

SPECIALIZED NUTRITIONAL SUPPORT

- 1. REASON FOR ISSUE.** This Veterans Health Administration (VHA) Handbook provides procedures relating to specialized nutritional support, including the use of Nutrition Support Teams (NSTs), Total Parenteral Nutrition (TPN), and enteral nutrition.
- 2. SUMMARY OF CONTENTS/MAJOR CHANGES.** This is a new Handbook outlining procedures, administration, and responsibilities for the VHA specialized NST.
- 3. RELATED DOCUMENT.** VHA Directive 1109.
- 4. RESPONSIBLE OFFICE.** National Director, Nutrition and Food Services (111N) and National Director, Surgical Services (111B), of the Office of Patient Care Services (11) are responsible for the contents of this Handbook. Questions may be addressed to 202-273-8516.
- 5. RESCISSIONS.** VHA Manual M-2, Part I, Chapter 33, is rescinded.
- 6. RECERTIFICATION:** This VHA Handbook is scheduled for recertification on or before the May 31, 2011.

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SPECIALIZED NUTRITIONAL SUPPORT

1. PURPOSE

This Veterans Health Administration (VHA) Handbook provides procedures relating to specialized nutritional support, including the use of Nutrition Support Teams (NSTs), Total Parenteral Nutrition (TPN), and enteral nutrition. It is published to ensure that quality is consistent and NST programs, where established, meet the unique needs of the at nutritional risk veteran population.

2. BACKGROUND

Identification and treatment of patients and residents who are critically malnourished or at nutritional risk is a high priority concern at each Department of Veterans Affairs (VA) medical facility. Interdisciplinary communication, education and cooperation are important for the provision of optimum delivery of nutrition support. It is essential that appropriate resources, including necessary staffing be provided to the nutrition support effort. Each facility strives to provide the best nutrition support possible, based on the facility's resources and the level of nutrition support needed by the patient.

3. SCOPE

a. Each VA medical center treating inpatients needs to have an active NST providing specialized nutrition support, such as Parenteral Nutrition (PN). A properly-functioning NST can produce significant reduction in PN associated complications, improve morbidity and mortality rates, reduce expenses and increase the cost-effectiveness of treatment. Use of a NST can have important benefits for enteral nutritional support as well, compared to non-team management.

b. To assist in the provision of safe, optimal nutrition to patients and residents, each medical facility must develop policies and procedures for interdisciplinary guidelines to address all nutrition support issues. *NOTE: At a minimum, each facility needs to have a minimum of two health care professionals designated to nutrition support.*

4. RESPONSIBILITIES OF MEDICAL FACILITY DIRECTOR

The medical facility Director is responsible for:

a. Ensuring there is an interdisciplinary NST to coordinate the provision of specialized nutrition support.

b. Determining the NST leadership. *NOTE: It is recommended that the leadership role of the team be a Registered Dietitian (RD) with full collaboration by an assigned physician.*

c. Ensuring the facility NST, or other designated entity, develops policies and procedures for interdisciplinary guidelines to address all nutrition support issues, and ensuring that these

policies and procedures are reviewed and revised periodically to reflect current standards and ensure optimal patient care.

- d. Ensuring the facility infection control policy addresses PN and enteral feedings.
- e. Ensuring that home PN is provided by the facility or is contracted to a home Intravenous (IV) infusion company.
- f. Ensuring that an enteral formulary, approved by the Nutrition Committee or other approving entity, is published. The use of a formulary facilitates providing optimal nutritional support in the most cost-effective manner and is based on the needs of the facility.
- g. Ensuring the health care professionals responsible for the ordering, preparation, and administration of EN have the resources available to document compatibility and stability of any additives.
- h. Ensuring that protocols for the continuity of care for the patient being discharged on home tube feeding are published and implemented.

5. NUTRITION SUPPORT TEAM (NST)

- a. A NST is a consulting and support group to the primary physician. It plays an active role in the management of patients and residents receiving enteral nutritional support, nutrition education and training, and performance improvement.
- b. One member of the team will be the Registered Dietitian. Other suggested members of the NST include a Physician (Physician Assistant (PA), Nurse Practitioner (NP), or use a licensed practitioner), Registered Pharmacist, and Registered Nurse. Each facility will need to identify leadership for the NST.
- c. The NST is responsible for:
 - (1) Incorporating the most current research, technology and scientific findings in an effort to provide optimal nutrition care and evidence based nutrition support.
 - (2) Assisting the primary physician in the identification and treatment of patients and residents at nutritional risk, while at the same time incurring the least amount of patient and resident risk and cost.
 - (3) Directing, coordinating, and managing the provision of PN.
 - (4) Assisting in strengthening the facility's efforts in nutritional screening and assessment,
 - (5) Providing education of other VA medical center staff, trainees, and students.
 - (6) Actively monitoring every inpatient receiving PN.

