NUTRITION THERAPY

- **1. REASON FOR ISSUE:** This Veterans Health Administration (VHA) Handbook provides procedures relating to nutrition therapy, including Oral Nutrition Supplements (ONS), Enteral Nutrition (EN), Parenteral Nutrition (PN), and the administration and responsibilities for the VHA Nutrition Support Team.
- **2. SUMMARY OF CHANGES:** This revised VHA Handbook includes:
- a. Renaming the handbook as Nutrition Therapy (from "Specialized Nutrition Support") to reflect current scientific terminology,
 - b. The incorporation of criteria for ONS;
 - c. The inclusion of bariatric nutrition standards for nutrition support; and
- d. The addition of specific nutrients and current scientific references to support evidence-based decision making for Veterans receiving nutrition therapy.
- 3. RELATED ISSUES: VHA Directive 1109 and VHA Handbook 1109.02.
- **4. RESPONSIBLE OFFICE:** National Director, Nutrition and Food Services (10P4E) of the Office of Patient Care Services (10P4) and the National Director, Surgical Services (10NC2), are responsible for the contents of this Handbook. Questions may be addressed by the National Director, Nutrition and Food Services at (202) 391-9662.
- **5. RESCISSIONS:** VHA Handbook 1109.05, dated May 10, 2007 is rescinded.
- **6. RECERTIFICATION:** This VHA Handbook is scheduled for recertification on or before the last working day of December 2018.

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NUTRITION THERAPY

- 1. PURPOSE: This Veterans Health Administration (VHA) Handbook provides procedures and guidance relating to Veteran centered nutrition therapy, including the use of Oral Nutrition Supplements (ONS), Enteral Nutrition (EN), Parenteral Nutrition (PN), and function of Nutrition Support Teams. This Handbook is published to ensure that quality of nutrition care is consistent and Nutrition Support Teams, where established, meet the unique needs of the Veteran population at nutritional risk.
- **2. BACKGROUND:** Identification and treatment of Veterans who are malnourished or at risk for becoming nutritionally compromised are high-priority concerns at each Department of Veterans Affairs (VA) medical facility. Interdisciplinary communication, education, and cooperation are important for the optimal provision of nutrition support. It is essential that appropriate resources, including necessary staffing, be provided to the nutrition support process. Each facility strives to provide the best nutrition therapy, based on the facility's resources and the level of nutrition support needed by the patient.

3. SCOPE:

- a. VHA medical facilities treating inpatients must have an active Nutrition Support Team providing nutrition support therapy for Veterans requiring PN. A properly-functioning Nutrition Support Team may: produce significant reductions in PN-associated complications, improve morbidity and mortality, reduce expenses, and increase the cost-effectiveness of treatment. Use of a Nutrition Support Team has important benefits for EN support as well, compared to non-team management.
- b. To assist in the provision of safe, optimal nutrition therapy to Veterans, each medical facility must develop policies and procedures for interdisciplinary guidelines to address the nutrition support process. At a minimum, each facility must have no less than two health care professionals designated to nutrition support, including at least one Registered Dietitian (RD).

4. **DEFINITIONS**:

- a. <u>Adult Malnutrition or Undernutrition</u>. Adult undernutrition typically occurs along a continuum of inadequate intake or increased requirements, impaired absorption, altered transport, and altered nutrient utilization. Because no single parameter is definitive for adult malnutrition, the identification of 2 or more of the following six characteristics is recommended for diagnosis:
 - (1) Insufficient energy intake, to include:
- (a) Less than (<) 75 percent of estimated energy requirement for more than (>) 7 days in the context of acute illness or injury.
- (b) < 75 percent of estimated energy requirement for more than or equal to (\ge) 1 month in the context of chronic illness.

- (c) < 75 percent of estimated energy requirement for ≥ 3 months in the context of social or environmental circumstances.
 - (2) Weight loss, to include:
 - (a) $\geq 1-2$ percent in 1 week.
 - (b) ≥ 5 percent in 1 month.
 - (c) ≥ 7.5 percent in 3 months.
 - (d) \geq 10 percent in 6 months.
 - (e) ≥ 20 percent in 1 year.
 - (2) Mild to Moderate loss of muscle mass.
 - (3) Mild to Moderate loss of subcutaneous fat.
- (4) Mild to Moderate localized or generalized fluid accumulation that may sometimes mask weight loss.
 - (5) Diminished functional status as measured by hand-grip strength.
- b. **<u>Drug-Nutrient Interaction.</u>** Drug-Nutrient Interaction means an event, which results from a physical, chemical, physiologic, or pathophysiologic relationship between a drug and nutrient status, nutrient(s), or food in general that is clinically significant if drug response is altered or nutrition status is compromised.
- c. <u>Enteral Misconnection</u>. An enteral misconnection is an inadvertent connection between an enteral feeding system and a non-enteral system such as a vascular access device, peritoneal dialysis catheter, tracheostomy, or medical gas tubing.
- d. <u>Enteral Nutrition (EN).</u> EN means feeding provided through the gastrointestinal tract through a tube, catheter or stoma that delivers nutrients distal to the oral cavity.
- e. <u>Immunocompromised.</u> Immunocompromised refers to patients whose immune systems' ability to fight infectious disease is compromised or absent. Immunocompromised may include, but is not limited to, critically ill patients, patients with presumed alteration to their gastrointestinal (GI) barrier function or patients with an immune compromising diagnosis.
- f. <u>Nutrition Assessment</u>. Nutrition Assessment means a comprehensive approach to diagnosing nutrition problems that uses a combination of the following: medical, nutrition, and medication histories; physical examination; anthropometric measurements; and laboratory data.

- g. <u>Nutrition-focused Physical Exam.</u> A Nutrition-focused Physical Exam means a physical assessment observing for the presence or absence of physical signs suggestive of nutrient deficits or excess.
- h. <u>Nutrition Support Process.</u> The Nutrition Support Process means the assessment, diagnosis, ordering, preparation, distribution, administration, and monitoring of nutrition support therapy.
- i. <u>Nutrition Support Specialist.</u> A Nutrition Support Specialist is a health care professional with specialized training and/or experience in nutrition support therapy. The specialized training may include independent or formalized education endeavors. Nutrition Support Specialists may be recognized with specialty certifications.
- j. <u>Nutrition Support Team.</u> A Nutrition Support Team is an interdisciplinary group that should include physicians, nurses, dietitians, clinical pharmacists, or other health care professionals with expertise in nutrition who manage the provision of nutrition support therapy.
 - k. Nutrition Support Therapy. Nutrition support therapy means parenteral nutrition or EN.
- 1. <u>Nutrition Therapy.</u> Nutrition Therapy means a component of medical treatment that includes oral, enteral, and parenteral nutrition.
- m. <u>Oral Nutrition Supplements (ONS).</u> ONS are commercially prepared nutritionally enhanced products used to supplement the intake of individuals who cannot meet nutrient needs by diet alone.
- n. <u>Parenteral Nutrition (PN).</u> PN is the intravenous administration of nutrients, which can be delivered two ways:
- (1) **Central.** PN delivered into a large diameter vein, usually the superior vena cava adjacent to the right atrium; it is also referred to as Central Parenteral Nutrition (CPN).
- (2) **Peripheral.** PN delivered into a peripheral vein, usually the hand or forearm; it is also referred to as Peripheral Parenteral Nutrition (PPN).
- **5. RESPONSIBILITIES OF THE VETERANS INTEGRATED SERVICES NETWORK** (**VISN**) **DIRECTOR:** The VISN Director is responsible for ensuring that each medical center in the VISN develops policies and criteria for provision of ONS in compliance with the national dietary supplements contract and appropriate for the population needs of malnutrition.
- **6. RESPONSIBILITIES OF THE MEDICAL FACILITY DIRECTOR:** The Medical Facility Director is responsible for:
- a. Appointing an interdisciplinary Nutrition Support Team (see Appendices A-E) to coordinate the provision of Veteran-centered nutrition support therapy and determining the Nutrition Support Team leadership. *NOTE:* It is recommended that the leadership role of the

team be a RD, who is a Nutrition Support Specialist with full collaboration by an assigned physician.

- b. Ensuring the facility Nutrition Support Team, or other designated entity, develops facility policies and procedures to address the nutrition support process, and ensuring that these policies and procedures are adhered to, and reflect current standards and ensure optimal patient care.
- c. Ensuring that each medical center uses standardized documentation in the EHR to note a patient's need for nutrition intervention through oral nutrition supplementation including reassessment and outcome goals.
- d. Ensuring that home PN is provided by the facility or is contracted to a home intravenous (IV) infusion company in accordance with facility policy
- e. Ensuring that an ONS and EN formulary is published. ONS and EN products must be prescribed based upon those products that are on the National Contract. Products that are not on the national contract and prescribed for either inpatients or outpatients must be justified consistent with facility policies.
- f. Ensuring the nutrition support specialists, who are responsible for the ordering, preparation, and administration of EN and PN, have the resources available to verify compatibility and stability of any additives.
- g. Ensuring that protocols outlining the process for the provision of continuity of care for the patient being discharged on home EN or home PN are published and implemented.
- **7. RESPONSIBILITIES OF THE FACILITY CHIEF OF STAFF:** The facility Chief of Staff is responsible for:
- a. Ensuring a physician with expertise in nutrition support therapy is appointed as a member or consultant to the Nutrition Support Team (see Appendix B).
- b. Ensuring nutrition support therapy issues are discussed in accordance with facility committee reporting structure, including the Medical Center Nutrition Committee (MCNC) or other committee that addresses clinical nutrition issues (i.e., Pharmacy and Therapeutics (P&T) Committee.).
- **8. RESPONSIBILITIES OF THE NURSE EXECUTIVE OR CHIEF, NURSING SERVICE:** The Nurse Executive or Chief, Nursing Service is responsible for:
- a. Ensuring a nurse with expertise in nutrition support therapy is appointed as a member or consultant to the Nutrition Support Team (see Appendix D).
- b. Ensuring that nursing policies that pertain to nutrition support therapy reflect current nursing practice and clinical nutrition support guidelines.

