Nutrition Support Rotation (PGY1)
Vanderbilt Medical Center
Center for Human Nutrition

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Purpose:
The purpose of the nutrition support rotation is to allow the PGY1 resident the opportunity to enhance his/her knowledge base and develop the clinical skills in providing nutrition support therapy. In collaboration with other healthcare professionals, the resident will gain direct patient care experience and become familiar with providing sound and efficient nutrition care for adult medical and surgical patients in need of nutrition support therapy.

Description:
The Nutrition Support Team (NST) is a physician-directed, multidisciplinary consultative service which provides comprehensive nutritional care for patients who require non-volitional feeding. A consult is required for all adult hospitalized patients who need parenteral nutrition. The NST members include a gastroenterologist, surgeons, dietitians, a nurse practitioner, and pharmacists with expertise in parenteral and enteral nutrition. You are encouraged to discuss nutrition issues with the members of the team to optimize patient care and your educational experience.

Inpatient Service
The NST conducts patient and teaching rounds Monday through Friday. In the morning, members of the team pre-round on the patients to collect pertinent patient information and labs. Sit-down rounds are conducted at 1pm and include attendance by the staff physician assigned to the NST service for the day (see monthly calendar). TPN orders should be entered via computerized physician order entry (CPOE) by 3pm. A consultation note is performed for all new consults and subsequent progress notes are completed every day (Mon-Fri). A template for the consult note is available in Star Notes and a template for the progress note is available in Star Forms.

Out Patient Service
The Vanderbilt Center for Human Nutrition (CHN) provides comprehensive care for patients receiving home parenteral nutrition. Patients requiring discharge from the hospital on home parenteral nutrition are evaluated by the Intestinal Rehabilitation Program (IRP) clinicians and training is initiated. Patients are seen in the CHN clinic for follow-up. Clinic hours are primarily held on Tuesday mornings, with additional time allotted throughout the week. IRP rounds are held every Wednesday at 2pm.
**Goals to be Taught/Evaluated:**

R1.4: Demonstrate ownership of and responsibility for the welfare of the patient by performing all necessary aspects of the medication-use system.

R2.1: As appropriate, establish collaborative professional relationships with members of the health care team.

R2.2: Place practice priority on the delivery of patient-centered care to patients.

R2.3: As appropriate, establish collaborative professional pharmacist-patient relationships.

R.2.4: Collect and analyze patient information.

R2.6: Design evidence-based therapeutic regimens.

R2.8: Recommend or communicate regimens and monitoring plans.

R2.9: Implement regimens and monitoring plans.

R2.10: Evaluate patients’ progress and redesign regimens and monitoring plans.

R2.11: Communicate ongoing patient information.

R3.1: Exhibit essential personal skills of a practice leader.

E2.5: Resolve conflicts through negotiation.

E7.4: Manage time effectively to fulfill practice responsibilities.

E8.2 Communicate effectively.

**Responsibilities and Associated Goals:**

- Effectively use the institution’s technology and automation systems (StarPanel, HEO, HMM, AdminRx) to collect, analyze, and monitor patient data relating to pharmacotherapy (R1.4, R2.4, R2.6)

- Directly manage 5-8 patients who are consulted to receive parenteral nutrition (R1.4, R2.1, R2.2, R2.3, R2.11, E2.5, E7.4)

- Assess nutritional requirements, design an appropriate parenteral nutrition formulation for initiation and advancement, develop a monitoring plan for assessing response to therapy, and revise the plan as necessary (R2.1, R2.2, R2.3, R2.4, R2.6, R2.8, R2.9, R2.10, R2.11)

- Assist with writing the initial nutrition support consult note and daily progress notes in the electronic medical record (R2.4, R2.8, E7.4, E8.2)

- Enter TPN and lab orders for assigned patient, per protocol (R1.4, R2.2, R2.9, R2.10)

- Attend inpatient NST afternoon rounds Monday-Friday (R2.1, R2.4, R2.11, E8.2)

- Participate in the education of team members with regards to pharmacotherapy-related questions/issues (R2.1, R3.1)

- Assist with precepting PharmD students who may be concurrently training on the service (R3.1, E7.4)

- Attend CHN Education Meetings as scheduled – Thursdays 3pm

- Prepare pharmaceutical care plan x 1

- Complete projects/in-service presentations as requested by preceptor
Learning Objectives:
1. Understand the parameters involved in assessing a patient’s nutritional status.
2. Determine the requirements of energy, protein, fluid, electrolytes, minerals, vitamins, and trace elements for a given patient.
3. Identify the influence of the following disease states on nutritional requirements: renal failure, hepatic failure, respiratory failure, trauma/metabolic stress.
4. Determine the appropriate dosing weight.
5. Identify appropriate indications for the use of parenteral and enteral nutrition.
6. List the components of a complete parenteral nutrition regimen and be familiar with the requirements of each component.
7. Be able to design a parenteral nutrition formulation for a given patient, including:
   a. How to meet nutritional requirements.
   b. How to perform the necessary calculations to determine its content.
   c. Considerations for stability and compatibility.
8. Describe the guidelines for safe administration of parenteral nutrition, including:
   a. Appropriate venous access.
   b. Appropriate hang-time.
   c. Use of IV filtration.
9. Identify potential complications associated with parenteral nutrition, including metabolic and infectious complications. Develop a plan to prevent and manage PN associated complications.
10. Describe refeeding syndrome, be able to identify patients who are at risk, and outline measures to minimize its occurrence.
11. Outline a monitoring protocol for patients receiving parenteral nutrition.
12. Identify advantages of enteral nutrition compared to parenteral nutrition.
13. Describe the routes and methods for the administration of enteral nutrition.

Method of Evaluation:
The resident will be evaluated on the above RLS goals and associated objectives. Evaluations will be completed in the access database and will consist of a summative evaluation (including resident self-eval), learning experience evaluation, and preceptor evaluation.