

Ketamine Infusion Therapy *Considerations Checklist*

Ketamine infusion therapy involving the administration of a single infusion or a series of infusions for the management of psychiatric disorders (e.g., major depressive disorder, post-traumatic stress disorder, acute suicidality) or chronic pain has grown over several decades. Ketamine is a noncompetitive *N*-methyl-D-aspartate (NMDA) receptor antagonist that has traditionally been used for the induction and maintenance of anesthesia. As ketamine infusion clinics in healthcare facilities become available, certified registered nurse anesthetists (CRNAs) are providing ketamine infusion therapy services as part of the patient's management and could be in collaboration with psychiatric clinicians, including psychiatric mental health registered nurses (PMH RNs), and psychiatric mental health advanced practice registered nurses (PMH APRNs). PMH RNs and PMH APRNs are collectively referred to as PMH Nurses.

This checklist provides considerations for administration of ketamine infusion therapy and is not intended to be all inclusive.

- Review and complete applicable elements of the AANA [Considerations for Adding New Activities to Individual CRNA Scope of Practice](#)
- Review the AANA and APNA [Joint Position Statement on Ketamine Infusion Therapy for Psychiatric Disorders](#)
- Review the AANA [Ketamine Infusion Therapy for Psychiatric Disorders and Chronic Pain Management, Practice Considerations](#)
- State scope of practice
 - Review applicable state nursing, medical, drug and facility statutes and regulations to identify existing and anticipated practice barriers.
 - Verify whether the state board of nursing or other relevant board has issued a related opinion applicable to RNs and/or CRNAs.
 - Establish State Association of Nurse Anesthetists (SANA) relationship(s), as appropriate, with SANA board of directors, committees, and lobbyist/lawyer.

Determine employment arrangement

- Employee of facility or independent contractor (AANA member login required)
 - [Starting Your Own Business Checklist](#)
 - [CRNA Independent Contractor Agreement Checklist](#)
 - [CRNA Employment Agreement Checklist](#)
- Establish contract for services (AANA member login required)
 - [Anesthesia Services Agreement Checklist](#)
 - [Anesthesia Services Agreement](#) (template; adapt to employment needs)

- Malpractice insurance
 - Who will provide insurance?
 - Verify coverage for specific procedures
- Determine the arrangement for consultation with psychiatric mental health providers

Considerations for clinic infrastructure, operations, and policies

- Market assessment
 - Is there a need for this service in your area?
 - What type of patient volume can you expect?
 - Identify competitors within your area.
 - What are your barriers?
 - What are the costs?
- Process for referrals
 - Establish relationships with primary care and specialty clinicians
 - Will a collaborative arrangement be established with local clinicians?
 - What clinicians can make referrals (e.g., MD, APRN, PA)?
 - Patient scheduling process
- Identify clinic personnel and outline roles
 - Consider PMH Nurses to be part of the treatment team to assess mental health status, monitor, and care for the patient prior to and after the ketamine infusion.
- Accreditation
 - Who accredits the facility?
 - What are the applicable standards?
- Identify requirements for credentialing within the facility
- Staffing needs
 - Consider psychiatric mental health staff
 - Evaluate staff education, skills, and expertise
 - Is additional training required for clinic staff?
 - Develop initial and ongoing competency assessment
 - Onboarding process
- Clinic location and equipment
 - Private areas for assessment
 - Accessibility to patients
 - Comfortable infusion rooms
 - Recovery area
 - Determine cost-benefit of equipment based on patient safety and clinic needs
 - Required equipment
 - Standard equipment
 - Monitoring equipment
 - Emergency equipment readily available

- Crash cart
- Emergency airway management

- ❑ Patient eligibility
 - Consultation with primary and and/or specialty clinicians (e.g., psychiatric mental health provider) with knowledge of ketamine and treatment resistant conditions to evaluate for suitability
 - Understand contraindications to ketamine
 - Patient selection criteria
 - Physical status 1 and 2 are typically candidates for ketamine infusion
 - Physical status 3 and 4 may be considered, but require additional precautions