- c. Ensuring that nursing education on nutrition support therapy is offered in nursing orientation and competency is assessed on an annual basis.
- **9. RESPONSIBILITIES OF THE CHIEF OF PHARMACY SERVICE:** The Chief of Pharmacy Service is responsible for:
- a. Ensuring a clinical pharmacist with expertise in nutrition support therapy is appointed as a member or consultant to the Nutrition Support Team (see Appendix C).
 - b. Ensuring safe PN compounding or procurement of PN by a contract infusion company.
- c. Ensuring that the medical facility or pharmacy policies that pertain to nutrition support therapy reflect current clinical pharmacy and clinical nutrition support guidelines.
- d. Ensuring collaboration with the Clinical Nutrition Section of Nutrition and Food Services to establish an ONS and EN formulary that is consistent for inpatients and outpatients.
- **10. RESPONSIBILITIES OF THE CHIEF, NUTRITION AND FOOD SERVICES:** The Chief, Nutrition and Food Services is responsible for:
- a. Ensuring a RD with expertise in nutrition support therapy is appointed as a member of the Nutrition Support Team (see Appendix E).
- b. Ensuring that the medical facility or nutrition policies that pertain to nutrition support therapy reflect current clinical nutrition support guidelines (Appendix A).
- c. Ensuring collaboration with the clinical pharmacists to establish an ONS and EN formulary that is consistent for inpatients and outpatients.
- d. Ensuring RDs receive nutrition support therapy training opportunities. *NOTE:* It is highly recommended that at least one RD is certified as a nutrition support specialist.
- e. Ensuring that a training program for medical staff and other health care professionals is established by a RD, who is a nutrition support specialist.

11. NUTRITION SUPPORT TEAM:

- a. The Nutrition Support Team is a consulting and support group for the primary physician that:
- (1) Plays an active role in the management of Veterans receiving nutrition support therapy, specifically PN;
 - (2) Provides nutrition support therapy education and training; and
 - (3) Identifies issues for performance improvement.

- b. One member of the team must be an RD. Other suggested members of the Nutrition Support Team include: a Physician, a Physician Assistant (PA) or Nurse Practitioner (NP), a Clinical Pharmacist or Clinical Pharmacy Specialist (CPS), and a Registered Nurse (RN).
 - c. The Nutrition Support Team is responsible for:
- (1) Incorporating the most current research, technology, and scientific findings in an effort to provide Veteran-centered optimal nutrition care and evidence-based nutrition support therapy.
- (2) Assisting the primary physician in the identification and treatment of Veterans at nutritional risk, while at the same time incurring the least amount of Veteran risk and cost.
 - (3) Directing, coordinating, and managing the provision of PN.
 - (4) Advancing current clinical nutrition practices.
- (5) Providing nutrition support therapy education to other VA medical facility staff, trainees, and students.
- (6) Actively monitoring every inpatient receiving PN and coordinating outpatient PN, if applicable.
 - (7) Establishing EN and PN performance monitors.

12. INPATIENT ORAL NUTRITION SUPPLEMENTS (ONS) THERAPY:

- a. <u>ONS.</u> A number of Veterans hospitalized in the VA medical system have a significantly-compromised nutrition status as a result of a medical condition, necessitating the use of oral medical nutrition supplements to meet nutrition therapy goals.
- (1) Current research supports the cost effectiveness of ONS for treating malnutrition related to medical conditions and disease states that often result in inadequate oral nutrient intake without ONS.
- (2) Some examples include: oncology diagnoses and ongoing cancer treatment, renal dialysis, increased metabolic need resulting from severe trauma; oral surgery, post-operative gastrointestinal and vascular surgery; acute spinal cord injury, patients with chronic non-healing wounds; malabsorption difficulties (e.g., short-gut syndrome, fistula), and significant, involuntary weight loss. Using ONS in pre-surgical evaluation/preparation programs is another example that would warrant the use of an ONS protocol.
- b. <u>Provision of ONS at each VHA Medical Facility.</u> The provision of ONS at each VHA medical facility is limited to inpatients that meet facility defined nutritional criterion. Medical diagnoses is considered, but ONS prescription is primarily based on nutrition diagnostic criteria. Following initial nutrition assessment and counseling and after a failure of food or diet

management for meeting RD documented nutrient needs, which cannot be met by current oral intake, ONS may be prescribed. Inadequate oral intake alone without a significant medical condition interfering with intake or absorption does not warrant a prescribed oral medical supplement. Prescribing practices of clinicians, RDs, or physicians, as defined by the facility must be aligned with RD established, medical record documented nutrition assessment and goals, with periodic RD monitoring of nutrition status, nutrition goals, and care plan progress. Inappropriate orders and use of commercially prepared nutritional supplements can unduly burden the VA's financial system. Nutrition consults and nutrition intervention/care planning are the first steps in considering use of an ONS (see Appendix F).

- c. **Types of ONS.** There are three basic types of commercially prepared ONS:
- (1) **Complete ONS.** Complete ONS contain balanced delivery of carbohydrates, fats, protein, vitamins and minerals, which are convenient to store and use (i.e., a liquid complete nutritional supplement used for protein-calorie malnutrition (PCM)).
- (2) **Incomplete ONS.** Incomplete ONS provide a single nutrient or multiple nutrients that are not complete nutrition supplements (i.e., a clear liquid supplements use prior to surgery).
- (3) **Modular ONS.** Modular ONS are single nutrient supplements designed to meet specific nutrient deficiencies and limited volume tolerances (i.e., a liquid protein used for wound healing).
 - d. Specialty ONS. Specialty ONS include, but are not limited to, the following:
 - (1) Pre-surgery enteral products to improve healing and recovery (i.e., oncology surgery);
 - (2) Products specific to specialized surgical procedures (i.e., bariatric surgery);
 - (3) Products that support or enhance wound healing (i.e., pressure ulcers);
- (4) Products intended for renal impairment and volume restriction (i.e., kidney failure or congestive heart failure); and
 - (5) Elemental products intended for malabsorptive syndromes.
- e. <u>Commercially-prepared ONS.</u> Commercially prepared ONS are ordered, stocked and issued to inpatients by the Nutrition and Food Services (NFS) (see VHA Handbook 1109.4, Food Service Management Program).
- f. Medical facilities will develop policies and criteria on the provision and use of ONS (See Appendix F.). Inpatient ONS products must be prescribed based upon those products that are on the National Contract and according to facility policy. Differing acuity levels between facilities and specialized programs may require the inclusion of commercial products not on contract in order to meet the Veterans' needs. Many Veterans use medical facilities throughout the VISN and VHA expects continuity of product from inpatient to outpatient use. Each medical center

facility must use the criteria listed in Appendix F, and may include additional criteria, as appropriate, to patient population and needs.

- g. Medical facilities will require documentation in the Electronic Health Record (EHR) of the following:
 - (1) Rationale or justification for provision of ONS;
 - (2) Progress towards meeting defined therapeutic goal(s); and
- (3) A minimum of quarterly nutrition monitoring, or more often, as the medical condition or nutrition status warrants.
- h. When needed, implement in-service programs or information messages for health care providers regarding appropriate patient referrals.
- i. Prevent renewals of authorized prescriptions without re-assessment by a RD at established intervals determined by the VA medical facility.
- j. Supplements must be discontinued after the outcome or goals of nutrition therapy are achieved and the patient is able to consume adequate amounts of food without supplementation with an ONS.
- k. The MCNC or other facility approving entity, and the Nutrition Support Team should establish quality assurance utilization review measures to ensure appropriateness, economical usage, and nutrition monitoring of inpatients receiving ONS.
- 1. Emphasis should be placed on the "food first" philosophy, that stipulates a Nutrition Consult and trial of meeting oral nutrition with regular food and beverage items, prior to the initiation of ONS. The ONS should not be prescribed for the purposes of general nutrition, maintaining or gaining weight in otherwise healthy Veterans.
- m. An EHR Nutrition Consult is required for all patients that are candidates for ONS. The MCNC or other facility approving entity, and the Nutrition Support Team must develop local criterion for candidates to be referred for a comprehensive nutrition evaluation. A comprehensive nutrition assessment may include:
 - (1) Nutrition diagnoses or problems;
 - (2) Nutrition status:
 - (3) Nutrient needs or requirements;
 - (4) Nutrition-focused physical examination;
 - (5) Nutrition goals; and

- (6) Plans for monitoring efficacy of ONS.
- n. Ensure the involvement of interdisciplinary health care team members in the planning, evaluation and implementation of the formulary as appropriate. Representative from the following services, disciplines, and programs who can provide valuable input include, but are not limited to:
- (1) **Clinical Nutrition Services.** Clinical Nutrition Services to assess the nutritional needs of Veterans and to recommend an appropriate ONS, based on identified patient needs or deficiencies.
- (2) **Social Work Service.** Social Work Service to assess the patient's self-management ability, to include assessment of the home environment, community resources, and financial needs if supplementation is planned when patient is discharge.
- (3) **Dental Service.** Dental Service to assess ONS needs related to specific dental or oral surgeries, and as related to oral and dental health and enabling usual food following assessment or supply of needed dentures.
- (4) **Pharmacy Service.** Pharmacy Service to assess the potential for supplement or medication interactions (i.e., anticoagulation therapy).
- (5) **Rehabilitation Service.** Rehabilitation Service to assess the needs of patients requiring rehabilitation (i.e., assess or treat self-feeding difficulties and patient or resident endurance to shop or prepare food, etc.).
 - (6) **Speech pathology.** Speech pathology to assess or treat oral motor issues and dysphagia.

13. INPATIENT ENTERAL NUTRITION (EN) THERAPY

- 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. Pregnant women at less than 20 weeks gestation, who have hyperemesis gravidarum and persistent weight loss despite antiemetic therapy, may be candidates for EN. This should be managed in consultation with an obstetric provider.
- b. <u>Overall Feeding System.</u> The overall feeding system includes formula, formula containers, administration sets, pumps, and feeding tubes. The decision of which feeding system to use must take into consideration the VA formulary, nutrition requirements, cost, convenience, and patient safety.
- c. <u>Sterile Versus (vs.) Tap Water</u>. Sterile water is required for formula reconstitution and medication dilution. Guidelines for use of sterile versus tap water are determined locally. Tap

water or bottled water may be adequate for hydration of the otherwise healthy, immune-competent patient. *NOTE:* Consider sterile water for enteral access device flushes for at-risk patients (may include, but not be limited to: critically ill patients, patients with presumed alteration to their GI barrier function or those with an immune-compromising diagnosis).