6. PARENTERAL NUTRITION (PN)

a. PN is a potentially life-saving or life sustaining form of treatment for patients and residents who are unable to receive adequate nutrition via the gastrointestinal tract. It is defined as the provision of required nutrients by the intravenous route to replenish or maintain nutritional status. It can be administered centrally, delivered into a large diameter vein, usually the superior vena cava adjacent to the right atrium. It can also be given peripherally, usually IN the hand or forearm. The NST needs to be consulted prior to initiating PN; however, designated staff members can be appointed to initiate PN as necessary, when the nutrition support team is unable to evaluate the patient.

b. Because of its invasive nature and composition, PN can have severe adverse effects, particularly if provided inappropriately or without proper precautions. PN is provided in a variety of settings including intensive care, acute care, and at a residence or in the patient's home.

c. If PN is provided by the medical facility the following criteria must be met:

(1) There must be a functioning NST.

(2) There must be written policies for providing PN including those in reference to necessary facilities, staff qualifications and competence, protocol, and staff education, to include:

(a) The preparation of the PN solution is to be conducted according to United States Pharmacopeia (USP) regulations.

(b) Staff has qualified expertise in catheters, pumps, formulas, solutions, and central venous catheter insertion techniques.

(c) All guidelines related to NS are to be formulated with input from a knowledgeable physician, Registered Dietitian, Registered Pharmacist, and a Registered Nurse.

(d) Other area to be addressed:

1. Indications and contraindications,
2. Metabolic aspects of therapy,
3. Administration of nutrients,
4. Compounding of solutions,
5. Monitoring of patients and residents,
6. Complications and their preventions,
7. Nursing guidelines,

8. Methods of terminating therapy,
9. Performance improvement,
10. Patient education, and
11. Home PN, if appropriate.

(3) There must be continuing staff education and/or training. This may be provided didactic courses in PN and/or EN, and/or team dynamics and attendance at courses or conferences sponsored by national professional organizations such as the American Society of Parenteral and Enteral Nutrition (ASPEN), the Mayo Clinic, American Dietetic Association (ADA) (Dietitians in Nutrition Support), and Harvard Medical School. **NOTE:** *Opportunities for continuing medical education to maintain expertise should be available to NST members at least annually.*

7. HOME PN

- a. Home PN is provided by VA medical centers or contracted to a home IV infusion company. It needs to be coordinated through the collaborative efforts of the referring physician, home care provider and nutrition support practitioner(s).
- b. A comprehensive psychosocial assessment must be conducted by a social worker. This assessment is to include family relationships and support systems, adjustment to PN, coping ability, home environment, and the need for follow-up care.

8. PERFORMANCE MONITORS

- a. Performance improvement monitors need to be established and periodically reviewed for monitoring and evaluating patients and residents receiving nutrition support. Examples include: documentation of indications for PN; consultation by the NST before initiation of PN; adherence to PN protocol; monitoring of complications; and the assessment of appropriateness, safety, and effectiveness of treatment (e.g., healing of wounds/decubitus ulcer(s), improvement in serum albumin, prealbumin, nitrogen balance, and catheter infection rates).
- b. The Nutrition Support dietitian or other Registered Dietitian must participate in the monitoring of the tube fed patient per facility protocol. Use of evidence-based interdisciplinary treatment protocols is essential for consistent high-quality care, treatment and management of the enterally fed patient.
- c. Monitoring needs to include, but is not limited to:
 - (1) Response to treatment;
 - (2) Gastrointestinal, metabolic, infectious and mechanical complications. Determination of the cause and consideration of preventive and treatment measures to reduce the likelihood of recurrence will be sought for each complication.

(3) Outcome measures to determine efficacy of treatment (e.g., the stabilization or increase in weight or body mass index, serum albumin, or prealbumin, and the healing of wounds and/or decubitus ulcers).