- ❑ Documentation
 - Electronic or paper patient record
 - Procedure-specific forms
 - Patient Self-assessment tools
 - Patient Health Questionnaire-9 (PHQ9)
 - Quick Inventory of Depressive Symptomatology (QIDs)
 - Hamilton Rating Scale for Depression (HAM-D)
 - Other anxiety rating scales
 - Document pertinent information on the patient's healthcare record in an accurate, complete, legible, and timely manner
 - Informed consent
 - Include risks, benefits, and potential side effects, as well as alternative therapies and their risks, benefits, and potential side effects
 - Manage treatment expectations
 - AANA [Informed Consent for Anesthesia Care](#)
 - AANA [Documenting Anesthesia Care](#)

Treatment and Management Policy Considerations

- ❑ Consult ketamine package insert and current literature for drug-specific considerations, contraindications, dosages, side effects, etc.

- ❑ Ketamine therapy is not a first line treatment
 - Consider only after failure of standard medical treatment, as determined during the consultation visit prior to first treatment.

- ❑ Pre-treatment infusion consultation
 - History and physical
 - Patient receives medical clearance
 - General medical clearance
 - Specialty medical clearance (e.g., cardiac, neurological) as necessary based on history
 - Pre-procedure labs (e.g., liver function tests, creatinine)
 - Establish process for infusion and medication orders
 - Evaluate patient for contraindications to ketamine
 - Conduct anesthesia patient assessment and evaluation

- Consider NPO status
 - Administer pre-medication, as appropriate, to mitigate adverse events
 - Consider trial infusions to assess for responsiveness, efficacy, and tolerability of side effects, prior to prolonged daily treatment. Typically, patients receive a three treatment (every other day) challenge to assess responsiveness to the ketamine infusion.
 - Initial challenge
 - Initial round of infusions
 - Consider reassessment after initial round of 3 treatments.
 - Administration of ketamine by the anesthesia professional
 - Dosage is weight based consistent with existing research
 - Volume
 - Frequency
 - Patient monitoring
 - Vital signs
 - Consciousness
 - Heart rate
 - Blood pressure
 - Respiratory rate
 - Oxygen saturation
 - Level of consciousness
 - End-tidal CO₂
 - ECG monitoring
 - Signs/symptoms of ketamine toxicity
 - Establish process of significant side effects
 - Physician and/or anesthesia professional immediately available
- Recovery
- Establish recovery criteria
 - Patient must be monitored until recommended recovery criteria are met
 - Establish recovery/discharge criteria
 - Recovery to pre-administration baseline levels
 - Cardiovascular function
 - Airway patency
 - Oxygen saturation
 - Patient reflexes and speech
 - Respiratory rate
 - Blood pressure
 - Patient is awake
 - Assess and treat nausea and vomiting
 - Recommend psychiatric evaluation post treatment to assess effects, suicidality, etc.
 - Patient and caregiver education
 - Patient sent home with appropriate driver/caregiver
- Follow-up
- Treatment communication with patient care team, referring clinician, primary care clinician, etc.

- Establish standardized testing tool for the facility to monitor progress
 - Psychological questionnaires
 - Pain assessment tools
- Treatment regimen - # infusions administered over # days
- Maintenance infusion(s)

- Drug disposal and diversion prevention
 - Implement proper drug disposal and wasting measures consistent with federal, state, and local law to prevent drug diversion and misuse
 - AANA recommendations on drug diversion prevention can be found in [Addressing Substance Use Disorder for Anesthesia Professionals](#)

- Continuous Quality Improvement
 - Process and outcome metric tracking
 - Tracking of adverse events and outcomes
 - Quality improvement committee and process
 - Patient satisfaction

- Reimbursement
 - Verify insurance coverage (e.g., private, Medicare, Medicaid)
 - Determine requirements for paper or electronic claims
 - Many insurers may not cover treatment
 - Establish fee schedule
 - Establish collection method for self-pay patients
 - Understand how clinic is billing for your services
 - Educate billing staff
 - Identify applicable billing codes

AANA Resources

- [AANA Ketamine Infusion Therapy](#) resource page:
- [Ketamine Infusion Therapy for Psychiatric Disorders and Chronic Pain Management, Practice Considerations](#)
- AANA and APNA [Joint Position Statement on Ketamine Infusion Therapy for Psychiatric Disorders](#)
- [The Role of the CRNA on the Procedure Team, Position Statement](#)
- AANA Professional Practice, practice@aana.com, 847-655-8870

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