- d. <u>Inpatient EN Products.</u> Inpatient EN products must be prescribed based upon those products that are on the National Contract and that provide available product descriptions, to include detailed nutrient composition and suggested indications for use. VA medical facilities may opt to use additional EN products not on the National Contract to meet specialized nutritional needs of patients, as appropriate. This decision is made at the local facility level.
- e. <u>EN Hazardous Analysis and Critical Control Point (HACCP).</u> An EN HACCP plan must be established at each VA medical facility. This plan will be addressed in the facility Specialized Nutrition Support policy in collaboration with Infectious Disease (see Appendix G).
- f. <u>Enteral Feeding Tubes</u>. Enteral feeding tubes specifically designed for EN are required. Veterans requiring long-term enteral feeding (e.g., more than 3 weeks) should be considered for a permanent feeding tube, such as a gastrostomy or jejunostomy tube. If a temporary nasoenteral tube (i.e., nasogastric, nasoduodenal, nasojejunal) is in place for greater than 3 weeks, documentation is required by a clinician justifying why the device must be continued.
- g. <u>Medication Administration</u>. 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 administered by the feeding tube, the following must be implemented:
- (1) Clinical pharmacist consultation to evaluate the patient's medication profile and compatibility with the enteral formula.
- (2) Feeding tubes are flushed with 15-30 milliliters (ml) of sterile water before and after medication administration.
- (3) Liquid formulations are used when available; however, medications that need to be crushed are to be finely pulverized and dispersed well in sterile water. Sustained-released medications are not to be crushed. The medication profile must be reviewed by a pharmacist and provider to collaborate for adjustments.
- (4) Compatible medications are administered separately with flushing between doses to avoid tube occlusion. *NOTE:* Flushing with sterile water after administration should prevent occlusion of the feeding tube.
- (5) Medications containing sorbitol or hyperosmolar medications are diluted with sterile water to avoid gastrointestinal side effects.
- (a) Enteral feedings are known to decrease the bioavailability of some medications and the medication profile should be reviewed by a pharmacist for potential adjustments. An example is

phenytoin. It is recommended to flush the feeding tube with at least 30 ml of sterile water or saline before and after suspension of phenytoin. Monitor serum phenytoin concentration and adjust dosage or recommended that drug suspension of phenytoin be separated from tube feeding for ≥ 2 hours.

- (b) Modular nutrition components used to increase calories, protein or fiber must be added as indicated.
- (c) Colorants (food coloring or methylene blue dye) are contraindicated and must not be added to EN formulations due to potential toxicity. Colorants are contraindicated for the use of checking any types of feeding tubes for questionable aspiration or leakage. If there is a concern, feedings are to be stopped and an x-ray completed to confirm placement.
- (d) To avoid chemical instability or drug-nutrient interactions, do not add medications to enteral formulas.

h. <u>Insertion of Naso-gastric (NG) and Naso-Jejunal (NJ) Feeding Tubes and Verification of Placement</u>

- (1) A potentially life-threatening complication of NG or NJ feeding tube insertion is nasopulmonary intubation; therefore, newly placed NG or NJ feeding tubes require X-ray or electromagnetic image confirmation to ensure proper placement.
- (2) Any blindly-placed NG or NJ feeding tubes require x-ray or electromagnetic image confirmation and documentation to ensure proper placement prior to instillation of fluid, medication or feedings into the tube.
- (3) Existing NG or NJ tubes require bedside verification of tube placement prior to each administration of fluid, medication or feeding into the tube. For example, mark the exit site of a feeding tube at the time of the initial radiograph; observe for a change in the external tube length during feedings. If a significant increase in the external length is observed, use other bedside tests to help determine if the tube has become dislocated. If dislocation is suspected, feedings must be withheld until tube position is verified by the primary provider or designee according to local policy. This verification process should be conducted initially and before every feeding, flushes, and medication administration. Changes in tube position must be clearly documented in the electronic medical record.
- (4) Clinical privileges for appropriate providers to insert NG or NJ feeding tubes are determined locally.

i. Endoscopic or Surgically Placed Feeding Tubes

- (1) Endoscopic Placed Enteral Tubes
- (a) Endoscopically placed enteral tubes may include PEG, PEJ, or PEG/J.

- (b) Indication for percutaneous placed enteral tubes is long-term enteral feedings.
- (c) The type of percutaneous enteral tube placed is dependent upon bowel function and clinical judgment.
- (d) Post insertion, all patients are to remain nothing by mouth (NPO) and nothing per percutaneous feeding tube until the GI physician or surgeon writes special orders for resumption or initiation of feedings.
- (e) Newly inserted percutaneous feeding tubes do not require radiographic confirmation of position.
- (f) For the first 24 hours after placement, a nursing assessment should be documented every 4 hours. This assessment includes:
 - 1. Vital signs
- <u>2</u>. Aspiration of gastric contents (for PEG) with measurement of residual volumes. *NOTE*: Aspiration of gastric contents is not required for PEJ or PEG/J.
- <u>3</u>. Measurement of tube length and inspection for presence of external retaining device ("bumper" or suture).
- <u>4</u>. Assessment for the presence of abdominal distention, abdominal tenderness, signs of pulmonary aspiration of gastric contents, vomiting, and bowel sounds.
 - <u>5</u>. Volume and character of the patient's stool.
- (g) Prior to beginning feeding, nursing staff should confirm proper tube placement by auscultation and assessment of tube length to ensure the tube has not migrated.
- (h) For PEG, check gastric residual volume (GRV) before each feeding. Assess the need to hold feeding if GRV is \geq 500 ml or as specified by the provider. Feedings should be held for GRV >500 ml. The provider must be notified of feeding being held.
- (i) During feeding, whether orally or by the tube, the patient's head is to be elevated to an angle of at least 30 to 45 degrees. This position is to be maintained at least 1 hour after feeding has ceased.
- (j) Care includes daily cleaning of the ostomy site with mild soap and water. Larger amounts of drainage or leakage of enteral feedings from the site should be reported to a provider.
- (k) An external retaining device ("bumper" or suture) should be present at all times to decrease the likelihood of tube migration.

- (l) The RD completes an in-depth nutrition assessment according to facility policy prior to and post percutaneous enteral tube insertion.
- (m) A provider assessment is completed on a daily basis during the acute care stay. Results of the nursing assessment, nutrition assessment, laboratory values, and the patient's physical status are reviewed. Based on these parameters, plans for future care (formula changes, discharge planning, laboratory or radiological studies) are determined. *NOTE:* A multidisciplinary approach is recommended to coordinate discharge planning, patient and caretaker education, and continuity of care.
- (n) When unintentional removal of a percutaneous endoscopic enteral tube occurs, the following steps should be taken:
- <u>1</u>. For an immature tract (tube placed within the past 3 weeks) the patient is to be made NPO, and intravenous (IV) access obtained for hydration if indicated. The appropriate service is to immediately be contacted for further directions.
- <u>2</u>. For a mature tract (tube placed for more than 3 weeks), the appropriate physician should attempt to insert a catheter (Foley or red rubber catheter of comparable or smaller size) through the tract and contact the service that placed the percutaneous enteral tube.
- <u>3</u>. A temporary tube that is inserted to maintain the tube tract must be sutured in a place or have an external retaining device. Temporary tubes are not to be used for feedings or medication administration unless position is confirmed by contrast radiography. The physician must write an order regarding the use of a temporary tube.
- <u>4</u>. A temporary tube should be exchanged for a formal percutaneous enteral replacement tube within 48 hours. The tube position must be confirmed by a Gastrograffin fluoroscopy study, unless it is inserted with endoscopic or radiographic assistance. A qualified radiologist must confirm proper position of the tube before administration of enteral feeding or medications.

(2) Surgically Inserted Enteral Tubes

- (a) Surgically inserted enteral tubes may be either gastric (gastrostomy or G tube) or intestinal (jejunostomy or J tube).
- (b) Indications for surgically-placed enteral tubes include inability to place a percutaneous enteral tube due to inability to illuminate the bowel.
- (c) Post insertion, all patients should remain nothing by mouth (NPO) and nothing by G tube or J tube until the surgeon writes orders for resumption or initiation of feedings.
- (d) Surgically-inserted enteral feeding tubes do not routinely require a radiographic confirmation of position, unless ordered by the surgeon.

- (e) Prior to beginning enteral feedings, the nursing staff should confirm proper tube placement by auscultation and assessment of tube length to ensure that the tube has not migrated.
- (f) Check gastric residuals before each feeding via gastrostomy tube. Hold feeding if residual is ≥ 500 ml or as specified by the provider and notify the provider. Residual volumes do not need to be checked for jejunostomy tubes. Replace aspirated gastrostomy residual up to 500 ml or provider order.
- (g) Care should include daily cleaning of the ostomy site with mild soap and water. If small amounts of purulent debris are present, a 1 percent hydrogen peroxide solution can be used. Larger amounts of drainage or leakage of enteral feedings form the site should be reported to a physician.
- (h) An external retaining device ("bumper" or suture) should be present at all times to decrease the likelihood of tube migration.
- (i) The RD must complete an in-depth nutrition assessment according to facility policy prior to and post surgically of the inserted tube insertion.
- (j) A physician assessment is completed on a daily basis during the acute care. Results of the nursing assessment, nutrition assessment, laboratory values, and the patient's physical status must be reviewed. Based on these parameters, plans for future care (formula changes, discharge planning, laboratory or radiological studies) will be determined. *NOTE:* A multi-disciplinary approach is recommended to coordinate discharge planning, patient and caretaker education, and continuity of care.
- (k) When unintentional removal of a surgically-inserted enteral feeding tube occurs, the following steps should be taken:
- <u>1</u>. For an immature tract (tube placed within the past 3 weeks), the patient is to be made NPO, and intravenous access obtained for hydration. The surgical service that placed the enteral tube is to be immediately contacted for further directions. Reinsertion of a tube is not to be attempted.
- <u>2</u>. For a mature tract (tube placed > 3 weeks), the surgical service that placed the tube should be contacted for further directions. If the appropriate surgical provider cannot be contacted within 30 minutes, according to facility policy, the non-surgeon should attempt to insert a replacement catheter (e.g., red rubber catheter or comparable or smaller size) through the tract, then the patient needs to be further evaluated.
 - 4. All replacement tubes must be sutured in place or have an external retaining device.
- <u>5</u>. After reinsertion, tubes are not to be used for administration of enteral feedings or medication until the position is confirmed by contrast radiography. Tubes that are inserted with endoscopic or radiographic assistance do not require contrast radiography. A qualified radiologist must confirm proper position of the tube before the tube can be used for feeding or

for the administration of medications and appropriate orders must be written regarding use of the tube.

