. Carraway
Deputy Agency Clerk

STATE OF FLORIDA
BOARD OF NURSING

IN RE: PETITION FOR DECLARATORY STATEMENT OF:

IVAN O. TANO, RN

FINAL ORDER

THIS MATTER came before the Board of Nursing (Board) pursuant to Section 120.565, Florida Statutes and Rule 28-105, Florida Administrative Code, at a duly-noticed public teleconference meeting held on April 8, 2021, for the purpose of considering the Petition for Declaratory Statement (attached as Exhibit A), filed by Ivan O. Tano, RN (Petitioner). Petitioner was represented at the hearing by Jamie A. Klapholz and Cynthia A. Mikos, Attorneys at Law. The Board was represented by Deborah Bartholow Loucks, Senior Assistant Attorney General.

The Petition was filed with the Department of Health on March 17, 2021. Petitioner seeks the Board's opinion as to whether the intravenous administration of ketamine to patients in the intensive care unit (ICU) at the Mayo Clinic hospital in Jacksonville, Florida is within his scope of practice as a registered nurse under the circumstances described in his Petition.

Having considered the Petition, relevant statutes and rules, arguments submitted by counsel for Petitioner and being otherwise fully advised in the premises, the Board makes the following findings and conclusions:

FINDINGS OF FACT

1. The Petition was duly filed and noticed in the Florida Administrative Register; Volume 47 Number 54 published on March 19, 2021.

2. The Petition is attached hereto and incorporated herein by reference.

3. Petitioner, Ivan O. Tano, RN, is a registered nurse licensed to practice nursing in

the State of Florida, having been issued license number RN9520923. He also practiced as a registered nurse in the State of Minnesota from 2015 to 2019.

4. Petitioner has practiced as a registered nurse in the Mayo Clinic Health System since 2015. He has worked primarily in the ICU.

5. Petitioner is certified in Advanced Cardiac Life Support and has completed critical care nursing training through the American Association of Critical-Care Nurses and the Society of Critical Care Medicine.

6. The Mayo Clinic in Rochester, Minnesota permitted RNs in the ICU to administer subanesthetic doses of ketamine via intravenous push, intravenous infusion, and rapid sequence induction in accordance with the Mayo Clinic's guidelines and to monitor the patient after the administration of the ketamine.

7. Petitioner inquires if it is within his scope of practice as an RN at Mayo Clinic-Florida to administer ketamine to patients in an ICU under each of three circumstances:

a. to administer a continuous ketamine infusion intravenously in a dose of 0.05 to 0.25 mg/kg/hr. to a non-intubated patient in an ICU for the purpose of pain management pursuant to an intensivist's order when an intensivist is present in the unit and directly supervising Mr. Tano in accordance with Mayo Clinic approved treatment protocols.

b. to administer an initiating/loading dose of 0.25 to 0.5 mg/kg (not to exceed 35mg) of ketamine intravenously at the onset of a continuous ketamine infusion to a non-intubated patient in an ICU for the purpose of pain management pursuant to an intensivist's order when an intensivist is present in the unit and directly supervising Mr. Tano in accordance with Mayo Clinic approved treatment protocols.

c. to administer ketamine intravenously in a dose of 1.0 to 2.0 mg/kg during rapid

sequence intubation in an ICU in accordance with Mayo Clinic approved treatment protocols and at the direction of and under the personal supervision of an intensivist who is present in the room during the intubation.

CONCLUSIONS OF LAW

8. The Board has jurisdiction over this matter pursuant to section 120.565, and Chapter 464, Florida Statutes.

9. The petition filed in this matter is in substantial compliance with the provisions of Section 120.565, Florida Statutes and Rule 28-105, Florida Administrative Code.

10. Section 464.003(19), Florida Statutes, defines the practice of professional nursing, in part, as

> the performance of those acts requiring substantial specialized knowledge, judgment, and nursing skill based upon applied principles of psychological, biological, physical, and social sciences which shall include, but not be limited to:
> b. The administration of medications and treatments as prescribed or authorized by a duly licensed practitioner authorized by the laws of this state to prescribe such medications and treatments.

11. The Board found the under the specific facts of the petition, it is within the scope of Petitioner's specific and particular education, training and experience to administer ketamine in the three circumstances set forth above.

DONE AND ORDERED this 28th day of **April**, 2021.

BOARD OF NURSING

Joe R. Baker, Jr., Executive Director
for Deborah McKeen, CD-LPN, BS, Chair

NOTICE OF RIGHT TO JUDICIAL REVIEW

A party who is adversely affected by this Final Order is entitled to judicial review pursuant to Section 120.68, Florida Statutes. Review proceedings are governed by the Florida Rules of Appellate Procedure. Such proceedings are commenced by filing one copy of a Notice of Appeal with the Agency Clerk of the Department of Health and a second copy, accompanied by filing fees prescribed by law, with the District Court of Appeal, First District, or with the District Court of Appeal in the Florida Appellate District where the party resides. The Notice of Appeal must be filed within thirty (30) days of rendition of the order to be reviewed.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing was furnished to **Ivan O. Tano, RN,** by sending same by electronic mail to: his attorneys of record, **Jamie A. Klapholz**, jamiek@jpfirm.com; and **Cynthia Mikos**, cynthiam@jpfirm.com; and **Deborah B. Loucks**, Senior Assistant Attorney General, deborah.loucks@myfloridalegal.com, and **Angela Southwell**, Paralegal Specialist, Office of the Attorney General, angela.southwell@myfloridalegal.com, on April 28, 2021.

Amy L. Carraway

Deputy Agency Clerk

FLORIDA DEPARTMENT OF HEALTH
BOARD OF NURSING

Petition for Declaratory Statement
Before the Board of Nursing

In re: Ivan O. Tano, RN
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Petitioner, Ivan O. Tano, RN, by and though the undersigned attorneys and pursuant to section 120.565, Florida Statutes and Florida Administrative Code Rule 28-105.002, seeks the Florida Board of Nursing's ("Board") opinion as to whether the intravenous administration of ketamine to patients in the intensive care unit ("ICU") at the Mayo Clinic hospital in Jacksonville, Florida ("Mayo Clinic-Florida") is within his scope of practice as a registered nurse ("RN") under the circumstances described herein.

1. Petitioner, Ivan O. Tano is a registered nurse ("RN") licensed by the Florida Board of Nursing pursuant to Florida Statutes Chapter 464 holding license number RN9520923 since 2019. Before coming to Florida, Mr. Tano practiced as an RN at Mayo Clinic hospitals located in Minnesota from 2015 to 2019. He can be contacted through undersigned counsel.

2. Mr. Tano is currently employed at Mayo Clinic-Florida as an RN in the adult medical ICU, where he has practiced since relocating to Florida in 2019. Mr. Tano's curriculum vitae is enclosed as **Exhibit 1.**

3. Mr. Tano has practiced in the Mayo Clinic Health System since he began his nursing career in 2015. After a brief stint in the medical-surgical unit at the Mayo Clinic hospital located in Mankato, Minnesota ("Mayo Clinic-Mankato"), he quickly found his niche in ICU nursing at the same facility. Mr. Tano transferred to Rochester, Minnesota to practice in the

medical, surgical, and transplant ICUs at both the Mayo Clinic's Saint Marys and Methodist Campuses (collectively, "Mayo Clinic-Rochester").

4. Mr. Tano holds Advanced Cardiac Life Support ("ACLS") certification from the American Heart Association. While at Mayo Clinic-Mankato, he completed Essentials of Critical Care Orientation ("ECCO") training through the American Association of Critical-Care Nurses. At Mayo Clinic-Rochester, Mr. Tano successfully completed both the Fundamentals of Critical Care Nursing ("FCCN") and Fundamentals of Critical Care Support ("FCCS") in coordination with the Society of Critical Care Medicine.

5. At Mayo Clinic-Rochester, RNs in the ICU are permitted to administer subanesthetic doses of ketamine via intravenous push, intravenous infusion, and rapid sequence induction in accordance with the Mayo Clinic's Intravenous Administration Guidelines ("I-VAG") enclosed as **Exhibit 2**. Mayo Clinic-Rochester ICU nurses, including Mr. Tano, are trained to administer subanesthetic ketamine intravenously and then monitor the patient in accordance with the Mayo Clinic I-VAG Guidelines.