9. ENTERAL NUTRITION (EN)

a. In general, EN is necessary when spontaneous oral intake is not medically feasible, needs to be supplemented, or is contraindicated though the remaining gastrointestinal function is sufficient for digestion and absorption for overall improvement in patient nutritional status. The patient's diagnosis, prognosis, and personal wishes must be taken into account before initiating tube feeding. EN should only be initiated in the hospital or outpatient clinical setting.

b. The overall system includes formula, formula containers, administration sets, pumps and feeding tubes. The choice of feeding system needs to take into consideration the VA formulary, nutrition requirements, cost, convenience and safety.

c. The published facility EN formulary must provide available nutrition product descriptions including detailed nutrient composition and suggested indications for use. *NOTE: The use of a formulary facilitates providing optimal nutritional support in the most cost-effective manner and is based on the needs of the facility.*

d. **Enteral Feeding Tubes.** The use of tubes specifically designed for EN is required. Patients and residents requiring long-term enteral feeding (e.g., more than 3 weeks) should be considered for a feeding gastrostomy or jejunostomy.

10. MEDICATION ADMINISTRATION

The health care professional responsible for the ordering, preparation and administration of EN must have resources available that document compatibility and stability of any additives. When medications are to administered via the feeding tube, the following must be implemented:

- a. A pharmacist needs to be consulted to evaluate the patient's medication profile.
- b. Feeding tubes should be flushed with 20-30 milliliters of warm water before and after medication administration.
- c. Liquid formulations need to be used when available; however, medications that need to be crushed are to be finely pulverized and dispersed well in warm water.
- d. Compatible medications need be administered separately with flushing between dosages to avoid tube occlusion. *NOTE: Flushing with water after administration should prevent occlusion of the feeding tube.*
- e. Medications containing sorbitol or hyperosmolar medications are to be diluted with water to avoid gastrointestinal side effects.

f. Modular nutrition components used to increase calories, protein or fiber can be added as indicated.

g. Colorants (food coloring or methylene blue dye) must not be added to EN formulations due to potential toxicity.

h. To avoid chemical instability and/or food-drug interactions, do not add medications to enteral formulas or enteral feeding systems.

11. INSERTION OF FEEDING TUBES AND VERIFICATION OF PLACEMENT

a. A potentially life-threatening complication of feeding tube insertion is nasopulmonary intubation, therefore, X-ray confirmation of tube placement is mandatory for all patients or residents prior to using the tube for enteral feedings, medications, or water.

b. Documentation of verification of tube placement will be recorded in the medical record.

c. The determination as to who will be clinically privileged to insert feeding tubes is determined locally.

12. DELIVERY

a. There are four methods of delivery for enteral feedings. Patient tolerance and the overall clinical situation dictate which delivery method to use.

(1) Intermittent (gravity drip feeding),

(2) Continuous (pump controlled drip feeding),

(3) Cyclical (feedings are cycled on 12-18 hours then off for 6-12 hours), and

(4) Bolus (a form of intermittent feeding administered via syringe).

b. Gastric feedings may be administered intermittently or continuously with gastric residual checks recommended at 4-hour intervals. Intestinal feedings must be administered continuously via pump (see subpar. 15g).

c. The continuous feeding method decreases the risk of aspiration, dumping, and diarrhea.

d. The intermittent and bolus methods are acceptable in ambulatory patients and residents having intact stomachs and low risk for aspiration.

13. TUBE-FEEDING ORDERS

Tube feeding orders must include:

a. Product name,

- b. Volume of feeding or flow rate,
- c. Free water boluses,
- d. Checking and evaluation of residuals, and
- e. Orders relating to positioning of patients or residents.

14. HOME TUBE FEEDING PROGRAMS

Each facility is responsible for developing its own protocols for the continuity of care for the patient being discharged on home tube feeding. A formalized, multi-disciplinary approach between Medicine, Pharmacy, and Nutrition and Food Services needs to include:

- a. The development of criteria to determine the appropriateness and duration of each prescription,
- b. The mechanism for monitoring tolerance,
- c. Any necessary formula adjustments,
- d. Supplying refills, and
- e. Scheduling appropriate Home Health, and/or clinic follow-up.