- j. EN Orders. EN orders must include:
- (1) Enteral feeding device used (i.e., NG tube, PEG, J-tube)
- (2) Method of enteral nutrition delivery. The methods of delivery for enteral feedings are described in subparagraphs 13j(2)(a) through (d). Patient tolerance and the overall clinical situation dictate which delivery method to use.
- (a) Intermittent (gravity drip feeding, i.e., 300 milliliters (ml) administered slowly over 30 minutes);
 - (b) Continuous (pump-controlled drip feeding);
 - (c) Cyclical (i.e., feedings are cycled on 12-18 hours then off for 6-12 hours); and
 - (d) Bolus (a form of intermittent feeding administered by syringe).
 - (3) Product name.
 - (4) Volume of feeding or flow rate.
- (5) Free water boluses. Specify the type of water (sterile or tap), volume, and interval for administration.
- (6) Checking and evaluation of gastric residuals; gastric feedings may be administered intermittently or continuously with gastric residual volume (GRV) according to facility policy. Abrupt cessation of enteral feeding upon overt regurgitation or aspiration is appropriate. GRV of 200-500 ml should stimulate a step-wise approach to assess the potential of GI intolerance. Intestinal feedings should be administered continuously or cyclically by pump. *NOTE:* According to ASPEN EN Practice Recommendations, it is suggested, as a result of ambiguity of GRV, that enteral feedings should not be stopped for residual volumes less than 500 ml, particularly in the absence of other signs and symptoms of gastro-intestinal intolerance including emesis, distention, or constipation.
 - (7) Orders relating to positioning (i.e., degree of head elevation).
- (8) Oral intake orders (for example: NPO, supplemental oral foods or beverages permitted, or oral medications) as follows:
- (a) <u>EN Labels.</u> All EN formula administration containers (bags, bottles, and syringes must have a standardized label affixed which reflects the following four elements of the order form:
 - <u>1</u>. Patient demographics:

- <u>2</u>. Formula type:
- 3. Enteral delivery site or access; and
- <u>4</u>. Administration method including the individuals responsible for preparing and hanging the formula, and the time and date that the formula is prepared and hung.
- (b) <u>EN Administration.</u> (see Appendix G for HACCP guidelines regarding EN administration) The EN label should be compared with the EN order to check for accuracy before administration of EN and documented in the electronic medical record.
 - (c) <u>Prevention of Enteral Misconnections</u>. To prevent enteral misconnections:
 - <u>1</u>. Ensure good lighting.
 - 2. Trace the lines and ensure that the lines are appropriate and secure prior to starting EN.
 - 3. Avoid the use of luer devices when administering EN.
 - (d) Feeding Tube Occlusions
- <u>1</u>. For prevention of feeding tube occlusions adhere to protocols that call for proper flushing of feeding tubes during feedings and before and after medication administration.
 - <u>2</u>. Facility policies must address protocol for tube occlusions. Be aware that:
 - <u>a</u>. Water is superior to cranberry juice or carbonated beverages.
- <u>b</u>. If water fails to resolve the occlusion, it is recommended that evidence-based methods be included in the protocol (i.e., bicarbonate and pancrealipase, Clog Zapper ®).

14. INPATIENT PARENTERAL NUTRITION (PN) THERAPY:

- a. PN is a potentially life-saving or life-sustaining form of treatment for Veterans who are unable to receive adequate nutrition through the gastrointestinal tract. The Nutrition Support Team is 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, sub-acute, long-term care 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 Nutrition Support Team. Members of the team function in accordance with standards of practice for their discipline. Team members have qualified expertise and are competent in their knowledge of catheters, pumps, solutions, and central venous catheter insertion techniques.
- (2) Written Policies and Procedures for the Provision of PN must be Established. The policies must address all areas of PN management including assessment for PN, ordering and administrating, safety and stability, staff qualifications and competencies, staff education, and quality assurance of nutrition support therapy. All policies and procedures related to PN are to be formulated with input from all members of the Nutrition Support Team.
- (3) **Assessment for PN Therapy.** All efforts to optimize enteral nutrition must be used prior to consideration of PN. Timing of PN therapy should be considered on a patient to patient basis. Evidence supports waiting at least 7 days to initiate PN in a previously well-nourished patient if EN cannot be initiated or advanced. However, if a patient is nutritionally compromised at the time of admission and EN is contraindicated, initiation of PN should be considered earlier than 7 days to avoid further nutrition compromise.
- (a) <u>Nutrition Assessment</u>. Nutrition assessment must be completed and documented within a time frame specified by local policy. Elements of the assessment include:
- <u>1</u>. Relevant anthropometric, biochemical, clinical, and pharmacological data; diet history; nutrition diagnosis; nutrition support goals; indications for PN; assessment of appropriate route; nutrition needs, including calorie, protein, fluid, and electrolyte and micronutrient requirements and recommended PN formulation. *NOTE:* A nutrition-focused physical exam is also recommended.
- <u>2</u>. Route of PN, PN formulation, and response to therapy must be monitored frequently for adequacy and appropriateness. PN must be adjusted according to the patient's clinical condition.

(b) Indications for PN Therapy:

- <u>1</u>. Non functioning GI tract (for example: intestinal obstruction, mesenteric ischemia, intractable vomiting, ileus intestinal hemorrhage).
- <u>2</u>. High output proximal fistula (>500ml a day) or distal fistula intended to be closed with complete bowel rest.
- $\underline{3}$. Require long-term (>10 days) supplemental nutrition because the patient is unable to meet daily energy, protein, and other nutrient requirements through oral or enteral feedings.
- <u>4</u>. Prolonged inadequate nutrition (less than 50 percent estimated needs for more than 7 days).

- <u>5</u>. Any of the following: malabsorption, massive small bowel resection, diseases of the small bowel, radiation enteritis, intractable diarrhea, intractable vomiting, diffuse peritonitis, intestinal obstruction, paralytic ileus, and gastrointestinal ischemia.
- <u>6</u>. Hyperemesis gravidarum in pregnant women prior to 20 weeks gestation with persistent weight loss despite antiemetic therapy in consultation with an obstetric provider.
 - (c) Contraindications to PN Therapy. Contraindications to PN therapy include:
 - 1. Functioning GI tract.
 - 2. Lack of vein access.
 - 3. Hemodynamic instability.
- <u>4</u>. Tolerance of at least 25-50 percent oral or EN or anticipated resumption of oral or EN within 7 days.
 - <u>5</u>. Treatment goals exclude use of artificial nutrition.

d. Route of Therapy

- (1) The route selected for providing nutrition support therapy must be appropriate for the patient's medical condition, safety, efficacy, and consideration of patient preference.
- (2) CPN, or often referred to as total parenteral nutrition TPN, contains all of the necessary macro and micronutrients making it a hyperosmolar solution that must be delivered through a central or large diameter vein (internal jugular, subclavian, peripherally inserted central catheter (PICC)). *NOTE:* Administration of CPN using a femoral line is not recommended due to increased infection risk.
- (3) PPN has a lower dextrose and amino acid content than CPN. In order to be administered through a peripheral vein, a PPN solution cannot exceed 900 milliosmole (mOsm) per liter. Additional characteristics of PPN include:
 - (a) Good peripheral venous access.
 - (b) Tolerance of large fluid volumes (approximately 3 liters).
- (c) No indication of renal or liver compromise, severe metabolic stress, severe malnutrition, or high nutrient or electrolyte needs.
- (4) Planned for short term use; PPN is not appropriate for patients requiring parenteral therapy longer than 2 weeks.

- e. <u>Ordering PN Therapy</u>. According to the American Society for Parenteral and Enteral Nutrition (ASPEN) Safe Practices Parenteral Nutrition, the PN label must be standardized and include:
- (1) Base formula, electrolyte additives, micronutrients, and medications expressed in amount per day. Quantity per liter option can be expressed in parenthesis for programs that administer PN in 1 liter volumes. Additional information expressed on the label should be clear and concise.
 - (2) Route of administration.
 - (3) Administration date and time and beyond use date and time.
- (4) The infusion rate expressed in milliliters per 24 hours. If a cyclic infusion, the duration and rates must be expressed on the label.
 - (5) Dosing weight (the weight used in calculating nutrient doses).
- f. <u>Compounding and Administering PN Therapy.</u> PN may be prepared and administered in several different ways. Total nutrient admixtures (TNA) also known as 3-in-1 solutions include dextrose, amino acids, and IV fat emulsions (IVFE) compounded together. Two (2)-in-1 solutions may be individually compounded or purchased as premixed solutions. IVFE is piggybacked to 2-in-1 solutions. Regardless which PN preparation is utilized, policies and procedures must demonstrate the following criteria:
- (1) The preparation of the PN solution is to be conducted according to United States Pharmacopeia (USP) regulations.
- (2) Each of the PN components should be assessed for compatibility, stability, and appropriateness of dose. Any dose of an additive or nutrient outside of normal range that is not explained by specific patient conditions must be questioned before the PN is compounded.
- (3) All patients receiving PN should receive a parenteral vitamin and trace element preparation on a daily basis. If vitamins and trace elements are not provided in the PN, an alternative plan and reasoning should be documented.
- (4) IVFE should be provided in doses sufficient to prevent essential fatty acid deficiency in patients who are receiving PN as the sole source of nutrition. Fatty acid deficiency may occur within 14 to 20 days in adults who are receiving PN as the sole source of nutrition without a source of lipids or IVFE.
 - (5) Facilities must establish a protocol for managing drug shortages that affect PN therapy.
 - g. **Nursing Guidelines.** Nursing staff needs to ensure:
 - (1) One lumen of a multi-lumen catheter must be dedicated to PN.