6. Mayo Clinic's Pharmacy & Therapeutics Executive Committee developed the I-VAG based on extensive review of data, clinical indications for ketamine, and the Minnesota Board of Nursing's *Statement of Accountability for Administration of Medications Classified as Anesthetics by the Registered Nurse* adopted in October 2005 and reaffirmed in October of 2016.

7. The Mayo Clinic Health System also maintains an order set titled *Ketamine Low Dose Infusion* that provides for continuous cardiac monitoring and pulse oximetry, as well as routine vital sign monitoring. This order set also provides for the supervising provider to be notified if a patient's respiratory rate, Richmond Agitation and Sedation Scale ("RASS") scores,

or oxygenation saturation fall outside of specified parameters. The supervising provider is also to be notified if the patient experiences confusion, delirium, or hallucinations.

8. Mr. Tano administered ketamine to intubated patients at all Mayo Clinic-Rochester ICUs throughout his two-year tenure there. Most often, Mr. Tano would initiate a continuous ketamine drip and administer maintenance doses of subanesthetic ketamine intravenously using ketamine syringes prepared by the pharmacy. On at least one occasion, Mr. Tano administered ketamine to a patient during rapid sequence intubation.

9. The Mayo Clinic Health System also has experience with RN administration of ketamine at its campuses located in Scottsdale and Phoenix, Arizona (collectively, "Mayo Clinic-Arizona"). After the Arizona Board of Nursing issued its *Advisory Opinion on Anesthetic Agents Administered by Registered Nurses for Limited Purposes: Airway Management* in January of 2003, Mayo Clinic-Arizona adopted a policy for RNs to assist licensed providers who are present and unable to inject the anesthetic agent during the performance of airway management (e.g., endotracheal intubation). Mayo Clinic-Arizona RNs have also been successfully administering subanesthetic ketamine for analgesia for many years pursuant to the Arizona Board of Nursing's *Advisory Opinion on Ketamine Administration* first issued in November of 2015.

10. The Mayo Clinic Health System is attempting to standardize order sets and treatment protocols throughout its locations.

11. At Mayo Clinic-Florida, intubated patients in the ICU are extubated as soon as possible because prolonged intubation carries numerous risks. However, extubated patients may still require intensive care and often remain in significant pain. For this population of patients, Mayo Clinic-Florida's intensivists will often order subanesthetic ketamine because of its ability

to produce a state of analgesia without causing hypotension or respiratory depression.[1] An intensivist is always on-duty in the ICU at Mayo Clinic-Florida.

12. As detailed in an article published in the Journal of PeriAnesthesia Nursing in June of 2015, Mayo Clinic-Florida has successfully used subanesthetic ketamine for post-operative analgesia for many years.[2] Though RNs do not presently administer ketamine to non-intubated patients at Mayo Clinic-Florida, RNs in all clinical units are trained to monitor and care for patients receiving ketamine therapy.[3] The pharmacy department prepares the ketamine infusions and "smart" pump infusion devices with "guardrail" technology are used to administer the ketamine infusions to reduce the likelihood of programming and dosing errors.[4]

13. Mr. Tano seeks the Board's determination as to whether it is within his scope of practice as an RN at Mayo Clinic-Florida to administer ketamine to patients in an ICU under each of the following three circumstances:

(a) Mr. Tano seeks the Board's determination as to whether it is within his scope of practice as an RN to administer a continuous ketamine infusion intravenously in a dose of 0.05 to 0.25 mg/kg/hr. to a non-intubated patient in an ICU for the purpose of pain management pursuant to an intensivist's order when an intensivist is present in the unit and directly supervising Mr. Tano in accordance with Mayo Clinic approved treatment protocols.

(b) Mr. Tano seeks the Board's determination as to whether it is within his scope of practice as an RN to administer an initiating/loading dose of 0.25 to 0.5 mg/kg (not to exceed 35 mg) of ketamine intravenously at the onset of a continuous ketamine infusion to a non-intubated patient in an ICU for the purpose of pain management pursuant to an intensivist's order when an intensivist is present in the unit and directly supervising Mr. Tano in accordance with Mayo Clinic approved treatment protocols.

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[1] Brown and Tucker, *Ketamine for Acute Pain Management and Sedation*, 40 **Critical Care Nurse** 5, e26 (Oct. 2020).
[2] Porter, McClain, Howe, et al, *Perioperative Ketamine for Acute Postoperative Analgesia: The Mayo Clinic–Florida Experience*, 30 **Journal of PeriAnesthesia Nursing** 3, 189-195 (June 2015).
[3] *Id.* at 194.
[4] *Id.* at 193.

(c) Mr. Tano seeks the Board's determination as to whether it is within his scope of practice as an RN to administer ketamine intravenously in a dose of 1.0 to 2.0 mg/kg during rapid sequence intubation in an ICU in accordance with Mayo Clinic approved treatment protocols and at the direction of and under the personal supervision of an intensivist who is present in the room during the intubation.

OVERVIEW OF RELEVANT MEDICAL LITERATURE

14. Ketamine is approved by the United States Food and Drug Administration as a nonbarbiturate anesthetic producing an anesthetic state characterized by profound analgesia, normal pharyngeal-laryngeal reflexes, normal or slightly enhanced skeletal muscle tone, cardiovascular and respiratory stimulation, and occasionally a transient and minimal respiratory depression.[5] Ketamine is noted for its ability to produce a state of anesthesia while preserving respiratory drive and protective airway reflexes.[6]

15. In low doses, ketamine has been shown to confer "potent, analgesic and amnestic effects that are accompanied by preservation of protective airway responses, spontaneous respiration and cardiopulmonary stability."[7] Low-dose ketamine is generally less than 1.0 mg/kg and sometimes referred to as a subanesthetic dose, subdissociative dose, or analgesic dose.[8] In low doses, ketamine has shown opioid-sparing effects which have made it a useful agent in many situations, including for pain relief post-operatively, in palliative care settings, and for patients with a tolerance to opioids. It is especially helpful when seeking to avoid the respiratory depression associated with the use of opioids and benzodiazepines.

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[5] U.S. Food and Drug Administration. Ketalar (ketamine hydrochloride) injection. Available at: https://www.accessdata.fda.gov/drugsatfda_docs/label/2020/016812Orig1s046lbl.pdf (last accessed March 6, 2021).
[6] Brown and Tucker, *Ketamine for Acute Pain Management and Sedation*, 40 **Critical Care Nurse** 5, e26 (Oct. 2020).
[7] Motov, Rockoff, Cohen, et al, *Intravenous Subdissociative-Dose Ketamine Versus Morphine for Analgesia in the Emergency Department: A Randomized Controlled Trial,* 66 **Annals of Emergency Medicine** 3, 222 (Sept. 2015).
[8] *Id.*

16. In the ICU setting, low-dose ketamine is often used for analgesia and as an induction agent during rapid sequence intubation.[9] In the widely cited *Consensus Guidelines on the Use of Intravenous Ketamine Infusions for Acute Pain Management* (the "Consensus Guidelines"), the authors note that commonly reported dosing regimens during the perioperative period include an initiating/loading dose of 0.1 to 0.5 mg/kg followed by an infusion of 0.1 to 0.6 mg/kg per hour, concluding that ketamine infusions for acute pain should generally not exceed 1 mg/kg per hour in settings without intensive monitoring.[10] The Consensus Guidelines further recommend that subanesthetic ketamine be administered by an appropriately trained RN, who "can monitor the patient receiving ketamine infusions in subanesthetic doses and change the infusion rate based on directions from the responsible physician."[11]

17. In October 2020, two Florida pharmacists published a narrative review of medical literature concerning ketamine for the treatment of acute pain or facilitation of mechanical ventilation in the ICU.[12] In this narrative review, the authors discussed two studies in which patients received initiating/loading doses of 0.5 mg/kg of ketamine followed by continuous infusions of 0.12 to 0.36 mg/kg per hour of ketamine for 48 hours, resulting in reduced cumulative doses of morphine and decreased patient nausea.[13]

18. Ketamine has also proven to be an effective induction agent for rapid sequence intubation in patients who are hypotensive or hemodynamically unstable, have reactive airway

