

Alaska State Board of Nursing Advisory Opinion

Explanatory Statement about Advisory Opinions

An advisory opinion adopted by the Alaska Board of Nursing is an interpretation of what the law requires. While an advisory opinion is not law, it is more than a recommendation. In other words, an advisory opinion is an official opinion the Alaska Board of Nursing regarding the practice of nursing as it relates to the health and safety of the Alaska healthcare consumer. Facility policies may restrict practice further in their setting and/or require additional expectations related to competency, validation, training and supervision to assure safety of their patient.

IV Drug Administration of Ketamine for the Treatment of the Post-Operative, Opioid Tolerant Adult Patient by a Registered Nurse (RN).

This advisory opinion CAN NOT be construed as approval for the RN (non-CRNA) to administer an anesthetic agent for the purposes of anesthesia.

Background: Ketamine is identified by the Federal Drug Administration as an intravenous anesthetic agent. However, within the last 10 years, although not licensed for this purpose, low-dose Ketamine has also been found to aid in providing analgesia in the treatment of post-operative pain for the opioid tolerant patient. Recent clinical studies suggest that in the majority of opioid tolerant post-operative patients, the use of low-dose Ketamine is a useful adjunct to standard practice opioid analgesia. That is, the use of Ketamine concurrent with reduced levels of opioids results in a decrease in the total amount of opioid medication required to manage post-operative pain. As a result, the risk of respiratory depression secondary to increased opioid administration is reduced. ^{1, 2, 3, 4, 5, 6, 7, 8}

The intent of administering low-dose Ketamine is to provide analgesia for the treatment of post operative pain in the opioid tolerant adult patient. This procedure is performed by RN's with additional education, skills, and demonstrated competency.

The use of Ketamine in the post-operative, opioid tolerant adult patient does carry risks. Psychomimetic side effects may include out of body experiences, hallucinations, delusions, and delirium. Ketamine increases heart rate and blood pressure, and when given in anesthetic doses, can cause respiratory depression. Additionally, there are no effective reversal agents to counteract Ketamine. Therefore, the Board of Nursing for the State of Alaska finds it acceptable for an RN to administer low-dose ketamine post-operatively to opioid tolerant adult patients *only* if all of the following criteria are met:

- I. Ketamine is ordered by an "Appropriate Provider". For the purposes of this advisory opinion, an "Appropriate Provider" is defined as either an anesthesia provider or an appropriately credentialed licensed independent practitioner (LIP). In order for an RN to be involved in the administration and monitoring of a low-dose Ketamine infusion on a post-operative, opioid tolerant adult patient, appropriate providers must:
 1. Evaluate (assess) the patient candidates for low-dose Ketamine prior to prescribing & initiating the infusion.
 2. Use a patient-specific order for the Ketamine infusion not to exceed a maximum dosage of 1.0 mg/kg/hr.
 3. Administer the initial low-dose Ketamine infusion, and the initial dose after an infusion rate increase.
 4. Not use "standing" orders, "verbal" orders, or "telephone" orders as a means of increasing infusion rates, and perform in-person assessments prior to any infusion rate increases. Providers from the same service may perform assessments, but only in cases of documented emergencies may providers from outside the service perform assessments.

5. Ensure the patient is re-evaluated by the prescribing provider (or a provider from the same service) at least every 24 hours for the duration of the Ketamine infusion.
- II. Pharmacy: All low-dose Ketamine infusions will be prepared *only* by the pharmacy. Ketamine is a schedule III drug and will only be administered in a locked IV infusion control device.
 - III. Facility: The facility will develop a written policy and procedure specifying the RNs role in the administration of low-dose Ketamine. This policy must clearly define the difference between the pain management dose and the anesthetic dose and the policy and procedure must always be easily accessible to the RN. The facility will also provide RNs with competency education about the safe administration and monitoring of Ketamine and maintain records to show initial and ongoing competence.
 - IV. Registered Nurse: The following criteria must be followed whenever an RN is involved in the administration and monitoring of an opioid tolerant, post-operative adult patient receiving a Ketamine infusion. RNs must:
 1. Demonstrate competency through completion of a competency course covering low-dose Ketamine administration and monitoring.
 2. Be ACLS certified.
 3. Have a patient/nurse ratio no greater than 3:1, where only one patient is receiving a Ketamine infusion.
 4. Maintain continuous monitoring of the patient's respirations, heart rate & rhythm, and oxygen saturation.
 5. Maintain intermittent monitoring of patient's blood pressure per unit policy.
 6. Evaluate patients for alertness, orientation, and sedation (using an appropriate sedation scoring system) per unit policy.
 7. Monitor patients for psychomimetic adverse effects such as: hallucinations, out of body experiences, delusions, and/or delirium per unit policy, immediately reporting any of these adverse effects to the ordering provider, or provider from the same service.
 8. Infuse low-dose Ketamine through its own dedicated IV line or via the most proximal port of a carrier solution using port-less IV tubing (to avoid an inadvertent Ketamine bolus). RNs will NOT bolus low-dose Ketamine.

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