- (2) Inspect the catheter site every shift for signs and symptoms of infection.
- (3) Change the administration sets every 24 hours.
- (4) If not using a 3-in-1 solution, IV lipids should be piggybacked into the line using the injection site on the tubing using a .22 universal (u) filter.
 - (5) A 1.2 u filter should be used for 3-in-1 solutions.
- (6) Flush the PN lumen with 10 ml of normal saline in a 10 ml syringe when changing PN bags.
 - (7) PPN IV site should be rotated every 48-72 hours.

h. Documentation of PN Therapy

- (1) The route of therapy, indications for use, assessment of nutrient requirements must be documented at initiation of therapy in the electronic health record (EHR).
- (2) The route of PN, PN formulation, and response to therapy must be documented in the electronic medical record routinely, according to local facility policy criteria.
 - (3) Interdisciplinary communication is to be documented in the EHR.
- (4) The reason for termination of therapy, attainment of nutrition support therapy goals, complications, and follow-up plan must be documented when PN therapy is stopped.
- i. <u>Monitoring of PN Therapy.</u> A plan for monitoring the patient's response to PN must be stated in the plan of the Nutrition Care Process (NCP). Monitoring must be relative to the severity of illness, level of metabolic stress, nutrition status, and NCP goals.
- (1) Daily or more frequent monitoring may be required in patients who are critically ill, malnourished, or at risk for re-feeding syndrome.
- (2) Stable patients may be monitored weekly or as clinically indicated. Monitoring parameters may include:
 - (a) Intake or output, weight changes, and fluid status.
 - (b) Signs and symptoms of central venous catheter infections.
- (c) Laboratory data, to include: complete blood count, blood urea nitrogen, creatinine, electrolytes, magnesium, phosphorus, calcium, liver function tests, triglycerides, serum proteins, and blood glucose.

- (3) Ability to transition from PN to EN or oral feeding must be monitored routinely.
- j. <u>Complications and Prevention of Complications</u>. PN associated complications can be categorized as metabolic, mechanical, and infectious. Patients receiving PN require close monitoring for prevention and early detection of these PN-associated complications.
- (1) **Metabolic Complications.** Metabolic complications can result from overfeeding or underfeeding and include:
 - (a) Hyperglycemia;
 - (b) Hypoglycemia;
 - (c) Hypophosphatemia;
 - (d) Essential fatty acid deficiency;
 - (e) Hypertriglyceridemia; or
 - (f) Azotemia.
- (g) Refeeding syndrome (i.e., a complication that occurs in patients who are malnourished or patients that are fed too aggressively) is characterized by hypophosphatemia, hypokalemia, hypomagnesemia and fluid retention. Severe refeeding syndrome may include respiratory failure, heart failure, and possible death.
- <u>1</u>. Patients at high risk for refeeding syndrome include those with anorexia nervosa, alcoholism, prolong periods of fasting, morbid obesity with significant weight loss, and chronic diseases that contribute to undernutrition such as cancer.
- <u>2</u>. To avoid refeeding syndrome, initiate PN therapy at approximately 10 calories per kilogram in high-risk patients or less than 50 percent of goal calories. Slowly advance PN calories over the next 3 to 5 days or as clinically indicated by the stability of laboratory reports and the patient's medical status.
- <u>3</u>. Additional thiamine (100 milligrams (mg) daily) should be considered for the first week of PN in high-risk patients.
- (2) **Mechanical Complications.** Catheter occlusion is one of the most common mechanical complications in PN and can be classified as thrombotic or non-thrombotic.
 - (3) Infectious Complications
 - (a) Central venous catheters are the most frequent cause of nosocomial blood infections.

- (b) Contamination of skin entrance or contamination of the IV hub, are the most likely causes.
- (c) To prevent infectious complications of central venous catheters, hand hygiene is essential prior to contact.
 - (d) The line is only to be manipulated by trained personnel.

NOTE: For guidance on central venous catheter care, refer to facility policy on intravenous infusions or infection control.

- k. <u>Terminating PN.</u> Patients should be able to tolerate or consume approximately 60 percent of estimated nutrient requirements prior to discontinuing PN.
- (1) To wean patients from continuous PN, cut the PC infusion rate by half and discontinue PN in 2 hours.
- (2) Avoid PN interruptions as possible. If PN must be interrupted unintentionally for greater than 1 hour, consider dextrose 10 percent infusion at the same PN prescription rate until PN can be safely resumed.
 - (3) No weaning is required for cyclic infusions.

1. Performance Improvement

- (1) The Nutrition Support Team monitors PN issues and reports to the designated medical center committee on a quarterly basis. Potential monitors include, but are not limited to:
 - (a) Duration of PN therapy;
 - (b) Adequacy or appropriateness of PN orders;
 - (c) Electrolyte abnormalities;
 - (d) Glycemic control;
 - (e) Line infections; and
 - (f) Liver function while on PN.
 - (2) Sentinel events related to PN should be reported to the appropriate regulatory agencies.
- m. <u>Staff Education and/or Training.</u> Staff education or training programs are a requirement that may be provided as didactic courses in nutrition support therapy, or team dynamics and attendance at courses or conferences sponsored by professional organizations, such as: ASPEN, Mayo Clinic, Dietitians in Nutrition Support Practice Group Academy of

Nutrition and Dietetics (AND), and Harvard Medical School. *NOTE:* Opportunities for continuing education to maintain expertise should be available to Nutrition Support Team members at least annually.

n. <u>Discharge Planning for Home PN.</u> The Nutrition Support Team collaborates with the physician, home care providers, and other health care providers including social workers regarding appropriateness of discharging the patient home on PN. PN is provided and monitored in the home setting according to local facility policy.

15. OUTPATIENT ONS THERAPY:

- a. A number of Veterans enrolled in the VA medical system and utilizing outpatient services have a significantly compromised nutrition status as a result of a medical condition, necessitating the use of oral medical nutrition supplements (ONS) to meet nutrition therapy goals. Current research supports the cost effectiveness of ONS for treating malnutrition related to medical conditions and disease states that often result in inadequate oral nutrient intake without ONS intervention. Some examples include oncology diagnoses and ongoing cancer treatment; renal dialysis, increased metabolic need resulting from severe trauma; oral surgery, post-operative gastrointestinal and vascular surgery; acute spinal cord injury, patients with chronic non-healing wounds; malabsorption difficulties (e.g., short-gut syndrome, fistula); and significant, involuntary weight loss. Using ONS in pre-surgical evaluation or preparation programs is another example that would warrant the use of an ONS protocol.
- b. Provision of ONS at each VA medical facility must be limited to outpatients that meet facility defined nutritional criterion. Medical diagnoses are considered, but ONS prescription is primarily based on nutrition diagnostic criteria, following initial nutrition assessment and counseling and after a failure of food or diet management or for meeting RD documented nutrient needs, which cannot be met by current oral intake. Inadequate oral intake alone without a significant medical condition interfering with intake or absorption does not warrant a prescribed oral medical supplement. Prescribing practices of clinicians, RDs or physicians, as defined by the facility, must be aligned with RD established, medical record documented nutrition assessment and goals with periodic RD monitoring of nutrition status and nutrition goals and care plan progress. Inappropriate orders and use of commercially prepared nutritional supplements can unduly burden VA's financial system. Nutrition consults and nutrition intervention or care planning are the first steps in considering use of an ONS (see Appendix F).
- c. Commercially prepared ONS for outpatients, or inpatients on authorized absences, are stocked and issued by Pharmacy Service (see VHA Handbook 1108.05).
- d. Policies and criteria must be developed on the provision and use of ONS. Outpatient ONS products must be prescribed based upon those products that are on the National Contract. Products that are not on the national contract and prescribed for outpatients must be justified consistent with facility policies. Differing acuity levels between facilities and specialized programs may require the inclusion of commercial products not on contract in order to meet Veterans' needs. Many Veterans use medical facilities throughout the VISN and VA expects continuity of product from inpatient to outpatient use. Each medical facility must use the

criteria listed in Appendix E, and may include additional criteria as appropriate to the patient population and needs. All medical facilities must provide ONS to Veterans if the Veteran meets one or more of the criteria, when appropriate.

- e. Documentation in the EHR is required for the following: Rationale or justification for provision of ONS; any progress towards meeting defined therapeutic goal(s); and a minimum of quarterly nutrition monitoring, or more often, as medical condition or nutrition status warrants. When needed, implement inservice programs and information messages for health care providers regarding appropriate patient referrals. Prevent renewals of authorized prescriptions without reassessment by a RD at established intervals determined by the medical facility. Supplements will be discontinued after the outcome or goals of nutrition therapy are achieved and the patient is able to consume adequate amounts of food without supplementation with an ONS.
- f. The MCNC or other facility approving entity, and the Nutrition Support Team should establish quality assurance utilization review measures to ensure appropriateness, economical usage, and nutrition monitoring of outpatients receiving ONS.
- g. The "food first" philosophy, that stipulates a Nutrition Consult and trial of meeting oral nutrition with regular food and beverage items, prior to the initiation of ONS must be emphasized. ONS is not to be prescribed for the purposes of general nutrition, maintaining or gaining weight in otherwise healthy Veterans.
- h. An EHR Nutrition Consult is required for all patients that are candidates for ONS. The MCNC or other facility approving entity, and the Nutrition Support Team must develop local criterion for candidates to be referred for a comprehensive nutrition evaluation. A comprehensive nutrition assessment may include:
 - (1) Nutrition diagnoses or problems;
 - (2) Nutrition status;
 - (3) Nutrient needs or requirements;
 - (4) Nutrition-focused physical examination;
 - (5) Nutrition goals; and
 - (6) Plans for monitoring efficacy of ONS.
- i. The involvement of interdisciplinary healthcare team members in the planning, evaluation and implementation of the formulary must be ensured, as appropriate. The representative team members, who can provide valuable input, include, but are not limited to:
- (1) **Clinical Nutrition Services.** Clinical Nutrition services, for the use of Medical Nutrition Therapy (MNT) to assess the nutritional needs of Veterans and to recommend an appropriate ONS, based on identified patient needs or deficiencies.

- (2) **Social Work Service.** Social Work Service to assess patient's self-management ability, to include assessment of the home environment, community resources, and financial needs.
- (3) **Dental Service.** Dental Service to ONS products needs related to specific dental or oral surgeries, and as related to oral or dental health and enabling usual food following assessment or a supply of needed dentures.
- (4) **Pharmacy Service.** Pharmacy Service to assess potential for supplement or medication interactions (i.e., anticoagulation therapy).
- (5) **Rehabilitation Services.** Rehabilitation services to assess needs of patients requiring rehabilitation (i.e., to assess or treat self-feeding difficulties and patient or resident endurance to shop or prepare food, etc.).
 - (6) **Speech Pathology.** Speech Pathology to assess or treat oral motor issues and dysphagia.

