MAYO CLINIC

Mayo Clinic College of Medicine
Pharmacy Services

Rotation Summary

Rotation Title: **Nutrition Support** **Rotation Length:** **2 - 4 weeks**

Primary Preceptor Name: **Erin Koopman, PharmD, BCNSP**
Additional Preceptor Name(s): **Margaret Fasbender, RPh**

Prerequisites:

Introduction:

Nutrition Support Service (NSS) employs a multidisciplinary approach to provide:

- Cost-effective evaluation and management of medical and surgical malnourished hospitalized patients who may be receiving parenteral nutrition or tube feeding
- Special expertise in the selection and care of nutrition-related access devices (catheters and tubes);nutritional assessment, design, and monitoring of nutritional programs
- Fluid and electrolyte management of ill patients
- Assessment of drug-nutrient interactions
- General nutrition support supervision

The resident will round with NSS at either St. Marys Hospital or Methodist Hospital. Core members of the service include a consultant from the Divisions of Endocrinology, Preventative Medicine, or Gastroenterology, one or two dietitians, a nurse, and a pharmacist. In addition to pharmacy residents and students, trainees at SMH include fellows from the Divisions of Critical Care, Endocrinology, or Gastroenterology and dietetic interns. An Internal Medicine resident rounds with the RMH team. A customized, rules-based, computer system (FEED) has been developed to facilitate patient data collection and monitoring, rule testing, documentation, and communication.

Rotation Goals:

The preceptor will be available to the resident throughout the learning experience for consultation and topic discussion. Resident learning is predicated not only on the responsibilities below but also on acceptance of personal responsibility and dedication to direct patient care and team service.

PGY1	PGY2 Pharmaco-therapy	PGY2 ID	PGY2 Oncology	Goals Selected
R1.5			R1.2	Provide concise, applicable, comprehensive, and timely responses to requests for drug information from patients and health care providers
			R1.3	Select core biomedical literature resources appropriate for oncology pharmacy practice.
R2.1	R2.1	R2.1	R2.1	Develop collaborative professional relationships with members of the health care team.
R2.2	R2.2	R2.2	R2.2	Prioritize delivery of patient care.
R2.4	R2.4	R2.4	R2.4	Collect and analyze patient information.
R2.5				When necessary, make and follow up on patient referrals
R2.6	R2.6	R2.6	R2.6	Design evidence-based therapeutic regimens.
R2.7	R2.7	R2.7	R2.7	Design evidence-based monitoring plans.
R2.8	R2.8	R2.8	R2.8	Recommend and communicate regimens and monitoring plans.
R2.10	R2.11		R2.10	Evaluate patients' progress and redesign regimens and monitoring plans.
R2.11		R2.11	2.11	Communicate ongoing patient information.

PGY1	PGY2 Pharmaco-therapy	PGY2 ID	PGY2 Oncology	Goals Selected
	R2.12			Communicate pertinent patient information to facilitate continuity of care.
R2.12	R2.13	R2.12	R2.12	Document direct patient care activities appropriately.
	R3.1			Employ advanced literature analysis skills in preparing drug information.
				Provide effective education or training to health care professionals and health care professionals in training.
R3.1	R1.1		R6.1	Exhibit (ongoing development of) essential personal skills of a practice leader.
		Custom1		Provide concise, comprehensive, and timely responses to requests for drug information. Address limitations of data as pertinent.
		Custom2		Demonstrate effective time management skills

Rotation Activities:

PGY1	PGY2 Pharmaco-therapy	PGY2 ID	PGY2 Oncology	Activities
R2.2 R2.4 R2.10	R2.2 R2.4 R2.11	R2.2 R2.4 Custom2	R2.2 R2.4 R2.10	Prior to daily multidisciplinary rounds, collect and analyze patient information found in the electronic medical record (FEED, MICS LastWord, Synthesis, Chart+/Remote View) for all of the patients you are following.
R2.2 R2.6 R2.7 R2.10	R2.2 R2.6 R2.7 R2.11	R2.2 R2.6 R2.7	R2.2 R2.6 R2.7 R2.10	Design, implement, monitor, and revise nutrition support and drug therapies for NSS patients based on patient-specific information. Areas of focus include, but are not limited to the following: • Assess indications for parenteral and enteral routes of nutrition. • Determine appropriateness of venous access for parenteral nutrition administration. • Estimate nutrition requirements, including calories, protein, fat, fluid, and electrolytes. • Formulate a parenteral nutrition formula to meet patients' nutritional requirements. • Recommend specific monitoring parameters for the administration of parenteral nutrition, frequency of monitoring, and interpret the results. • Evaluate approaches to administering and monitoring insulin to manage hyperglycemia in a patient receiving parenteral nutrition. • Assess and manage electrolyte and fluid derangements. • Interpret blood/gas values and clinical scenarios contributing to acid/base disturbances. • Evaluate the effect of medications on fluid and electrolyte status and monitoring of nutrition support. • Identify complications of parenteral nutrition, including parenteral nutrition-associated liver disease. • Address compatibility considerations associated with parenteral nutrition. • Tailor nutrition program and monitoring program to unique needs in the following patient populations: obesity, refeeding syndrome, pancreatitis, short bowel syndrome, critical illness, renal failure, and hepatic failure/encephalopathy. • Identify medications that can affect a patient's fluid, micronutrient, or acid/base status • Identify medication-feeding tube interactions.
PGY1	PGY2 Pharmaco-therapy	PGY2 ID	PGY2 Oncology	Activities