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[9] Leung, Nelson, and Wieruszewski, *Ketamine in the Intensive Care Unit*, 29 **AACN Advanced Critical Care** 2, 102-103 (Summer 2018).
[10] Schwenk ES, Viscusi ER, Buvanendran A, et al, *Consensus Guidelines on the Use of Intravenous Ketamine Infusions for Acute Pain Management From the American Society of Regional Anesthesia and Pain Medicine, the American Academy of Pain Medicine, and the American Society of Anesthesiologists*, 43 **Regional Anesthesia and Pain Medicine** 5, 460 (July 2018).
[11] *Id.* at 461, 463.
[12] Brown and Tucker, *Ketamine for Acute Pain Management and Sedation*, 40 **Critical Care Nurse** 5, e26-e33 (Oct. 2020).
[13] *Id.* at e26.

disease, or have known adrenal insufficiency.[14] In the rapid sequence intubation context, a single 1 to 2 mg/kg intravenous dose is recommended.[15]

19. Rapid sequence intubation is defined as "a technique where a potent sedative or induction agent [such as ketamine] is administered virtually simultaneously with a paralyzing dose of neuromuscular blocking agent to facilitate rapid tracheal intubation."[16] Rapid sequence intubation is an emergent intubation technique that "includes specific protection against aspiration of gastric contents, provides excellent access to the airway for intubation, and permits pharmacologic control of adverse responses to illness, injury, and the intubation itself."[17]

20. In *Unscheduled Procedural Sedation: A Multidisciplinary Consensus Practice Guideline*, the American College of Emergency Physicians and several other nationally recognized professional associations explain that "[j]ust as qualified registered nurses routinely administer sedatives and paralytics for intubation under direct supervision of an ordering provider, they are similarly qualified and capable of administering medications for procedural sedation while under the direct supervision of the ordering provider."[18] Accordingly, appropriately skilled RNs "should be permitted to administer any and all medications used for unscheduled procedural sedation while under the direct supervision of the ordering provider, with the ordering provider specifying the dosing and administration."[19]

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[14] Leung, Nelson, and Wieruszewski, *Ketamine in the Intensive Care Unit*, 29 **AACN Advanced Critical Care** 2, 103 (Summer 2018).
[15] *Id.*
[16] *Policy Statement: Rapid-Sequence Intubation*, **American College of Emergency Physicians** (reaffirmed Oct. 2018).
[17] *Id.*
[18] Green, Roback, Krauss, et al, *Unscheduled Procedural Sedation: A Multidisciplinary Consensus Practice Guideline*, 73 **Annals of Emergency Medicine** 5, e59 (May 2019) (organized by American College of Emergency Physicians and endorsed by American Academy of Emergency Medicine, the American Board of Emergency Medicine, the American College of Cardiology, the American College of Medical Toxicology, the American College of Osteopathic Emergency Medicine, the Association of Academic Chairs of Emergency Medicine, the Emergency Medicine Residents' Association, the Emergency Nurses Association, the Society for Academic Emergency Medicine, and the Society for Pediatric Sedation).
[19] *Id.*

21. As further detailed below, many state boards of nursing have explicitly approved RN administration of the induction agent during rapid sequence intubation while the qualified practitioner is present but unable to personally inject the agent because the practitioner is performing the critical task of airway management, and to require the qualified practitioner to leave the airway in order to administer the agent compromises patient safety.

FLORIDA LAW AND PREVIOUS FLORIDA BOARD OF NURSING DECLARATORY STATEMENTS ON RN ADMINISTRATION OF KETAMINE

22. Under Florida law, an RN's scope of practice includes the practice of professional nursing. Section 464.003(19) of Florida Statutes defines the "practice of professional nursing" as follows:

> "Practice of professional nursing" means the performance of those acts requiring substantial specialized knowledge, judgment, and nursing skill based upon applied principles of psychological, biological, physical, and social sciences which shall include, but not be limited to:
> (a) The observation, assessment, nursing diagnosis, planning, intervention, and evaluation of care; health teaching and counseling of the ill, injured, or infirm; and the promotion of wellness, maintenance of health, and prevention of illness of others.
> (b) **The administration of medications and treatments as prescribed or authorized by a duly licensed practitioner authorized by the laws of this state to prescribe such medications and treatments.**
> (c) The supervision and teaching of other personnel in the theory and performance of any of the acts described in this subsection.
> A professional nurse is responsible and accountable for making decisions that are based upon the individual's educational preparation and experience in nursing.

(emphasis added).

23. An RN's administration of ketamine is not directly addressed in Florida's Nurse Practice Act or associated regulations. In 2012, the Board proposed a regulation to govern the circumstances under which an RN may administer conscious sedation, including the use of ketamine, but this proposed regulation was invalidated by an administrative law judge ("ALJ") in

a rule challenge proceeding.[20] The ALJ reasoned, among other things, that the Board did not have authority to impose additional education/training requirements or otherwise limit the RN's ability to administer any medication ordered by a duly licensed practitioner because no such limitation is included the Nurse Practice Act.[21]

24. In a similar case a few years later, an ALJ reasoned that the Board's blanket statement prohibiting RNs from injecting Botox was contrary to the expressed statutory policy allowing RNs to administer medications within their scope of practice (the ALJ explained that "Botox is a medication" and "injection is one of the methods of administration of a medication.").[22]

25. Upon information and belief, the Board first addressed whether an RN may administer ketamine nearly 20 years ago in its April 29, 2003 Final Order regarding *In Re: The Petition for Declaratory Statement of Linda C. Noelke, RN.* The Board ruled that it was not in Ms. Noelke's scope of practice as an RN trained in basic cardiac life support to administer intravenous ketamine pursuant to a written or verbal order by a surgeon in an ambulatory surgery center setting where the patient is not intubated, for the purpose of rendering the patient insensible to pain for the injection of local anesthetic and surgical procedures, or where there is no anesthesiologist on staff. Notably, Ms. Noelke's Petition did not specify the ketamine doses, the level of supervision, or whether the administration of ketamine would be pursuant to facility approved treatment protocols.

26. In the Amended Final Order dated February 28, 2014 in *In Re Petition for Declaratory Statement of Lancia L. Simmons, RN*, this Board approved Ms. Simmons'

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[20] *Florida Med. Ass'n v. Dep't of Health, Bd. of Nursing*, Case No. 12-1545RP (Fla. DOAH Nov. 2, 2012), aff'd, 132 So. 3d 225 (Fla. 1st DCA 2014).
[21] *Id.*
[22] *Hill v. Dep't of Health, Bd. of Nursing*, No. 14-4511RU (Fla. DOAH Mar. 10, 2015).

administration of intravenous ketamine at low doses (up to 50 mcg/kg/min[23] but generally 25 mcg/kg/min or less) to mechanically ventilated patients in an ICU for purposes of sedation or pain control. This Board also approved Ms. Simmons' administration of intravenous ketamine at analgesic doses (up to 5 mcg/kg/min)[24] to burn patients, some of whom may not be intubated, for pain control during certain time limited procedures such as dressing changes in the burn unit of Tampa General Hospital.

27. In its Amended Final Order dated August 7, 2017 in *In Re: The Petition for Declaratory Statement of Amberly L. Porto, RN*, this Board approved Ms. Porto's administration of ketamine intravenously or intramuscularly at a dose of 0.5 mg/kg or less, pursuant to an order by a licensed physician or advanced registered nurse practitioner (n/k/a advanced practice registered nurse) under policies and procedures established by an interdisciplinary team at Tampa General Hospital, for analgesia to end-stage patients receiving palliative care who suffer from pain that is chronic, intractable, or difficult to control as an alternative to, or adjunct to, opioids.

28. Similarly, in the Final Order dated July 7, 2017 in *In Re: The Petition for Declaratory Statement of Richard P. Pearson, RN*, this Board approved Mr. Pearson's administration of ketamine intravenously or intramuscularly at a dose of .05 mg/kg or less, no more frequently than once every four hours, pursuant to policies and procedures established by an interdisciplinary team at Tampa General Hospital, for pain control to patients in the emergency department. However, the Board found that it was not within Mr. Pearson's scope of practice to administer ketamine to patients in the emergency department for purposes of moderate sedation or sedation/analgesia during time limited procedures. Notably, Mr. Pearson's

[23] There are 1,000 micrograms (mcg) in one milligram (mg), and 60 minutes in an hour. Therefore, 50 mcg/kg/min = 3.0 mg/kg per hour.
[24] 5 mcg/kg/min = 0.3 mg/kg per hour.

Petition did not specify the ketamine doses that would be administered during these time limited procedures.