16. OUTPATIENT EN THERAPY:

Each VHA facility is responsible for developing its own protocols for the continuity of care, including timeframes for the patient being discharged on home EN. A formalized, interdisciplinary approach to outpatient EN, between Nursing, Medicine, Pharmacy, Prosthetics, and Nutrition and Food Services must include:

- a. The ordering process and development of criteria to determine the appropriateness and duration of each prescription. Outpatient EN products must be prescribed based upon those products that are on the National Contract and provide available product descriptions included detailed nutrient composition and suggested indications for use. Medical facilities may opt to use additional EN products not available on the National Contract to meet specialized nutritional needs of patients as appropriate. *NOTE:* This decision is made at the local facility level.
 - b. The mechanism for monitoring tolerance.
 - c. Any necessary formula adjustments.
- d. Guidelines for flushing tubes. Use of sterile water for home enteral nutrition is not required, unless the patient is immunocompromised or the safety of tap water cannot be reasonably assumed.)
 - e. An evaluation of the patient's medication profile and compatibility with the EN product.
 - f. The completion of a nutrition assessment.
 - g. The development of a home EN education program for patients and caretakers.
 - h. A process for supplying refills.

- i. Scheduling appropriate in home or clinic follow-up (i.e., nutrition, PACT, GI).
- j. A timely evaluation or replacement of the enteral feeding device.
- k. Other supportive consultative services, such as Social Work Service and Chaplain Service should be considered as appropriate.

17. OUTPATIENT PN THERAPY:

- a. PN is a potentially life-saving or life sustaining form of treatment for Veterans who are unable to receive adequate nutrition through their own gastrointestinal tract. The Nutrition Support Team 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. Home PN is provided by VHA medical facilities or contracted to a home IV infusion company. Coordination of home PN is through the collaborative efforts of the referring physician, home care provider, and the Nutrition Support Specialist(s). Other supportive consultative services, such as Chaplain Service should be considered as appropriate. Because of its invasive nature and composition, PN can have severe adverse effects, particularly if provided inappropriately or without proper precautions. For provision of home PN, the duration of PN should be prolonged (greater than 2 weeks). *NOTE:* A comprehensive psychosocial assessment conducted by a social worker is strongly recommended. This assessment is to include family relationships and support systems, adjustment to PN, coping ability, home environment, and the need for follow-up care.
 - c. If home PN is provided by the medical facility the following criterion must be met:
 - (1) There must be a functioning Nutrition Support Team.
- (2) Home PN support shall be initiated, modified, supervised, evaluated, and coordinated by the referring physician and nutrition support practitioners.
- (3) Written policies and procedures for the provision of home PN must be established. The policies shall address all areas of PN management including assessment for PN, ordering and administrating, safety and stability, staff qualifications and competencies, staff education and quality assurance of nutrition support therapy.
- d. <u>Assessment for PN Therapy.</u> All efforts to optimize enteral nutrition shall be used prior to consideration of home PN. However, if a patient is nutritionally compromised and has failed EN attempts, initiation of PN should be considered.
- (1) Nutrition assessment must be completed and documented within a time frame specified by local facility policy. Elements of the nutrition assessment include:

- (a) Relevant anthropometric biochemical, clinical, and pharmacological data; diet history; nutrition diagnosis; nutrition support goals; indications for PN; assessment of appropriate route; nutrition needs, including calories, protein, fluid, electrolytes, and micronutrient requirements; and recommended PN formulation. *NOTE:* A nutrition-focused physical exam is recommended.
- (b) PN route, PN formulation, and response to therapy must be monitored frequently for adequacy and appropriateness. PN will be adjusted according to the patient's clinical conditions.
- (2) Indications for home PN are the same as the hospitalized patient, but with consideration of the capabilities of the patient and family members as well as the safety of the home environment. Home PN is available only to patients who meet strict qualification criteria. This criterion includes appropriate social support at home and documentation that other nutrition support modalities were attempted and unsuccessful.

e. Route of Therapy

- (1) The route selected for providing nutrition support therapy must be appropriate for the patient's medical condition, safety, efficacy, and consideration of patient preference.
- (2) CPN, often referred to as TPN, contains all of the necessary macro and micronutrients making it a hyperosmolar solution that must be delivered through a central or large diameter vein (internal jugular, subclavian, peripherally inserted central catheter or PICC).
- f. <u>Ordering PN Therapy.</u> The preparation of the PN solution is to be conducted according to USP regulations. In addition to ASPEN, Safe Practices Parenteral Nutrition, require the PN label must be standardized and include:
- (1) Base formula, electrolyte additives, micronutrients, and medications expressed in amount per day. A quantity per liter option can be expressed in parenthesis for programs that administer PN in 1 liter volumes. Additional information expressed on the label is to be clear and concise.
 - (2) Route of administration.
 - (3) Administration date and time and beyond use date and time.
- (4) Cyclic infusion, duration and rates are expressed on the label. Rate is expressed in milliliters per 24 hours.
 - (5) Dosing weight (the weight used in calculating nutrient doses).
- g. <u>Compounding and Administering PN Therapy.</u> Amino acids, carbohydrates, fat, electrolytes, vitamins, and trace elements are used in various combinations when formulating PN. Sterile water is added to provide necessary volume to PN formulations.

- (1) Each of the PN components should be assessed for compatibility and stability and appropriateness of does. Any dose of an additive or nutrient outside of normal range that is not explained by specific patient condition must be questioned before PN is compounded.
- (2) All patients receiving PN should receive a parenteral vitamin preparation on a daily basis. If vitamins and trace elements are not provided in the PN, an alternative plan and reasoning should be documented.
- (3) IVFE needs to be provided in doses sufficient to prevent essential fatty acid deficiency in patients where PN is the sole source of nutrition. Fatty acid deficiency may occur within 14-20 days in adults who are receiving PN as the sole source of nutrition without a source of lipids or IVFE.
- (4) The clinical pharmacist should verify the administration of medications given by PN or co-infused with PN is safe, appropriate, stable, and compatible.
- h. **Patient or Caregiver Guidelines for Home Administration.** The patient or caregiver must ensure:
 - (1) One lumen of a multi-lumen catheter is dedicated to PN.
- (2) The catheter site is inspected daily for signs and symptoms of infection. The physician will be contacted if signs of redness are present.
 - (3) Change administration sets will be changed every 24 hours.
- (4) If not using a 3-in-1 solution, intravenous lipids should be piggybacked into the IV line using a .22 micron filter.
 - (5) A 1.2 micron filter should be used for 3-in-1 solutions.
- (6) The PN lumen is flushed with 10 ml of normal saline in a 10 ml syringe when changing PN bags.
- (7) PN formulations will be stored under refrigerated conditions (35.6F-46.4F) and warmed to room temperature prior to infusion.

i. **Documentation of PN Therapy**

- (1) Route of therapy, indications for use, assessment of nutrient requirements will be documented at initiation of therapy in the electronic medical record.
- (2) Route of PN, PN formulation, and response to therapy will be documented in the electronic medical record routinely according to local facility policy criteria.
 - (3) Interdisciplinary communication must be documented routinely.

- (4) The reason for termination of therapy, attainment of nutrition support therapy goals, complications, and follow-up plan must be documented when PN therapy is stopped.
- j. <u>Monitoring of PN Therapy.</u> A plan for monitoring the patient's response to PN must be stated in the plan of the NCP. Monitoring is relative to the severity of illness, malnutrition, level of metabolic stress, and NCP goals.
 - (1) Stable patients may be monitored weekly or as clinically indicated.
 - (2) Monitoring parameters may include:
 - (1) Intake or output, weight changes, fluid status;
 - (2) Signs or symptoms of central venous catheter infection; and
- (3) Laboratory data, to include: complete blood count, blood urea nitrogen, creatinine, electrolytes, magnesium, phosphorus, calcium, liver function tests, triglycerides, serum proteins, and blood glucose.
- k. <u>Complications and Preventions of Complications.</u> Patients receiving home PN require close monitoring for prevention and early detection of metabolic complications associated with PN. PN associated complications can be categorized as metabolic, mechanical, and infectious.
- (1) **Metabolic Complications.** Metabolic complications can result from overfeeding or underfeeding and include:
 - (a) Hyperglycemia;
 - (b) Hypoglycemia;
 - (c) Hypophosphatemia;
 - (d) Essential fatty acid deficiency;
 - (e) Hypertriglyceridemia; or
 - (f) Azotemia.
- (2) **Mechanical Complications.** Catheter occlusion is one of the most common mechanical complications in PN and can be classified as thrombotic or non-thrombotic. Patients should be educated to look for symptoms such as arm swelling, neck swelling, or pain upon infusion.
 - (3) Infectious Complications
 - (a) Central venous catheters are the most frequent cause of nosocomial blood infections.

- (b) Contamination of skin entrance or contaminations of the IV hub are the most likely causes.
- (c) Patients or caregivers should be instructed to contact their physician if they experience a fever.
- (d) To prevent infectious complications of central venous catheters, hand hygiene is essential prior to contact and the IV line should only be manipulated by trained personnel.

1. Terminating PN

- (1) PN should be terminated under the following circumstances:
- (a) The patient is able to tolerate sufficient oral or enteral intake to eliminate the need for PN.
 - (b) The patient is no longer benefiting from PN therapy.
- (2) The patient or designated health care representative should be involved in the decisions and plan for withdrawal of support. The plan for withdrawal must be in accordance with patient advanced directives, medical ethics, and current Federal law.

m. Performance Improvement

- (1) PN can be high-risk and must be addressed in the home care provider's performance improvement and outcome measurements. Data to be collected is determined at the VA medical facility level and may include:
 - (a) Mortality;
 - (b) Hospital readmission;
 - (c) Complications; and
 - (d) Customer satisfaction.
 - (2) Sentinel events related to PN should be reported to the appropriate regulatory agencies.
- n. <u>Patient or Caregiver Education</u>. The patient or caregiver must receive education from a qualified member of the health care team and the patient or caregiver must demonstrate competence in the preparation and administration of home PN. Education and training must be specific to the patient and caregivers needs and abilities, as appropriate to the service provided. Patient or caregiver competency and compliance should be assessed periodically and documented according to local facility policy.

o. <u>Staff Education and/or Training.</u> There must be a continuation of staff education and/or training programs. This may be provided as didactic courses in PN, or team dynamics, and attendance at courses or conferences sponsored by national professional organizations such as: ASPEN, the Mayo Clinic, Dietitians in Nutrition Support Practice Group in the Academy of Nutrition and Dietetics (AND), and Harvard Medical School. *NOTE: Opportunities for continuing medical education to maintain expertise should be available to Nutrition Support Team members at least annually*.