R2.2 R2.4 R2.6 R2.7 R2.8 R2.10 R2.11	R2.2 R2.4 R2.6 R2.7 R2.8 R2.11	R2.2 R2.4 R2.6 R2.7 R2.8 R2.11 Custom1	R2.2 R2.4 R2.6 R2.7 R2.8 R2.10 R2.11	Meet with preceptor on a daily basis prior to rounds to review patients. Review past medical history, history present illness, pertinent laboratory data, medications, and nutrition support data. Identify potential nutrition support and medication related issues, develop monitoring plan, report on parameters being following in monitoring plan, discuss potential modification of therapy base on results of monitoring, identify therapeutic endpoints and patient progress towards reaching the endpoints.
R2.1 R2.2 R2.8 R2.11 R3.1	R1.1 R2.1 R2.2 R2.8	R2.1 R2.2 R2.8 R2.11 Custom1	R2.1 R2.2 R2.8 R2.11 R6.1	Attend daily multidisciplinary NSS rounds and contribute to discussion and therapeutic decisions. Residents will have a preceptor on rounds with them for half of the rotation, unless otherwise determined, to allow for role modeling, timely feedback, and appropriate patient care.
R1.5 R3.1	R1.1 R3.1	Custom1	R1.2 R1.3 R6.1	Provide drug information to all groups of care providers
R2.2 R2.4 R2.5	R2.2 R2.4 R2.12	R2.2 R2.4	R2.2 R2.4	Perform nutrition support histories for patients admitted on parenteral nutrition and discharge coordination for patients transferred to another hospital or returned to their home health care provider.
R2.2 R2.8 R2.11 R2.12	R2.2 R2.8 R2.12 R2.13	R2.2 R2.8 R2.11 R2.12 Custom2	R2.2 R2.8 R2.11 R2.12	Write NSS progress notes in the medical record as needed to communicate recommendations related to nutrition support or drug therapy. Residents must have a Minnesota pharmacy license to leave notes in the medical record.
R2.1 R2.2 R2.5 R2.8 R2.11 R2.12	R2.1 R2.2 R2.8 R2.12 R2.13	R2.1 R2.2 R2.8 R2.11 R2.12 Custom2	R2.1 R2.2 R2.8 R2.11 R2.12	Document progress notes and clinical activities in FEED and copy/send to PCARE. As needed, communicate pertinent information verbally to appropriate individuals involved in patient's care (primary service, clinical pharmacist covering the floor, DCS service, etc.).
R2.11 R2.12	R2.13	R2.11 R2.12	R2.11 R.12	Document all interventions in PCARE.
R2.1 R3.1	R1.1 2.1	R2.1 Custom2	R1.3 R2.1 R6.1	Participate in topic discussions with preceptor and NSS team members.
R3.1	R1.1		R6.1	Complete an informal self assessment at the midpoint and a formal one in ResiTrak at the end of the rotation. Actively seek feedback and incorporate suggestions into your practice.

Preceptor Interaction:

- The resident will discuss patients with the preceptor prior to rounds on a daily basis.
- The preceptor will round alongside the resident for the first half of the rotation (unless otherwise determined) to allow for role modeling, timely feedback, and appropriate patient care.
- The resident and preceptor will discuss a topic no less than three times weekly.

Evaluation Strategy

ResiTrak will be used for documentation of formal evaluations. For evaluations, the resident and preceptor will complete the evaluations separately. Prior to signing the evaluation, the preceptor and the resident will compare and discuss the evaluations. This discussion will provide feedback for both the resident and preceptor on their performance.

What type of evaluation	Who	When
Mid-point Evaluation	Preceptor, Resident	Middle of learning experience
Summative	Preceptor, Resident	End of learning experience
Preceptor, Learning Experience Evaluation	Resident	End of learning experience