29. In 2019, this Board considered three substantially similar petitions[25] in which the RNs sought to administer ketamine intravenously in doses of 0.4 mg/kg or less, no more frequently than once every four hours, under the supervision of a credentialed physician or authorized practitioner, to patients being treated for treatment resistant depression in an area of the Centerstone Behavioral Hospital and Addiction Center where practitioners trained in airway management are readily available to support the patient. The Board concluded that ketamine administration was not within the RNs' scope of practice under these circumstances, noting that the petitioners failed to elaborate on the level of supervision or the qualifications of the supervising practitioners. The petitioners also failed to describe their level of training or certification beyond RN education. The Board further concluded that "[k]etamine by intravenous administration is not approved for use in the treatment of treatment resistant depression" and "[t]he safe administration of intravenous ketamine without direct supervision by a physician or practitioner qualified to provide emergency airway management including intubation and resuscitation is not within the scope of practice for Registered Nurses in Florida."

30. Here, Mr. Tano seeks to administer low dose ketamine for pain control ***with*** direct supervision by a physician or practitioner qualified to provide emergency airway management including intubation and resuscitation. As noted above, Mr. Tano is ACLS certified and has prior experience administering ketamine to patients in the ICU.

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[25] In Re: The Petition for Declaratory Statement of Terrence Meneely, RN, Final Order No. DOH-19-0651-DS-MQA (Apr. 23, 2019); In Re: The Petition for Declaratory Statement of Michelle Percival, RN, Final Order No. DOH-19-0652-DS-MQA (Apr. 23, 2019); In Re: The Petition for Declaratory Statement of Misty Barrere, RN, Final Order No. DOH-19-0650-DS-MQA (Apr. 23, 2019).

BOARDS OF NURSING IN OTHER STATES THAT HAVE ADDRESSED RN ADMINISTRATION OF KETAMINE

31. The administration of ketamine by RNs has come before boards of nursing in other states where licensees have sought regulatory guidance. Selected examples of boards approving RN administration of ketamine under circumstances consistent with the those set forth in paragraph 13(a)-(c) herein are described below in alphabetical order.

32. In 2009, the Alaska Board of Nursing amended and readopted an Advisory Opinion finding that it is within the role and scope of practice for RNs to administer an induction agent during an emergency rapid sequence intubation under circumstances similar those described in paragraph 13(c) herein.[26] In 2014, the Alaska Board of Nursing issued another Advisory Opinion specifying that RNs may administer low-dose ketamine to provide analgesia for the treatment of post-operative pain in the opioid tolerant adult patient under circumstances similar to those described in paragraph 13(a) herein.[27]

33. The Arizona State Board of Nursing issued an Advisory Opinion in 2003, reaffirmed in 2018, stating that an RN may administer an induction agent in situations where the licensed provider is present but unable to personally inject the agent because the provider is performing the critical task of airway management or placement of a peripheral nerve block requiring the use of both hands.[28] The Arizona State Board of Nursing noted in this Advisory Opinion that it surveyed other state boards of nursing and 16 of 22 responding states also approve of this RN role. The Arizona State Board of Nursing issued another Advisory Opinion in November of 2015, revised in May of 2020, stating that "[i]t is within the Scope of Practice of a

[26] *Advisory Opinion: Registered Nurse Administration of Sedating and Anesthetic Agents*, **Alaska Board of Nursing** (rev. Oct. 2009).
[27] *Advisory Opinion: IV Administration of Ketamine for the Treatment of Post-Operative, Opioid Tolerant Adult Patient by a Registered Nurse (RN)*, **Alaska Board of Nursing** (April 2014).
[28] *Advisory Opinion: Anesthetic Agents Administered by Registered Nurses for Limited Purposes: Airway Management*, **Arizona State Board of Nursing** (reaffirmed March 2018).

Registered Nurse (RN) to administer low-dose (sub- anesthetic) IV or intranasal Ketamine for the purposes of pain control (analgesia), depression, and sedation."[29]

34. Similarly, the Arkansas State Board of Nursing takes the position that it is within the scope of practice of an RN with demonstrated competency to administer pharmacologic agents under direct supervision of a physician or advanced practice registered nurse to produce moderate sedation and to assist in rapid sequence intubation.[30]

35. The California Board of Registered Nursing has published a statement indicating that "[i]t is within the scope of practice of registered nurses to administer medications for the purpose of induction of conscious sedation for short-term therapeutic, diagnostic or surgical procedures[,]" noting that California's Nursing Practice Act "places no limits on the type of medication or route of administration; there is only a requirement that the drug be ordered by one lawfully authorized to prescribe."[31] The same is true of the Florida's Nurse Practice Act's definition of the "practice of professional nursing."[32]

36. The Kansas State Board of Nursing takes the position that it is within the scope of practice for an RN "to administer pharmacologic agents via the intravenous route to produce moderate sedation/analgesia, also referred to as IV 'conscious sedation.'" The Kansas State Board of Nursing has noted that Kansas statutes authorize an RN to "execute a medical regimen as prescribed by someone licensed to practice medicine and surgery" and "[r]eceiving an order

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[29] *Advisory Opinion: Ketamine Administration*, **Arizona State Board of Nursing** (rev. May 2020).
[30] *Position Statement 94-1: Role of the Registered Nurse in the Management of Patient's Receiving Moderate Sedation, Anesthetic Agents or Neuromuscular Blocking (paralytic) Agents For Therapeutic or Diagnostic Procedures*, **Arkansas State Board of Nursing** (rev. May 11, 2017).
[31] Publication on *Conscious Sedation/Moderate Sedation*, California Board of Registered Nursing (rev. Aug. 7, 2013).
[32] *See* § 464.003(19)(b), Fla. Stat.

and administering an IV med is the execution of a medical regimen and is allowed when following a lawful physician's order." [33]

37. The Kentucky Board of Nursing's Advisory Opinion Statement #32, revised in October of 2020, states that "[i]t is within the scope of registered nursing practice for the RN who is educationally prepared and currently clinically competent to administer medications for procedural sedation and analgesia." This Advisory Opinion Statement further provides that it is within the RN's scope of practice to administer sedation medications and/or neuromuscular blocker agents for rapid sequence intubation when supervised by an appropriate practitioner who is immediately present.[34]

38. The Maine State Board of Nursing takes the position that an RN "may administer anesthetic agents for the purpose of analgesia, muscle relaxation, or sedation provided that the nurse has received the appropriate documented training based on the facility's established policies and procedures."[35]

39. On May 28, 2002, the Maryland Board of Nursing issued a Declaratory Ruling as follows: "The Board has determined that the administration of medication classified as an anesthetic agent is within the scope of practice of the registered nurse in an ACUTE CARE SETTING when administered for purposes other than anesthesia or non-procedural sedation, such as clinical circumstances requiring sedation, and/or rapid sequence intubation."[36]

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[33] *Position Statement: Administration of IV Conscious Sedation (Moderate Sedation/Analgesia) By the Registered Professional Nurse*, **Kansas State Board of Nursing** (March 25, 2014).
[34] *Advisory Opinion Statement #32: The Role of Nurses in Procedural Sedation, Analgesia, Airway Management, and Chest Tube Removal*, **Kentucky Board of Nursing** (rev. Oct. 2020).
[35] *Practice Questions*, **Maine State Board of Nursing**, available at https://www.maine.gov/boardofnursing/practice/rpn-questions.html (last accessed March 3, 2021).
[36] *Declaratory Ruling 2002-1 Re: Registered Nurse Administration of Medications Classified as Anesthetic Agents*, **Maryland Board of Nursing** (May 28, 2002).