18. BARIATRIC SURGERY – VITAMIN AND MINERAL RECOMMENDATIONS:

- a. Nutritional deficiencies remain common and underdiagnosed after weight loss surgery and they are the most common long-term complication. This makes the role of the RD critical to achieving best outcomes.
- b. Proper nutritional care, including adequate micronutrient supplementation can be daunting and complex. Appropriate protein supplements are recommended with special attention to amino acid content. Clinicians must also be well versed in evaluating micronutrient needs of the bariatric surgery patient. Calcium, vitamin D, vitamin B12, folate, and iron are the most common nutrients of concern; however, other less common deficiencies have been observed and should be monitored, such as thiamine and copper.
- c. The ordering clinician, whether this is the patient's bariatric team or primary care team, must ensure appropriate and adequate doses and forms of these supplements are used and vitamin levels are evaluated frequently. This is especially important for women of childbearing potential who undergo bariatric surgery. Pregnancy may occur as fertility increases with weight loss, and deficiencies of some micronutrients, such as folate, can increase the risk for birth defects. During nutritional care adjustments following bariatric surgery, women of reproductive age should undergo preconception counseling and be offered the option of contraceptive counseling if not considering pregnancy.

19. REFERENCES:

- a. Aills, L et al. ASMBS Allied Health Nutritional Guidelines for the Surgical Weight Loss Patient. Vol. 4. Surgery for Obesity and Related Disease, 2008.
- b. Bankhead, R, et al, ASPEN Enteral Nutrition Practice Recommendations, JPEN Journal of Parenteral Enteral Nutrition 33:122, January 26, 2009.
- c. Brown, J. Unraveling Misconnections in Medical Tubing. <u>Medical Device and Diagnostic Industry Magazine</u> . March 2009.
- d. Definition of Terms, Style and Conventions Used in A.S.P.E.N. Board of Directors-Approved Documents, American Society for Parenteral and Enteral Nutrition (A.S.P.E.N), Board of Directors and Clinical Practice Committee (2008-2009 and 2009-2010).

- e. DeLegge, Mark, MD, et al, The State of Nutrition Support Teams and Update on Current Models for Providing Nutrition Support Therapy to Patients. <u>Nutrition in Clinical Practice</u>" 25(1), 76-84, February 25 2010.
- f. Dietitians and Small Bowel Feeding Tube Placement. <u>Nutrition in Clinical Practice</u>. June 2010. 25(3), 270-276.
- g. Avgerinos D. V. et al. Incidence and risk factors for the development of anemia following gastric bypass surgery. <u>World Journal of Gastroenterology</u>, April 21, 2010. 16(15), 1867-70.
- h. Gasteyger C, Suter M, Gaillard R. C., Giusti V. Nutritional deficiencies after Roux-en-Y gastric bypass for the morbid obesity often cannot be prevented by standard multivitamin supplementation. 87(5), 1128-33. <u>American Journal of Clinical Nutrition</u> (<u>Am J Clin Nutr</u>), May 2008.
- i. Gottschlich, Michele M., Fuhrman, M. Patricia, Hammond, Kathleen A, Holcombe, Beverly J., and Seider, Douglas L. The Science and Practice of Nutrition Support: <u>Case-based Core Curriculum</u>. Kendall Hunt Publishing Company, Dubuque, IA, 2001.
- j. Guenter, P., Hicks, R. W., Simmons, D., et. al. Enteral Feeding Misconnections: A Consortium Position Statement. <u>The Joint Commission Journal on Quality and Patient Safety</u>. May 2008; 34(5); 285-292.
- k. Hauser DL, Titchner RL, Wilson MA, Eid GM. Long-term outcomes of laparoscopic Roux-en-Y gastric bypass in US veterans. <u>Obesity Surgery (Obes Surg)</u>, March 2010. 20(3), 283-9.
- l. Koopman, M. C., Kudsk, K., et al. A Team-Based Protocol and Electromagnetic Technology Eliminate Feeding Tube Placement Complications, <u>Annals of Surgery</u>, 253(2), 287-302. February 2011.
- m. Kulick, D et al. The bariatric surgery patient: A growing role for registered dietitians. Journal of the American Dietetic Association (J Am Diet Assoc), April 2010. 110(4), 593-9.
- n. Lizer, MH et al. Nutritional and Pharmacologic challenges in the bariatric surgery patient. Obes Surg, December 2010. 20(12), 1654-9
- o. Marinella, M A.. Anemia following Roux-en-Y surgery for morbid obesity: A review. <u>Southern Medical Journal</u>, October 2008. 101(10), 1024-31.
- p. Martindale, RG, McClave SA, et al, Guidelines for provision and assessment of nutrition support therapy in the adult critically ill patient: Society of Critical Care Medicine and American Society for Parenteral and Enteral Nutrition, <u>JPEN Journal of Parenteral and Enteral Nutrition</u>. May-June 2009, 33(3), 277-316.

- q. Mechanick JI, Kushner RF, Suerman HJ, et al. American Association of Clinical Endocrinologists, The Obesity Society, and American Society for Metabolic & Bariatric Surgery Medical guidelines for clinical practice for the perioperative nutritional, metabolic, and nonsurgical support of the bariatric surgery patient Endocrine Practice, July-August 2008, 14 Suppl 1, 1-83.
- r. American Dietetic Association. Position of the American Dietetic Association: Integration of Medical Nutrition Therapy and Pharmacotherapy. <u>J Am Diet Assoc</u>. October 2013; 103(10), 1363-70.
- s. Shankar, P et al. Micronutrient deficiencies after bariatric surgery. <u>Nutrition</u>, November-December 2010. 26(11-12), 1031-7.
- t. Simmons, D., Phillips, M. S., Grissinger, M., Becker, S. C., USP Safe Medication Use Expert Committee. Error-Avoidance Recommendations for Tubing Misconceptions When Using Luer-Tip Connectors: A Statement by the USP Safe Medication Use Expert Committee. <u>The Joint Commission Journal on Quality and Patient Safety</u>. May 2008; 34 (5): 293-296.
- u. Soguel, L et al. Energy deficit and length of hospital stay can be reduced by a two-step quality improvement of nutrition therapy: The intensive care unit dietitian can make a difference. Crit Care Med. February 2012. 40(2), 412-9.
- v. Ukleja A. et al. Standards for Nutrition Support: Adult Hospitalized Patients, <u>Nutrition in Clinical Practice (NCP)</u>. 25(4): 403-414. August 2010.
- w. ASPEN Board of Directors and Nurses Standards Revision Task Force et al. Standards of Practice for Nutrition Support Nurses. August 2007. 22(4), 458-65.
- x. ASPEN Task Force for the Revision of Nutrition Support Pharmacist Standards et al. Standards of Practice for Nutrition Support Pharmacists. Nutrition in Clinical Practice. April-May 2008. 23(2), 189-94.
- y. Task Force of ASPEN et al. American Society for Parenteral and Enteral Nutrition (ASPEN) and American Dietetic Association (ADA): Standards of Practice and Standards of Professional Performance for Registered Dietitians (Generalist, Specialty, and Advanced) in Nutrition Support. NCP. 22(5):558-586: October 2007.
- aa. Tondapu, P et al. Comparison of the absorption of calcium carbonate and calcium citrate after roux-en-y gastric bypass. Obesity Surgery. September 2009. 19(9), 1256-61.
- bb. VHA Bariatric Surgery Nutrition Workgroup. Nutrition Guidelines for Bariatric Surgery Patients. 2010. Web site: http://vaww.infoshare.va.gov/sites/Nutrition/batiatric/default.aspx Access Restricted to VHA Workgroup.
 - cc. VHA Handbook 1108.5. Outpatient Pharmacy Services.

- dd. VHA Handbook 1109.04. Food Service Management Program.
- ee. Volkert, D., Berner, Y. N., Berry, E., et al. ESPEN Guidelines on Enteral Nutrition: Geriatrics. Clinical Nutrition. Apr 2006; 25(2):330-360.
- ff. White, Jane V. et al. Consensus Statement: Academy of Nutrition and Dietetics and American Society for Parenteral and Enteral Nutrition: Characteristics Recommended for the Identification and Documentation of Adult Malnutrition (Undernutrition). JPEN Journal of Parenter and Enteral Nutrition. May 2012. 36(3), 275-83.
- gg. Windle, E., Beddow, D., Hall, E., et al Implementation of an electromagnetic imaging system to facilitate nasogastric and post-pyloric feeding tube placement in patients with and without critical illness. Journal of Human Nutrition and Dietetics. February 2010. 23(1), 61-68.
- hh. Xanathakos, S.A. Nutritional deficiencies in obesity and after bariatric surgery. <u>Pediatric</u> Clinics of North America, October 2009. 56(5), 1105-21.
 - ii. Pronsky, Z.M., et al. Food Medication Interactions 17th Edition, March 29, 2012.

REQUIREMENTS FOR VA FACILITY NUTRITION THERAPY POLICIES

The following elements are required for inclusion in the Veterans Health Administration (VHA) facility Nutrition Therapy or related policies:

- 1. Membership and function of the Nutrition Support Team, including:
 - a. Team members meet standard of practice for nutrition support therapy.
- b. Use of current research, technology, and scientific findings to provide evidenced-based nutrition support.
 - c. Coordination and monitoring of all aspects of PN.
 - d. Provision of nutrition support therapy education to VA staff, trainees and students.
- 2. Interdisciplinary procedures addressing the nutrition support process which are periodically reviewed and revised.
- 3. Development of an approved oral nutrition supplement and enteral formulary.
- 4. Infection control issues related to EN and PN, as:
 - a. Development of an EN HACCP plan.
 - b. Prevention of CLAB.
- 5. Safety issues related to EN and PN, to include:
 - a. Drug-nutrient interactions.
 - b. Enteral misconnections.
 - c. Protocols for parenteral nutrition additive shortages.
- 6. Guidelines for ordering, preparation and administration of EN and PN, including resources to verify the compatibility and stability of any additives.
- 7. Protocols for the provision of continuity of care for patients discharged home on EN or PN, to include:
 - a. Provision of home PN is provided by the facility or a contract home IV infusion company.
- b. Interdisciplinary approach to follow-up care either in the home or hospital clinic, including timeframes for monitoring, medication profile evaluation, nutrition assessment, EN

education for patients and caregivers, and evaluation or replacement of the enteral feeding device.

