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Veterans Health Administration
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M-2, Part I
Chapter 33

July 11, 1991

1. Transmitted is a new chapter to Department of Veterans Affairs, Veterans Health Administration Manual M-2, "Clinical Affairs," Part I, "Administration," Chapter 33, "Specialized Nutritional Support."

2. This new chapter provides policy relating to specialized nutritional support including use of NSTs (Nutrition Support Teams), TPN (Total Parenteral Nutrition) and tube/enteral nutrition.

3. Filing Instructions

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4. RESCISSIONS: VHA Circular 10-90-061, dated May 23, 1990.

James W. Holsinger, Jr., M.D.
Chief Medical Director

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33.01 SPECIALIZED NUTRITIONAL SUPPORT POLICY

National professional organizations including ASPEN (the American Society for Parenteral and Enteral Nutrition) and the American Society for Clinical Nutrition recommend a interdisciplinary group to coordinate provision of specialized nutrition support. A properly functioning NST (Nutrition Support Team) can produce significant reduction in TPN (Total Parenteral Nutrition) 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. It is VA (Department of Veterans Affairs) policy that each VA medical center that provides TPN will have a formal, active, interdisciplinary NST as described in paragraph 33.02. VA medical centers that provide TPN will also meet the requirements described in paragraph 33.03. A NST is also recommended for VA medical centers that provide only enteral nutritional support.

33.02 NST (NUTRITION SUPPORT TEAM)

a. A NST is most often a consulting and support group to the primary physician. One of the objectives of a NST is to utilize the most current technologies to assist the primary physician in the identification and treatment of patients at nutritional risk while at the same time incurring the least amount of patient risk and cost.

b. Identification and treatment of patients who are critically malnourished or at nutritional risk is a high priority concern that each VA medical center shall address. It is essential that appropriate resources including necessary staffing are provided to the nutrition support effort.

c. In addition to its role in supporting TPN, the NST will, to the extent possible, assist in strengthening the facility's efforts in nutritional screening and assessment and play active roles relating to the management of patients receiving enteral nutritional support, nutrition education and training and quality assurance.

d. The following disciplines are to be represented on the NST: a physician; registered dietitian; pharmacist; and registered nurse. Other disciplines including a social worker and dentist are also encouraged to participate.

33.03 TPN (Total Parenteral Nutrition)

a. TPN (Total Parenteral Nutrition) is defined by ASPEN as "the provision of required nutrients by the intravenous route to replenish or maintain nutritional status". TPN is a potentially life-saving or life sustaining form of treatment for patients who are unable to receive adequate nutrition via the

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gastrointestinal tract. However, because of its invasive nature, it can have severe adverse effects particularly if provided inappropriately or without proper precautions. Patients may require prolonged or even permanent TPN to sustain life. Medical conditions of some of these patients may be otherwise sufficiently stable to permit discharge from the medical center and provision of TPN at home.

b. A VA medical center that provides TPN will meet the criteria as follows:

(1) A formal, active NST as described in paragraph 33.02 is functioning.

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(2) Guidelines for providing TPN are developed and followed including necessary facilities, staff qualifications, protocol, and staff education, as follows:

(a) Facilities. A laminar flow hood must be present to ensure proper preparation of TPN solution.

(b) Staff qualifications. Expertise in catheters, pumps, formulas, solutions, etc., will be represented by one or more disciplines on the NST. The following are recommended for specific disciplines and are not mandated requirements:

1. Physician. The NST physician will be knowledgeable about nutrition, malnutrition, metabolism, the digestive system, and the rationale, indications and methodologies for enteral and parenteral nutritional support. Ideally, the physician will have completed residency training in internal medicine, general surgery, or another specialty related to nutrition support, received additional fellowship training in clinical nutrition, be certified by one or more specialty boards recognized by the American Board of Medical Specialties and/or the American Board of Nutrition, have participated on an NST previously, and devote a significant amount of professional time to the practice of specialized nutritional support. Personal expertise and clinical privileges in the placement of in-dwelling central venous catheters may be advantageous.

2. Pharmacist. The NST pharmacist will be a Registered Pharmacist with either a minimum of 2 years of clinical experience including nutrition care or 6 months of NST experience. The pharmacist will be knowledgeable in using aseptic technique to prepare intravenous admixtures, drug/nutrient interactions, interpretation of lab data, and will assist in developing and monitoring the patient's nutritional therapy.

3. Nurse. The NST nurse will be a Registered Nurse with a minimum of 3 to 5 years of medical--surgical experience who is knowledgeable about enteral and parenteral therapies and who is experienced in the monitoring and care of patients receiving all types of nutrition support, including infection control and the care and complications of central venous catheters. Ideally the nurse will have a master's degree in nursing and certification in Nutrition Support Nursing.

4. Dietitian. The NST dietitian will be a clinical Registered Dietitian who is knowledgeable about nutritional assessment and patient monitoring to evaluate therapeutic efficacy and meet one of the following qualifications:

a. Two years clinical experience (having actively participated in nutritional care) plus attendance at conferences, workshops, or individual study concerning nutrition support;

b. Six months experience on an established active NST; or

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c. A recent advanced degree in human nutrition and/or physiology and 1-year clinical experience.