40. The Massachusetts Board of Registration in Nursing takes the position that an "RN may administer medications intended for deep sedation to a non-intubated patient as ordered by a duly authorized prescriber" under specified conditions.[37]

41. The Minnesota Board of Nursing in its *Statement of Accountability for Administration of Medications Classified as Anesthetics by the Registered Nurse* expressed its belief that RNs "may administer medications classified as anesthetics provided the RN has acquired the knowledge and skill to administer these medications safely."[38]

42. The Nebraska Board of Nursing reaffirmed an Advisory Opinion in August of 2020 approving the appropriately trained RN to administer and monitor low-dose ketamine infusions for pain control.[39]

43. In 2018, the New Hampshire Board of Nursing published a Position Statement stating that "[i]f prescribed by physician/provider at sub-anesthetic doses, RN may monitor patient and administer [ketamine for pain control]."[40] On January 29, 2020, the New Hampshire Board of Nursing further specified that a "[f]ixed dose of sub anesthetic infusion of Ketamine is within the scope of practice of an RN" when a licensed independent practitioner evaluates the patient, orders the ketamine, and is readily available in the facility during the infusion.[41]

44. The New York State Board of Nursing has ruled that "[w]ithin the first 24 hours of initiation of low-dose ketamine administration, RNs, with demonstrated competence, can administer and monitor patients on this regimen only to patients in recovery rooms, critical care, hospice, step-down or palliative care areas, that is, in patientcare units with low patient to nurse

[37] *Advisory Ruling on Nursing Practice: Administration of Medications for Sedation/Analgesia*, **Massachusetts Board of Registration in Nursing** (rev. June 14, 2017).
[38] *Statement of Accountability for Administration of Medications Classified as Anesthetics by the Registered Nurse*, **Minnesota Board of Nursing** (reaffirmed Oct. 2016).
[39] *Advisory Opinion: Sub-Anesthetic Ketamine*, **Nebraska Board of Nursing** (reaffirmed Aug. 2020).
[40] *Position Statement, Definitions, and Clinical Practice Advisories Regarding the Role of the RN and LPN in the Administration of Anesthesia, Sedation, and Analgesia*, **New Hampshire Board of Nursing** (June 26, 2018).
[41] *NH Board of Nursing RN Scope of Practice Advisories*, **New Hampshire Board of Nursing** (rev. March 9, 2020).

ratios. Following this time period, and with no evidence of untoward side effects, such patients can be cared for by RNs, with demonstrated competence, on general patient units."[42]

45. The North Carolina Board of Nursing takes the position that it is within an RN's scope of practice to administer ketamine to a non-intubated patient for moderate sedation/analgesia.[43] In addition, the North Carolina Board of Nursing specifically states that "[t]he administration and monitoring of sedative, anesthetic induction, and neuromuscular blocking agents at paralyzing doses to facilitate [rapid sequence intubation] in adult and pediatric clients, is within the non-anesthetist RN scope of practice."[44]

46. The Ohio Board of Nursing takes the position that an appropriately trained and credentialed RN may administer an anesthetic agent for the purpose of moderate sedation with a valid authorized provider order in the presence of an authorized provider.[45] Further, on May 6, 2020, the Ohio Board of Nursing specifically stated that "qualified RNs may, pursuant to an order, and in appropriate clinical circumstances, administer ketamine to pediatric patients to achieve dissociative sedation[.]"[46]

47. The Oklahoma Board of Nursing maintains Guidelines that allow an RN to administer agents to achieve moderate sedation upon the order of an authorized prescriber.[47] In separate Guidelines, the Oklahoma Board of Nursing provides that an RN may administer "certain neuromuscular blocking agents, sedatives, and analgesics in situations where the

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[42] *Practice Information: IV Drug Administration of Ketamine for the Treatment of Intractable Pain*, **New York State Board of Nursing** (June 2011).
[43] *Position Statement: Procedural Sedation/Analgesia*, **North Carolina Board of Nursing** (rev. September 2018).
[44] *Position Statement: Rapid Sequence Intubation (RSI)*, **North Carolina Board of Nursing** (rev. September 2018).
[45] *Interpretive Guideline: Registered Nurse Care of Patients Receiving Intravenous Moderate Sedation for Medical and/or Surgical Procedures*, **Ohio Board of Nursing** (reapproved March 18, 2020).
[46] *Memorandum re Interpretive Guideline*, **Ohio Board of Nursing** (May 6, 2020).
[47] *Moderate (Conscious) Sedation Guidelines for Registered Nurse Managing and Monitoring Patients*, #P-06, **Oklahoma Board of Nursing** (rev. September 24, 2019).

provider is present but unable to personally inject the agents because the provider is performing the critical task of airway management for the patient during rapid sequence intubation[.]"[48]

48. The Oregon State Board of Nursing takes the position that "[t]here may be circumstances in which a [registered] nurse, under the direction of a [Licensed Independent Practitioner], may use Ketamine in non-intubated patients. Evidence-based practice supports the use of Ketamine in the adult population as an adjunct for pain management, and in the pediatric population for pain and respiratory management." The Oregon State Board of Nursing further states that the RN may administer sedation, including the administration of anesthetic agents, under the direction of an authorized provider during an emergency intubation.[49]

49. On October 7, 2020, the Pennsylvania Department of Health's Safe and Effective Prescribing Practices Task Force published *Guidelines for Safe Administration of Low-Dose Ketamine*, which states that "Ketamine administration (infusion initiation and infusion dose changes) may be provided by any licensed practitioner, such as a registered nurse who has competence in administration of low-dose ketamine, under supervision of a physician or a CRNA."[50]

50. The Rhode Island Board of Nurse Registration and Nursing Education states that for emergency situations and in licensed, hospital-based emergency departments, "it is within the scope of practice for registered nurses to act as the physician's 'third hand' and administer anesthetic agents, in the presence of and under the direction of, a physician or other provider who is properly credentialed in the use of these medications as well as resuscitation and emergency airway management." The Rhode Island Board further explains that "[t]he term 'third hand'

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[48] *Rapid Sequence Intubation Guidelines-Medication Administration by Registered Nurses*, #P-19, **Oklahoma Board of Nursing** (rev. July 24, 2018).
[49] *Policy Guideline: Nursing Scope of Practice for the Use of Sedating and Anesthetic Agents*, **Oregon State Board of Nursing** (Feb. 2006).
[50] *Guidelines for Safe Administration of Low-Dose Ketamine*, **Pennsylvania Department of Health** (Oct. 7, 2020).

assumes the physician ordering the medication is present at the bedside and unable to perform the administration of the medications him/herself due to the circumstances of the environment and/or situation."[51]

51. In 2019, South Carolina's State Board of Medical Examiners, the State Board of Pharmacy, and the State Board of Nursing for South Carolina issued a Joint Advisory Opinion acknowledging that it is within the role and scope of the responsibilities for the RN to administer low dose ketamine infusions and intravenous push in specified patient care areas and for use in patients with high opioid requirements or pain/side effects refractory to traditional modalities in the ICU, PACU, or on a general floor.[52] In January of 2020, the South Carolina Board of Nursing revised its *Advisory Opinion #25* to reaffirm the aforementioned Joint Advisory Opinion and further explain that "[f]or situations requiring the immediate facilitation of airway management (intubation), the RN may administer any intravenous/intraosseous (IV/IO) agents if a qualified provider is immediately present and available if needed to secure the airway."[53]

52. The Texas Board of Nursing's *Position Statement on the Role of the Nurse in Moderate Sedation* provides the circumstances under which an RN may administer moderate sedation, and further specifies that an RN may administer ketamine when assisting in the physical presence of a CRNA or anesthesiologist who is intubating or otherwise managing the patient's airway.[54]

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[51] *Policy Statement: Scope of Practice Guide to the Administration of Anesthetic Agents by Registered Nurses*, **Rhode Island Board of Nurse Registration and Nursing Education** (March 17, 2017).
[52] *Joint Advisory Opinion regarding The Administration of Low Dose Ketamine Infusions in Hospital Settings, Including Acute-Care, by Nurses*, **South Carolina State Boards of Medical Examiners, Nursing, and Pharmacy** (April 12, 2019).
[53] *Advisory Opinion #25*, **South Carolina Board of Nursing** (rev. Jan. 2020).
[54] *Position Statement 15.8: The Role of the Nurse in Moderate Sedation*, **Texas Board of Nursing** (rev. Jan. 2020).