STANDARDS OF PRACTICE FOR NUTRITION SUPPORT PHYSICIANS

Minimum qualifications are required of nutrition support physicians to ensure competence to practice nutrition support therapy. 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 <u>or</u> certification by one of the specialty boards accepted by the Department of Veterans Affairs (VA);
- 3. Ability, determined by:
- a. Certification as a Certified Nutrition Support Clinician by the National Board of Nutrition Support Certification, Inc.;
- b. Certification as a Physician Nutrition Specialist by the American Board of Physician Nutrition Specialists;
- c. Completion of a residency or fellowship program, which includes formal education and training in nutrition support therapy; <u>or</u>
- d. Provision of a minimum of 15 percent medical practice time devoted to the practice of nutrition support therapy for at least 2 years.
- 4. Active participation in the nutrition support committee of a VA medical facility, or participation in a health care entity responsible for development, implementation, and evaluation of protocols for administration of nutrition support therapy. *NOTE:* If the Nutrition Support Team is newly established or the physician is new and desires to participate with the Nutrition Support Team, the physician should obtain experience or guidance from any active Nutrition Support Team within the VA system.);
- 5. Involvement as the primary physician, or as the primary consultant, for administration of nutrition support therapy to at least twenty Veterans annually. *NOTE:* Nutrition support physicians are encouraged to have an active membership in professional societies devoted to the promotion of safe and effective nutrition support therapy. Part of the state continuing medical education (CME) credits can be in nutrition support therapy.

STANDARDS OF PRACTICES FOR NUTRITION SUPPORT PHARMACISTS

The practice of nutrition support therapy 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 nutrition support clinical pharmacist or CPS must document competence to practice specialized nutrition support, which must include:

- 1. Substantial practice time devoted to the practice of Nutrition Support Therapy.
- 2. Documentation of <u>one</u> of the following criteria:
 - a. Completion of an educational training program that includes Nutrition Support Therapy;
- b. Active participation in the nutrition support service or a committee of a health care entity responsible for development, implementation, and evaluation of protocols for the administration of Nutrition Support Therapy; or
- c. Certification by the Board of Pharmaceutical Specialties as a Board Certified Nutrition Support Pharmacist (BCNSP), or Certification by the National Board of Nutrition Support Certification, Inc., as a Certified Nutrition Support Clinician (CNSC).

limited to:

VHA HANDBOOK 1109.05 APPENDIX D

STANDARDS OF PRACTICE FOR NUTRITION SUPPORT NURSES

Minimum qualifications are required of each nutrition support nurse to ensure competence to practice nutrition support therapy. This includes a demonstration of competence, which must include documentation of:

1. Significant responsibility in the practice of Nutrition Support Therapy, including, but not

	a. Direct patient care;
	b. Consultation;
	c. Patient advocacy;
	d. Case management;
	e. Administration or management;
	f. Performance improvement;
	g. Education; or
	h. Research.
2.	Professional experience through <u>one</u> of the following criteria:

- a. Completion of an education program (e.g., clinical practicum, fellowship) that includes
- a. Completion of an education program (e.g., clinical practicum, fellowship) that includes Nutrition Support Therapy.
- b. Membership in the Nutrition Support Service or a committee of a health care entity responsible for the development, implementation, and evaluation of protocols for administration of Nutrition Support Therapy.
- c. Certification by the National Board of Nutrition Support Certification, Inc., as a Clinical Nutrition Support Clinician (CNSC).

STANDARDS OF PRACTICE FOR NUTRITION SUPPORT DIETITIANS

- 1. Each nutrition support dietitian must be a clinical Registered Dietitian (RD) to ensure competence to practice nutrition support therapy. 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 Nutrition Support Team; or
- (2) An advanced degree in human nutrition or physiology and 1 year of 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 Clinician (CNSC).
- b. Formal education, training, or continuing professional education in Nutrition Support Therapy.
- c. A minimum of 30 percent professional practice time devoted to the area or field of Nutrition Support Therapy.
 - d. Participation in the health care institution's Nutrition Support Therapy activities.

RECOMMENDED MIMIMUM CRITERIA FOR ORAL NUTRITION SUPPLEMENTS

- 1. There needs to be a nutrition consult for a nutrition assessment and to provide counseling on food and diet management to trial meeting oral nutrition with regular food or beverage items, prior to initiation of Oral Nutrition Supplements (ONS).
- 2. After failure of food or diet management or failure in meeting estimated needs according to the nutrition assessment, which cannot be met by current oral intake, the identification of two or more of the following six characteristics are recommended to justify prescription of ONS:
 - a. Insufficient Energy Intake. Insufficient energy intake as:
- (1) Less than (<) 75 percent of estimated energy requirement for more than (>)7 days in the context of Acute Illness or Injury.
- (2) < 75 percent of estimated energy requirement for greater than or equal to $(\ge)1$ month in the context of chronic illness.
- (3) < 75 percent of estimated energy requirement for \ge 3 months in the context of social or environmental circumstances.
 - b. Weight Loss. Weight loss as:
 - (1) \geq 1-2 percent in 1 week.
 - (2) \geq 5 percent in 1 month.
 - (3) \geq 7.5 percent in 3 months.
 - (4) \geq 10 percent in 6 months.
 - (5) \geq 20 percent in 1 year.
 - c. Mild to Moderate loss of muscle mass.
 - d. Mild to Moderate loss of subcutaneous fat.
- e. Mild to Moderate localized or generalized fluid accumulation that may sometimes mask weight loss.
 - f. Diminished functional status as measured by hand-grip strength.
- 3. Renewal of ONS is based upon a reassessment in the nutrition clinic.

- 4. Nutrition support must be discontinued after the outcome or goal of nutrition therapy is achieved and the patient is able to consume adequate amounts of food without supplementation with an ONS.
- 5. Inadequate oral intake alone without a significant medical condition interfering with intake or absorption does not warrant a prescribed oral medical supplement.

SAMPLE OF AN ENTERAL NUTRITION HAZARD ANALYSIS CRITICAL CONTROL POINT (HACCP) PLAN

Process	Hazard	Concern	Control	Monitoring Method	Action Plan
Purchase	Contamination of enteral feeding products by chemical, microbiological or particulate matter; breakdown in quality control at point of production		Purchase from approved and certified vendor/National V.A. contract	Monitor vendors for adherence to purchasing specifications. Inspect delivery upon receipt Receive notification from vendor/FDA regarding quality control issues.	Reject delivery if not adhering to specifications without exception. Follow food recall procedures to address quality control issues. Assure that all staff is properly trained.
Receiving	Contamination of enteral feeding products by chemical, microbiological or particulate matter through improper receiving methods.	CR.	Verify delivery based upon receiving criteria. Move received enteral feeding products to appropriate storage.	Monitor receiving process and vendor adherence to specifications for delivery. Document vendor problems on appropriate document.	Provide appropriate training in proper receiving techniques. Managers/supervisors to monitor receiving process to assure correct procedures are followed.
Storage	Contamination of enteral feeding products by chemical, microbiological or particulate matter due to improper storage and handling procedures	CR.	Verify adherence to "first in first out" (FIPO), safety and sanitation standards in all storage areas. Removed dented cans from circulation. Assure that proper inventory control and proper storage climate is maintained.	Verify safety and sanitation process by conducting appropriate inspections. Verify climate control in storage areas. Verify expiration dates on products	Monitor storage area for proper climate control. Monitor storage areas to assure proper inventory control. Monitor product expiration dates to verify inventory control. Remove products if climate standards in dry storage areas are not met. Return to vendor or discard products that have exceeded expiration date as noted by the manufacturer. Return dented cans to vendor. Train employees in proper inventory control methods.

Process	Hazard	Concern	Control	Monitoring Method	Action Plan
Enteral	All enteral feeding	CCE	OPEN SYSTEM: Wash hands prior	Nursing administers	Train staff in proper enteral
Feeding	products at room	(Critical	to handling feedings and	enteral products.	formula administration.
Administrat	temperature can	Control	administration systems. Avoid	Reference Nursing	Monitor process to assure
ion	support microbial	Point)	touching any part of the container or	Enteral Feeding	compliance.
	growth. Formula		administration system that will come	Administration	
	manipulation or		into contact with the feeding. Inspect	policy/procedure.	
	using procedures		seals and reservoirs for damage prior		
	that increase		to utilization. Avoid adding		
	handlingof		medications directly to the feeding: if		
	formulas or		necessary, flush tube after		
	administration		administration with sterile or accepted		
	systems increases		potable water. Date/time each		
	the potential for contamination		component of the system also		
	contamination		indicating patient name and formula		
			(on feeding bag.) Limit hang time of feeding to 8 hours. Empty feeding		
			bags of product completely prior to		
			pouring newly opened product into		
			the bag. Flush bag with sterile water		
			before filling with additional formula.		
			Use administration sets with Y-ports		
			and drip chambers. Cap disconnected		
			sets. Change administration sets and		
			syringes used		
			for flushing the tubes every 24 hours.		

			CLOSED SYSTEM: Wash hands		
			prior to handling feedings and		
			administration systems. Obtain closed		
			system formula and administration		
			set. Fill out label information (patient		
			name, room, date, start time/rate).		
			Invert container and shake vigorously.		
			Connect spike set to closed formula		
			container according to manufacturer's		
			instructions. A new administration set		
			should be used with each new		
			container. Hang time on the closed		

			system feedings should not exceed manufacturer recommendations. Discard container and administration set when container empty.		
Process	Hazard	Concern	Control	Monitoring Method	Action Plan
Disposition/ Follow Up	Left over products are used that may have exceeded the recommended time at room temperature which can result in microbiological contamination.	B	Opened unused or left over products will be discarded immediately.	Verify that left over products or unused products are discarded	Assure that staff is appropriately trained. Monitor procedures to verify compliance.
Storage in Ward Areas	Contamination of enteral feeding products by chemical, microbiological or particulate matter due to improper storage and handling procedures	B	Verify adherence to proper storage procedures to assure appropriate climate control and inventory control of all enteral feeding products.	Nursing and Nutrition and Food Service staff will monitor ward storage areas to assure that excessive amounts of enteral feeding products are not stored on the ward, proper inventory control is maintained and that all expired products are returned to Nutrition and Food Service or discarded.	Assure that all staff is properly trained. Monitor ward storage areas to assure compliance.

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