5. Social Worker. The NST social worker will have a master's degree in social work with a minimum of 1-year clinical medical -- surgical experience. The social worker will be knowledgeable of the psychosocial aspects of illness including an understanding of the stressors associated with enteral and parental nutritional support therapy. The

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social worker will be knowledgeable of VA and community resources required to support and assist the TPN patient and caregiver at home.

(c) Protocol. A written protocol or manual relating to general policies concerning TPN must be present at each VA medical center using this form of therapy. This protocol will be formulated with input from a knowledgeable physician, pharmacist, registered nurse, and clinical dietitian. General sections of this protocol will include:

1. Indications and contraindications (provisions on living wills and durable power of attorney for health care, etc., will be honored in the assessment process); Alternate forms of nutritional care, such as enteral nutrition, will be utilized whenever appropriate.

2. Metabolic aspects of therapy.

3. Administration of nutrients.

4. Central venous catheter insertion techniques.

5. Compounding of solutions.

6. Monitoring of patients.

7. Complications and their preventions.

8. Nursing guidelines.

9. Method of terminating therapy.

10. Quality control data collection.

11. List of pertinent references.

If home TPN is provided, a section addressing this will be developed which includes patient education.

(d) TPN Education. NST team training may be provided by the VA Regional NSTT (Nutrition Support Training Team) in cooperation with the VA RMEC (Regional Medical Education Center). Other education and training may be provided by didactic courses in parenteral/enteral nutrition and/or team dynamics sponsored by the VA and attendance at courses and meetings of national professional organizations such as ASPEN and the American Society for Clinical Nutrition. Opportunities for continuing medical education to maintain expertise will be available to NST members at least every 2 to 3 years. One of the responsibilities of an established NST will be in-service education for other VA medical center staff, trainees, and students.

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(3) The VA medical center has administrative controls over initiation of TPN, including patient evaluation by the NST and limiting authority to initiate TPN only to designated staff members when the NST is unable to evaluate the patient.

(4) The NST actively follows every patient receiving TPN.

(5) Home TPN will be provided only by VA medical centers with a hospital TPN program and additional professional expertise in home support. A comprehensive

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psychosocial assessment will be provided. This assessment will include family relationships and support systems, adjustment to TPN, coping ability, home environment and need for followup care.

(6) Quality of care indicators are established for monitoring and evaluating indications for initiating TPN, outcomes of patients who are receiving or have received TPN and evaluating the care provided by the NST. Examples include documentation of indications for TPN, consultation by the NST before initiation of TPN, adherence to TPN protocol, monitoring of complications, and assessment of efficacy of treatment (e.g., stabilization or increase in body mass, healing of decubitus ulcer(s) and improvement in serum albumin). These are integrated into the VA's overall QA (Quality Assurance) Program.

33.04 TUBE/ENTERAL NUTRITION

a. To assist in the provision of safe, optimal nutrition to patients, each VA medical center Nutrition Committee will develop comprehensive interdisciplinary guidelines for tube/enteral nutrition and a tube/enteral nutrition protocol. Involvement of the facility's NST is encouraged. The important aspects of a tube/enteral nutrition protocol are as follows:

(1) Indications and Contraindications. In general, tube feeding is necessary when spontaneous oral intake is not feasible or is contraindicated, though remaining gastrointestinal function is sufficient for maintenance or improvement of nutritional status. Good clinical judgment requires that the patient's diagnosis, prognosis, and personal wishes be taken into account before initiating tube feeding. The ASPEN has outlined clinical settings where tube/enteral nutrition will be considered (Journal of Parenteral and Enteral Nutrition, Volume 5, 1987, pages 435-39, Guidelines for the use of Enteral Nutrition in the Adult Patient). Provisions of living wills and durable power of attorney for health care, etc., will be honored in the assessment process.

(2) Selection of Feeding System(s). The overall system includes formula containers, administration sets, pumps and feeding tubes. The choice of feeding system will depend on cost, convenience and safety.

(3) Selection of Feeding Tubes. The use of tubes and catheters specifically designed for enteral nutrition is encouraged. Soft, fine-bore (#8-14 Fr.) nasoenteric tubes appear to enhance patient comfort in comparison with harder tubes although they may be more difficult to insert, are probably dislodged more easily, and are more costly. Consideration will be given to the use of such soft, fine-bore tubes for those patients in need of long term (e.g., 2 weeks) nasoenteric feeding. Patients requiring nasoenteric feeding indefinitely (e.g., more than 6 weeks) will be considered for feeding gastrostomies or other forms of enterostomies which would be preferable to the use of nasal feeding tubes. Tube jejunostomies and needle catheter jejunostomies are also effective modalities which can be used to provide enteral nutritional support to selected patients. The choice of feeding tubes will maximize patient comfort without compromising safety.