53. The Virginia Board of Nursing's *Guideline Document 90-63*, adopted in 2015, provides that an RN "may administer mild to moderate sedation under certain conditions."[55]

54. The State of Washington's Nursing Care Quality Assurance Commission in an Advisory Opinion dated March 12, 2015 found that low-dose ketamine provides effective analgesia for the treatment of post-operative pain, neuropathic pain, and chronic pain, especially related to patients with opioid tolerance. After discussion of various studies supporting the efficacy of ketamine in treating pain, the Commission concluded that an RN may administer analgesic, sedating, and anesthetic agents for acute and chronic pain using low-dose anesthetics and for emergency care, including rapid sequence intubation.[56]

55. In March of 2020, the West Virginia Board of Examiners for Registered Professional Nurses issued a revision to its *Position Statement on Administration of Anesthetic Agents* stating that "[t]he administration of Ketamine, as prescribed by a licensed healthcare provider with appropriate prescriptive authority as a palliative care intervention is within the scope of practice of the RN." This Position Statement further provides that in a hospital setting, in the presence of an appropriately credentialed physician or CRNA, "the RN may administer a sedative or induction agent (i.e. Propofol, Etomidate, Ketamine) or neuromuscular blocking agents to the non-intubated patient for the purpose of intubation when the clinical presentation of impending respiratory failure is imminent."[57]

56. The Wyoming State Board of Nursing in its Advisory Opinion on Ketamine published in July of 2019 found that it is within the scope of practice of the appropriately trained

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[55] *Guideline Document 90-63: Registered Nurses and Procedural Sedation*, **Virginia Board of Nursing** (Nov. 17, 2015).
[56] *Advisory Opinion 7.1: Administration of Sedating, Analgesic, and Anesthetic Agents*, **Washington Department of Health, Nursing Care Quality Assurance Commission** (March 13, 2015).
[57] *Position Statement: Administration of Anesthetic Agents*, **West Virginia Board of Examiners for Registered Professional Nurses** (rev. March 2020).

and competent RN to administer ketamine in accordance with the Consensus Guidelines discussed herein.[58]

ARGUMENT

57. If a Petition for Declaratory Statement sets forth the required elements under section 120.565 of Florida Statutes and Florida Administrative Code Rule 28-105.002, the Board must consider and rule upon the merits of the Petition.[59] This Petition sets forth the required elements by stating with particularity that Mr. Tano is an RN who practices in the ICU at Mayo Clinic-Florida and needs the Board to state whether administration of ketamine is within his scope of practice as an RN under section 464.003(19)(b) of Florida Statutes in the circumstances described herein. Hence, Mr. Tano seeks the Board's response to this Petition.

58. Mr. Tano's scope of practice as a Florida-licensed RN includes "the administration of medications and treatments as prescribed or authorized by a duly licensed practitioner authorized by the laws of this state to prescribe such medications and treatments."[60] Ketamine is a medication and injection is one of the methods of administration of a medication. In the facts presented herein, Mr. Tano would administer ketamine pursuant to the order of a duly authorized and licensed practitioner in accordance with Florida's Nurse Practice Act.

59. As a Florida-licensed RN, Mr. Tano is "responsible and accountable for making decisions that are based upon [his] educational preparation and experience in nursing."[61] As described above, Mr. Tano has been practicing as an RN for roughly six years within the Mayo

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[58] *Advisory Opinion: Ketamine*, **Wyoming State Board of Nursing** (July 2019) (citing Schwenk ES, Viscusi ER, Buvanendran A, et al, *Consensus Guidelines on the Use of Intravenous Ketamine Infusions for Acute Pain Management From the American Society of Regional Anesthesia and Pain Medicine, the American Academy of Pain Medicine, and the American Society of Anesthesiologists*, 43 **Regional Anesthesia and Pain Medicine** 5, 460 (July 2018)).

[59] *1000 Friends of Fla., Inc. v. State, Dep't of Cmty. Affs.*, 760 So. 2d 154 (Fla. 1st DCA 2000), *as clarified* (Apr. 20, 2000).

[60] § 464.003(19)(b), Fla. Stat.

[61] § 464.003(19), Fla. Stat.

Clinic Health System, mostly in the ICU setting. He holds ACLS certification and has completed extensive training in critical care nursing. During his time at Mayo Clinic-Rochester, Mr. Tano gained training and experience with administering subanesthetic ketamine intravenously in accordance with the hospital's policies and procedures.

60. In the states where RNs are specifically authorized to administer low-dose ketamine, the boards of nursing frequently describe one or more of the following criteria to ensure patient safety:[62]

(a) The facility must establish policies and procedures addressing RN competency, ketamine dosing, and patient monitoring.

(b) The RN must be ACLS certified and appropriately trained in accordance with facility policies and procedures regarding RN competency to administer low-dose ketamine.

(c) The ketamine should be ordered by an appropriately credentialed physician, advanced practice registered nurse, or physician assistant.

(d) The ketamine dose should be prepared by the pharmacy.

(e) The ketamine should be administered via an infusion pump with "guardrail" technology.

(f) During the RN's administration of low-dose ketamine, an appropriately credentialed physician, advanced practice registered nurse, or physician assistant should be physically present in the facility and immediately available to respond and implement emergency protocols if needed.

(g) Appropriate emergency equipment and supplies must be immediately available in the unit (e.g., intubation equipment, cardiac monitor and defibrillation equipment, reversal agents, and resuscitation medications).

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[62] *See, e.g.*, *Advisory Opinion: Ketamine Administration*, **Arizona State Board of Nursing** (rev. May 2020); *Advisory Opinion: Sub-Anesthetic Ketamine*, **Nebraska Board of Nursing** (reaffirmed Aug. 2020); *Position Statement: Procedural Sedation/Analgesia*, **North Carolina Board of Nursing** (rev. September 2018); *Policy Guideline: Nursing Scope of Practice for the Use of Sedating and Anesthetic Agents*, **Oregon State Board of Nursing** (Feb. 2006); *Joint Advisory Opinion regarding The Administration of Low Dose Ketamine Infusions in Hospital Settings, Including Acute-Care, by Nurses*, **South Carolina State Boards of Medical Examiners, Nursing, and Pharmacy** (April 12, 2019); *Advisory Opinion 7.1: Administration of Sedating, Analgesic, and Anesthetic Agents*, **Washington Department of Health, Nursing Care Quality Assurance Commission** (March 13, 2015).

61. Mr. Tano would administer low-dose ketamine in accordance with all the above criteria. Mr. Tano has been informed that Mayo Clinic-Florida would develop policies and procedures approved by a multidisciplinary team including representatives from pharmacy, medicine, and nursing, whereby ketamine may be administered in the ICU under conditions with which Mr. Tano would comply. As detailed herein, the Mayo Clinic Health System has extensive experience with developing and implementing such policies and procedures.

62. In the states where RNs are specifically authorized to administer the induction agent during rapid sequence intubation while the qualified practitioner is present but unable to personally inject the agent, the boards of nursing frequently describe one or more of the following criteria to ensure patient safety:[63]

(a) The facility must establish policies and procedures addressing initial and ongoing RN competency, ketamine dosing, and patient monitoring.

(b) The RN must be ACLS certified and possess validated competency regarding assessment and monitoring of the patient receiving the medication; pharmacology,

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[63] *See Advisory Opinion: Registered Nurse Administration of Sedating and Anesthetic Agents*, **Alaska Board of Nursing** (rev. Oct. 2009); *Advisory Opinion: Anesthetic Agents Administered by Registered Nurses for Limited Purposes: Airway Management*, **Arizona State Board of Nursing** (reaffirmed March 2018); *Position Statement 94-1: Role of the Registered Nurse in the Management of Patient's Receiving Moderate Sedation, Anesthetic Agents or Neuromuscular Blocking (paralytic) Agents For Therapeutic or Diagnostic Procedures*, **Arkansas State Board of Nursing** (rev. May 11, 2017); *Advisory Opinion Statement #32: The Role of Nurses in Procedural Sedation, Analgesia, Airway Management, and Chest Tube Removal*, **Kentucky Board of Nursing** (rev. Oct. 2020); *Declaratory Ruling 2002-1 Re: Registered Nurse Administration of Medications Classified as Anesthetic Agents*, **Maryland Board of Nursing** (May 28, 2002); *Position Statement, Definitions, and Clinical Practice Advisories Regarding the Role of the RN and LPN in the Administration of Anesthesia, Sedation, and Analgesia*, **New Hampshire Board of Nursing** (June 26, 2018); *Position Statement: Rapid Sequence Intubation (RSI)*, **North Carolina Board of Nursing** (rev. September 2018); *Rapid Sequence Intubation Guidelines-Medication Administration by Registered Nurses*, #P-19, **Oklahoma Board of Nursing** (rev. July 24, 2018); *Policy Guideline: Nursing Scope of Practice for the Use of Sedating and Anesthetic Agents*, **Oregon State Board of Nursing** (Feb. 2006); *Policy Statement: Scope of Practice Guide to the Administration of Anesthetic Agents by Registered Nurses*, **Rhode Island Board of Nurse Registration and Nursing Education** (March 17, 2017); *Advisory Opinion #25*, **South Carolina Board of Nursing** (rev. Jan. 2020). *Position Statement 15.8: The Role of the Nurse in Moderate Sedation*, **Texas Board of Nursing** (rev. Jan. 2020). *Advisory Opinion 7.1: Administration of Sedating, Analgesic, and Anesthetic Agents*, **Washington Department of Health, Nursing Care Quality Assurance Commission** (March 13, 2015). *Position Statement: Administration of Anesthetic Agents*, **West Virginia Board of Examiners for Registered Professional Nurses** (rev. March 2020).

including dosing, effects, side effects, and contraindications of the medication; potential complications; and recognizing emergency situations and instituting appropriate nursing interventions.