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STANDARDS OF PRACTICE FOR NUTRITION SUPPORT PHYSICIANS (NSPS)

Minimum qualifications are required of all NSP's to ensure competence to practice Specialized Nutrition Support (SNS). This includes a demonstration of competence, which must include documentation of:

1. Membership in the American Board of Medical Specialties (ABMS) or American Osteopathic Association.
2. Eligibility or certification in anesthesiology, family medicine, primary care, internal medicine, obstetrics and gynecology, pediatrics or surgery **or** certification by one of the specialty boards accepted by the Department of Veterans Affairs (VA);
3. Certification as a Nutrition Support Physician by the National Board of Nutrition Support Certification, Inc., **or**
 - a. Certification as a Physician Nutrition Specialist by the American Board of Physician Nutrition Specialists; **or**
 - b. Completion of a residency or fellowship program, which includes formal education and training in SNS; **or**
 - c. Provision of a minimum of 15 percent medical practice time devoted to the practice of SNS for at least 2 years.
4. Active participation in the nutrition support committee of a hospital (**NOTE: If the NST is newly established and/or the physician is new and desires to participate with the NST, the physician should obtain experience or guidance from any active NST within the VA system.**); **or** participation in a health care entity responsible for development, implementation and evaluation of protocols for administration of SNS.
5. Involvement as the primary physician, or as the primary consultant, for administration of SNS to at least twenty patients and residents annually.

NOTE: NSPs are encouraged to have an active membership in professional societies devoted to the promotion of safe and effective SNS. Part of the state continuing medical education (CME) credits can be in SNS.

STANDARDS OF PRACTICES FOR NUTRITION SUPPORT (NS) PHARMACISTS

The practice of specialized NS varies with the individual pharmacist's position, education and practice environment. Since certain minimum qualifications are required of all who practice specialized nutrition support, the NS Pharmacist must document competence to practice specialized nutrition support, which must include:

1. Substantial practice time devoted to the practice of Specialized Nutrition Support (SNS).
2. Documentation of **one** of the following criteria:
 - a. Completion of an educational training program that includes SNS.
 - b. Active participation in the NS service or committee of a health care entity responsible for development, implementation and evaluation of protocols for administration of SNS.
 - c. Active participation (e.g., leader, committee member) in one or more professional societies devoted to the promotion of safe and effective SNS.
 - d. Certification by the Board of Pharmaceutical Specialties as a Board Certified Nutrition Support Pharmacist (BCNSP).

STANDARDS OF PRACTICE FOR NUTRITION SUPPORT (NS) NURSES

Minimum qualifications are required of each nutrition support (NS) Nurse to ensure competence to practice Specialized Nutrition Support (SNS). This includes a demonstration of competence, which must include documentation of:

1. Significant responsibility in the practice of nutrition support, including but not limited to: direct patient care, consultation, patient advocacy, case management, administration or management, performance improvement, education and/or research.
2. Documentation of **one** of the following criteria:
 - a. Completion of an education program (e.g., clinical practicum, fellowship) that includes SNS.
 - b. Active participation in the nutrition support service or committee of a health care entity responsible for development, implementation, and evaluation of protocols for administration of SNS.
 - c. Active participation (e.g., leader, committee member) in one or more professional societies devoted to the promotion of safe and effective SNS.
 - d. Certification by the National Board of Nutrition Support.

STANDARDS OF PRACTICE FOR NUTRITION SUPPORT (NS) DIETITIANS

1 Each nutrition support (NS) Dietitian must be a clinical, Registered Dietitian (RD) to ensure competence to practice Specialized Nutrition Support (SNS). At a minimum, this includes a demonstration of competence, which must include documentation of:

a. Advanced knowledge about nutrition assessment and patient monitoring in order to evaluate therapeutic efficacy

b. Two years of clinical nutrition experience; **or**

(1) Six months of experience on an established NST; **or**

(2) An advanced degree in human nutrition and/or physiology **and** 1 year clinical nutrition experience.

2. It is recommended, but not required, that the RD have at least **three** of the following:

a. Certification by the National Board of Nutrition Support Certification, Inc., as a Certified Nutrition Support Dietitian (CNSD).

b. Formal education, training or continuing professional education in nutrition support.

c. A minimum of 30 percent professional practice time devoted to the area or field of nutrition support.

d. Participation in the health care institution's nutrition support activities.

e. Membership in professional societies devoted to nutrition support. **NOTE:** *Membership in CNSD is preferred, but not required.*