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(4) Medication Administration. Use of soft, fine bore nasoenteric tubes for the administration of crushed oral dosage forms of medication is discouraged due to the high incidence of tube obstruction from this practice. If the feeding tube must be utilized for the delivery of medication, commercially available or extemporaneously prepared liquid formulations will be employed. When the liquid medication has been administered via

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the feeding tube, the patient will be monitored for drug tolerance, diarrhea, and therapeutic response. In addition, the potential for interaction between the feeding formula and medication (e.g., phenytoin) will be considered as well as the potential for gastrointestinal side effects associated with the administration of hyperosmolar medications via the feeding tube.

(5) Insertion of Feeding Tubes and Verification of Placement. Each medical center will determine who will be clinically privileged to insert feeding tubes. A potentially life-threatening complication of feeding tube insertion is nasopulmonary intubation. Those patients at risk need to be identified. Consideration of mandatory X-ray confirmation of tube placement in the elderly, critically ill or the neurologically impaired patient who cannot recognize or react to a misplaced tube is recommended to prevent the infusion of feeding into the lung or aspiration. For patients not at risk for nasopulmonary intubation, other acceptable methods for verification of tube placement need to be outlined. For all patients, documentation of verification of tube placement will be written in the medical record.

(6) Use/Problems with PEGs (Percutaneous Endoscopic Gastrostomies). A number of serious complications (e.g., peritonitis) have been reported following PEG placement. It is, therefore, strongly recommended that a collaborative effort be made between the NST and those services providing PEG placement. Such a coordinated effort prior to, during, and after PEG placement will decrease complications related to:

(a) Inappropriate placement,

(b) Technical aspects,

(c) Immediate post-PEG care, and

(d) Long-term care needs.

For those patients at high risk for aspiration pneumonia, consideration will be given to gastroduodenal or gastrointestinal tube placement via PEG or via endoscope. However, aspiration pneumonia can occur even if the tube is in the duodenum or jejunum and precaution against aspiration must be continued. Thus, it is strongly recommended that post-PEG nursing care protocols be developed and implemented.

(7) Formulas. A formulary based on generic product descriptions for nutritions for nutrition products will be established and information on the nutrient content and appropriate use will be communicated. Attention will be given to the calories per volume to meet the patient's nutritional needs. Micro-nutrient content and other components may differ among commercial formulations. Therefore, patients' nutritional status will be reviewed when formula changes are made. Also, changing formulas may result in altered status with drugs such as warfarin. Preparation, labeling, distribution, storage, and

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hang-times procedures need to be determined with the emphasis on preventing bacterial contamination.

(8) Administration. Patient tolerance and the clinical situation will dictate which delivery method to use. There are 4 methods of delivery:

(a) Bolus,

(b) Intermittent,

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(c) Continuous (pump controlled drip feeding), and

(d) Cyclical (where patients are fed continuously for 12 to 18 hours and then disconnected for 6 to 12 hours).

The bolus and intermittent methods are better in ambulatory patients with intact stomachs and no risk of aspiration. The continuous method decreases the risk of aspiration, dumping and diarrhea. Isotonic formulas at full strength are appropriate for the majority of patients. Center-wide guidelines for feeding regimens assist in assuring that patients receive adequate amounts but are not overfed.

(9) Tube-Enteral Feeding Orders. To ensure consistent and quality care, strong consideration will be given to standardized orders. Orders will include specific type of feeding tube, verification of tube placement, calories/cc., number and volume of feedings or flow rate, checking and evaluation of residuals and orders relating to positioning of patients (e.g., elevation of head of bed, etc.).

(10) Management/Monitoring. It is recommended that the NST actively participate in the management of the tube-enterally fed patient. Interdisciplinary treatment protocols are essential for consistent high quality management. Patients need to be monitored for response to treatment and also for gastrointestinal, metabolic, infectious, and mechanical complications. Determination of cause and consideration of preventive and treatment measures to reduce the likelihood of recurrence will be sought for each complication. Outcome measures are necessary to determine efficacy of treatment, (e.g., stabilization or increase in body mass, healing of decubitus ulcer(s), improvement in albumin).

(11) Quality Assurance. The quality and appropriateness of care for patients receiving tube-enteral nutrition will be monitored, evaluated and documented (e.g., indications for tube feeding, verification of tube placement prior to administration of formula, and adherence to local protocol).

(12) Education and Training. It is recommended that the NST take a leading role in the education and training of staff, trainees, and students in enteral nutrition support.

(13) Home Tube-Enteral Feeding Programs. With the growing awareness that specialized nutrition support will continue in some patients after stabilization of their medical problem, home tube-enteral nutritional care is recognized as a cost-effective alternative to hospitalization. A formalized coordinated approach is essential. This will include the development of criteria for the provision of formulas to patients being discharged to the home or long-term care setting. Each facility will also determine duration of prescription, mechanism for monitoring tolerance, supplying refills and scheduling appropriate clinic follow-up. Provisions will be made to provide

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monitoring of patient nutritional intake, metabolic monitoring, and tolerance of home tube-enteral feeding.

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