(c) A qualified airway specialist must be immediately available.

(d) An appropriately credentialed physician, advanced practice registered nurse, or physician assistant must be responsible for pre-rapid sequence intubation assessment of the patient.

(e) The medication must be selected and ordered by an appropriately credentialed physician, advanced practice registered nurse, or physician assistant.

(f) An appropriately credentialed physician, advanced practice registered nurse, or physician assistant must be present at the bedside throughout the rapid sequence intubation.

(g) The RN must not have any responsibilities during rapid sequence intubation other than administration of ordered medications and continuous monitoring of the patient's physiologic parameters, including the implementation of nursing interventions as indicated by patient status.

(h) Appropriate emergency equipment and supplies must be immediately available in the unit, including emergency resuscitation medications, basic and advanced airway and ventilator adjust equipment, cardiac monitor and defibrillation equipment, source for 100% oxygen administration, suction devices, positive pressure breathing device/bag-valve mask, supplemental oxygen, blood pressure cuff, stethoscope, and pulse oximetry.

63. Mr. Tano would administer ketamine as the induction agent during rapid sequence intubation in accordance with all the above criteria. Mr. Tano has been informed that Mayo Clinic-Florida would develop policies and procedures approved by a multidisciplinary team including representatives from pharmacy, medicine, and nursing, whereby ketamine may be administered in the ICU under conditions with which Mr. Tano would comply. As detailed herein, the Mayo Clinic Health System has extensive experience with developing and implementing such policies and procedures.

64. This Board and many others across the country have determined that the administration of low dose ketamine for analgesia is within the scope of practice of an RN, like

Mr. Tano, under conditions like those outlined herein. As set forth in paragraphs 13(a) and 13(b) herein, Mr. Tano would not administer ketamine as an anesthetic. Mr. Tano's training and experience make him qualified to administer low-dose ketamine to non-intubated patients in the ICU, and this activity falls squarely within Florida's definition of professional nursing. Accordingly, this Board should find that the acts described in paragraphs 13(a) and 13(b) are within his scope of practice as an RN.

65. As detailed herein, many boards of nursing across the country have specifically ruled that an RN may administer ketamine or another induction agent during rapid sequence intubation while the qualified practitioner is present but unable to personally inject the agent. While the ketamine dose required for induction is not considered "low dose," boards of nursing in other states have drawn a distinction between administration of the induction agent and administration of anesthesia, finding the latter to be outside the scope of the RN.

66. Because rapid sequence intubation is done on an emergent basis when the clinical presentation of impending respiratory failure is imminent, it is not possible to ensure the availability of at least two properly credentialed physicians or advanced practice providers (the authorized practitioners) to simultaneously perform all three tasks required for rapid sequence intubation: (i) performing the intubation, (ii) administering the paralyzing dose of neuromuscular blocking agent, ***and*** (iii) administering the induction agent (e.g., ketamine). While the authorized practitioner is establishing the airway, the qualified and properly credentialed RN may function as the "third hand" to administer the induction agent so that the authorized practitioner does not have to leave the patient's airway to do so. As several boards of nursing have noted, requiring

the authorized practitioner to use one of their hands to administer the induction agent would compromise patient safety.[64]

67. Accordingly, the boards of nursing cited herein have found that administering the induction agent (e.g., ketamine) is within the RN scope of practice when done at the contemporaneous direction of a physician or other authorized practitioner who is present at the bedside. Under these circumstances, the Rhode Island Board of Nurse Registration and Nursing Education explains that the RN is acting as the practitioner's "third hand."

68. In addition to the numerous boards of nursing cited herein, the American College of Emergency Physicians and several other nationally recognized professional associations state that an RN should be permitted to administer the induction agent during rapid sequence intubation "while under the direct supervision of the ordering provider, with the ordering provider specifying the dosing and administration."[65]

69. As previously noted, the "practice of professional nursing" is defined in Florida law to include "[t]he administration of medications and treatments as prescribed or authorized by a duly licensed practitioner authorized by the laws of this state to prescribe such medications and treatments."[66] Mr. Tano's administration of ketamine during rapid sequence intubation as set forth in paragraph 13(c) falls within this definition. Mr. Tano's training and experience make

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[64] *See, e.g., Advisory Opinion: Anesthetic Agents Administered by Registered Nurses for Limited Purposes: Airway Management*, **Arizona State Board of Nursing** (reaffirmed March 2018); *Position Statement 94-1: Role of the Registered Nurse in the Management of Patient's Receiving Moderate Sedation, Anesthetic Agents or Neuromuscular Blocking (paralytic) Agents For Therapeutic or Diagnostic Procedures*, **Arkansas State Board of Nursing** (rev. May 11, 2017); *Rapid Sequence Intubation Guidelines-Medication Administration by Registered Nurses*, #P-19, **Oklahoma Board of Nursing** (rev. July 24, 2018).

[65] Green, Roback, Krauss, et al, *Unscheduled Procedural Sedation: A Multidisciplinary Consensus Practice Guideline*, 73 **Annals of Emergency Medicine** 5, e59 (May 2019) (organized by American College of Emergency Physicians and endorsed by American Academy of Emergency Medicine, the American Board of Emergency Medicine, the American College of Cardiology, the American College of Medical Toxicology, the American College of Osteopathic Emergency Medicine, the Association of Academic Chairs of Emergency Medicine, the Emergency Medicine Residents' Association, the Emergency Nurses Association, the Society for Academic Emergency Medicine, and the Society for Pediatric Sedation).

[66] § 464.003(19)(b), Fla. Stat.

him qualified to administer ketamine as an induction agent during rapid sequence intubation in the ICU at Mayo Clinic-Florida, as he has previously done at Mayo Clinic-Rochester. Accordingly, this Board should find that the acts described in paragraph 13(c) are within his scope of practice as an RN.

WHEREFORE, Mr. Tano respectfully requests that the Board issue a declaratory statement opining that his administration of ketamine to patients in the Mayo Clinic-Florida ICU under the circumstances set forth in paragraphs 13(a), 13(b), and 13(c) is within his scope of practice as a registered nurse.

Respectfully submitted this 17th day of March, 2021.

Respectfully submitted,

/s/ Jamie A. Klapholz

JOHNSON POPE BOKOR RUPPEL & BURNS, LLP
CYNTHIA A. MIKOS, ESQ.
Florida Bar No.: 0984256
JAMIE A. KLAPHOLZ, ESQ.
Florida Bar No.: 091765
401 E. Jackson Street, Suite 3100
Tampa, FL 33602
Tel: (813) 225-2500
Fax: (813) 223-7118
E-Mail: cynthiam@jpfirm.com
E-Mail: jamiek@jpfirm.com

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the fully executed foregoing has been furnished via e-mail to Deborah B. Loucks, Esq., Senior Assistant Attorney General, at deborah.loucks@myfloridalegal.com; via e-mail to David D. Flynn, Esq., Senior Assistant Attorney General, at david.flynn@myfloridalegal.com; and via facsimile to 850-413-8743 and U.S. Mail to the Florida Department of Health, Agency Clerk, 4052 Bald Cypress Way, Bin A-02, Tallahassee, FL 32399 on this 17th day of March, 2021.

/s/ Jamie A. Klapholz
Attorney

cc: Joe Baker, Jr., Executive Director, Florida Board of Nursing (*via email*)

Petition for Declaratory Statement
Before the Board of Nursing

In re: Ivan O. Tano, RN
_____/

EXHIBIT 1

IVAN O. TANO

OBJECTIVE

I would like a position in ECMO ICU as a Registered Nurse. Building amongst my fundamentals I could provide a deeper knowledge to why we do the intervention we do for our patients, while also explaining to families to better their anxiety levels during this stressful time. Being an ECMO nurse would allow my 5yrs+ experience be enhanced and provide a stronger team player for my team, the unit, while also being a stronger nurse to the company. I think growth is always important for the mind, as well as humanity. As someone currently wanting to grow roots in the community, this opportunity provides a deeper resource that can facilitate care, knowledge, communication with fellow peers.

SKILLS SUMMARY

Bilingual, punctual, and enthusiastic worker who learns quickly and can adapt easily to new responsibilities. Accountable for planning, implementing, evaluating and communicating all phases of nursing care for assigned patients and their families.

EDUCATION

Capella University, Minneapolis, MN **06/2017**
Bachelor of Science in Nursing (BSN)
Rasmussen College, Mankato, MN **03/2015**
Associates of Applied Science in Professional Nursing
Broward College, Davie, FL **05/2012**
Associates in Arts (AA)

RELATED EXPERIENCE

Mayo Clinic- Jacksonville, FL (RN, MICU)

- CRRT (NXStage) also doing intra-op during liver transplant
- Reprioritizing throughout shift between 1-3 patients at a time
- Trending Vitals, adjusting to expected lab changes based on disease process (DKA, Sepsis, MODS, ARDS)
- Adjusting to rapid changes to practice and protocols related to COVID-19
- COVID-19 and all new intricacies of disease process
- Team player (willing to help, teach, pickup shift, learn, and provide open communication for a strong workforce, work environment)
- Open to criticism, while also providing solutions when discussing a complaint. (Speaking up with upper management for the team during COVID response breakdown while being split amongst 3 floors)
- Discussing essentials supplies, better methods of handling emergency communication
- Asked to speak to the Board about Ketamine as a Mayo Clinic representative by Nurse Administration

IVAN O. TANO – CONTINUED

Mayo Clinic – Rochester, MN (RN, Medical/ Surgical/ Transplant ICU)

- Completed FCCN (Fundamentals of Critical Care Nursing)
- Completed FCCS (Fundamentals of Critical Care Support) in coordination with Society of Critical Care Medicine (2019-2023)
- Trending of deteriorating patients vitals, providing interventions while calling rapid response while helping on general care floors
- Liver/Kidney/Pancreas transplant (monitoring and trending vitals)
- Oncology Patients (assessing multiple disease process, monitoring proper vitals and labs)
- Working with multi-disciplinary groups, coordination of care
- Teaching of disease process to patients and family members
- Floated to other ICU's in anticipation of cares
- Understanding of deteriorating patients, and calling rapid response while helping on general care floors

Mayo Clinic Health System - Mankato, MN (RN, ICU)

- Handling of vents (RSI, Weaning, ABG Interpretation, Troubleshooting)
- Blood pressure monitoring with proper titrating of medications.
- Understanding of complexity of Sepsis, ARDS, DKA, MODS, etc.
- Respond quickly and efficiently during an emergent situation (teamwork, communication, coordination) (Code, massive transfusion)
- Understanding complexity of disease, while following vital trends with proper interventions.
- Coordination of multidisciplinary team, proper patient and family teaching
- Bilingual (Used for translating and communicating with growing Hispanic population)
- Completion of ECCO Training

Mayo Clinic Health System - Mankato, MN (RN, Medical Surgical- Orthopedics, Neurology, Trauma)

- Provide leadership, effectively communicating, delegating, mentoring and teaching
- Skilled at working in a multidisciplinary team for the best outcomes of our patients
- Delegating to empower our aids in understanding while also developing confidence
- Creating an atmosphere of teamwork, respect, and always available to translate and empower fellow team members
- Assessing patients, while also working with families for the best care of their loved ones.

CERTIFICATIONS

- BLS for Healthcare Providers (CPR & AED) Program 2013-Present
- ACLS certified, American Heart Association 2016-Present

OTHER

- ePraisals have demonstrated I'm eager to learn and always willing to help the team, and colleagues
- Bilingual English/Spanish (speak, read, write)
- Ability to cope with difficult situations with empathy and maturity
- Professional demeanor and attentive to detail
- Sense of professionalism and humor to create a team aura

Petition for Declaratory Statement
Before the Board of Nursing

In re: Ivan O. Tano, RN
_____/

EXHIBIT 2

Generic Index | Trade Index | Home Page

Ketamine

Ketalar

AGE SPECIFICATIONS	ADULT	PEDIATRIC	NEONATAL
IV INFUSION:	YES	YES	NO
IV PUSH:	YES	YES	NO
MONITORING REQUIREMENTS			
HEART RATE AND RHYTHM:	**Intermittent doses:** 0.3 mg/kg (max 30 mg single adult dose; 10 mg for peds) with total of dose (bolus plus continuous) not to exceed 0.3 mg/kg in one hour; HR 5 minutes, and 30 minutes, after each dose **Infusion or PCA:** **Initiation and with dose changes**: Continuous ECG or HR baseline, every 30 minutes x 2, then every 1 hour x 4. **Maintenance**: HR every 4 hours during infusion or PCA. **Mayo Clinic Depression Center Ketamine Clinic ONLY**: 0.5 mg/kg infused over a minimum of 40 minutes. HR baseline, then every 15 minutes until IV is removed.		
BLOOD PRESSURE:	**Intermittent doses:** 0.3 mg/kg (max 30 mg single adult dose; 10 mg for peds) with total of dose (bolus plus continuous) not to exceed 0.3 mg/kg in one hour; BP 5 minutes, and 30 minutes, after each dose. **Infusion or PCA:** **Initiation and with dose changes**: BP baseline, every 30 minutes x2, then every 1 hour x 4. **Maintenance**: BP every 4 hours during infusion or PCA. **Mayo Clinic Depression Center Ketamine Clinic ONLY**: 0.5 mg/kg infused over a minimum of 40 minutes. BP baseline, then every 15 minutes until IV is removed.		
RESPIRATORY:			

	Intermittent doses: 0.3 mg/kg (max 30 mg single adult dose; 10 mg for peds) with total of dose (bolus plus continuous) not to exceed 0.3 mg/kg in one hour; RR 5 minutes, and 30 minutes, after each dose. **Infusion or PCA:** **Initiation and with dose changes**: Pulse oximetry: continuous. RR and Sedation Assessment (RASS): baseline, every 30 minutes x2, then every 1 hour x 4. **Maintenance**: Pulse oximetry: continuous. RR and Sedation Assessment (RASS): every 4 hours during infusion or PCA. **Mayo Clinic Depression Center Ketamine Clinic ONLY**: 0.5 mg/kg infused over a minimum of 40 minutes. RR baseline, then every 15 minutes until IV is removed. Modified Observer's Alertness/Sedation scale (MOAA/S) baseline, then every 15 minutes until IV is removed.
INFUSION PUMP REQUIRED:	YES
IV PUSH CAREGIVER LEVEL:	RN
HAZARDOUS:	NO
CHEMO RN:	NO
EXTRAVASATION RISK:	NO
MD MONITORING:	NO
Filter / Tubing:	

COMMENTS: When using for sedation, refer Sedation home.

ADMINISTRATION: Adult push rate: over at least 60 seconds; max 30 mg without ready access to ventilator support and continuous ECG.
Peds push rate: 0.5 mg/kg/minute; maximum 10 mg without ventilator and continuous ECG..
Adult/Peds infusion rate: **Maximum total dose (bolus plus continuous) not to exceed 0.3 mg/kg in one hour without ventilator or continuous ECG.**
P&T approved preferential dispensing and use of Ketamine bags (not syringes) for non-PCA infusions.
For **Mayo Clinic Depression Center Ketamine Clinic use only**: 0.5 mg/kg infused over a minimum of 40 minutes

INFUSION DRUGS

- **Infusion Standard Concentration:** 1 mg/mL
  (Titrated Only) Peds:1 or 2 mg/mL

- **Fluid Restricted Concentration:** ICU: 2 mg/mL or 10 mg/mL
(Formulary Acceptable)

- **Standard Units for Ordering:**
(Infusions)

See CSPG Link: 9/30/2020

http://mayoweb.mayo.edu/ps-ivpg/ivpages/ivpg_kl/ketamine.htm

See Link:

http://intranet.mayo.edu/charlie/moderate-sedation-rst/policy/

Generic Index | Trade Index | Home Page

P and T Committee	IV Administration Guidelines
Contact the Enterprise IVAG workgroup with questions	