## Use Case 9: Request Dietitian Consultation

Use Case Description

The purpose of this use case is to place an order request for a dietitian consultation on a hospital inpatient and the subsequent fulfillment of that order request.

Conditions

No conditions are currently documented for this use case.

Exclusions

No exclusions are currently documented for this use case.

Preconditions:

1. The patient has been admitted to an inpatient nursing unit of an acute care hospital on a ‘General’ oral diet.
2. Admission nutrition screening has already been completed on the patient triggering alerts for patient reported unintended weight loss.
3. Given the patient’s current medical condition and recent unintended weight loss, the physician (LIC) ~~determines the need~~ for a dietitian consultation.
4. The Dietitian is authorized to provide all nutrition-related consultation services requested by the LIC.
5. Dietitian consultation services include, but are not limited to:
	1. patient nutrition assessment (may include nutrient intake analysis/calorie counts)
	2. nutrition diagnosis/problem,
	3. nutrition interventions to include:
		1. recommended changes to the current diet prescription (e.g., adjustments to food and/or nutrient intake, enteral nutrition and/or parenteral nutrition etc.)
		2. recommendations for patient counseling, patient education, etc.
	4. and monitoring/evaluation to include discharge diet instructions.
6. The acute care hospital uses an electronic medical record or EHR
7. The LIC and Dietitian and are authorized users of the EHR.
8. The acute care hospital uses an electronic food and nutrition management system (FNMS).
9. The acute care hospital EHR and FNMS share information via a uni-directional or bi-directional interface.

Use Case Sequence of Steps

1. Physician enters the dietitian consultation order into the EHR.
2. The Dietitian consultation order request is communicated to the dietitian directly via EHR reports/alerts as well as via an interface to the FNMS.
3. Dietitian receives order (sub-flow 1), completes requested service(s) and documents service in the EHR.
4. Physician reviews the nutrition recommendations and shall:
	1. Accept the recommendations and writes an order to modify the patient’s existing nutrition order/diet prescription, (e.g., change the oral diet or add a nutritional supplement)
	2. Reject the recommendations and chooses to implement alternative interventions
	3. Neither accepts or rejects the recommendations and the patient continues on the current nutrition order/diet prescription without modifications.

Use Case Scenario:

Adam Everyman, a cancer patient who has experienced significant weight loss since beginning chemotherapy, is admitted to the Oncology Unit at Good Health Hospital. He is on currently on a ‘General’ oral diet. Rachel Resident writes an order for a Dietitian consult in electronic health record (EHR) which includes her electronic signature and a date/time stamp. The Dietitian consultation order request auto-populates on the dietitian task list within the EHR and/or it may be communicated through the EHR to Food & Nutrition Services via an electronic interface to the FNMS. Food & Nutrition Service Department contacts Connie Chow, the Dietitian responsible for the oncology unit, and communicates the details of the dietitian consultation order. Connie completes the requested service by conducting a nutrition assessment, and then documents the nutrition problem/nutrition diagnosis and the recommended nutrition interventions in the nutrition care plan area within the EHR which automatically includes her electronic signature, date and time with her entry. Rachel Resident reviews the nutrition recommendations and concurs, so she modifies Adam’s current nutrition orders.

## Sub-Flow 1: Nutrition Assessment

Use Case Description

The purpose of this use case sub-flow is to describe the process of completing a nutrition assessment and documenting a nutrition diagnosis/problem along with recommended nutrition interventions as performed by the dietitian upon receipt of a dietitian consult request. Dietitian consultation services include, but are not limited to: patient nutrition assessment, nutrition diagnosis, and nutrition intervention to include recommended changes to the current diet prescription (e.g., adjustments to food and/or nutrient intake, enteral nutrition and/or parenteral nutrition, etc.) and monitoring/evaluation of the nutrition problem as well as recommendations for discharge to include diet recommendations/instructions.

Conditions

No conditions are currently documented for this use case.

Exclusions

No exclusions are currently documented for this use case.

Preconditions:

1. Dietitian consultation order has been communicated to the dietitian covering that patient’s service area/unit.
2. Dietitian has access to the patient’s record in the EHR including data on his current/previous medical diagnoses and treatments, weight history, and laboratory test results.
3. Dietitian has access to the patient’s record in the hospital’s FNMS which may provide food/fluid consumption and nutrient analysis data.

Use Case Sequence of Steps

1. Dietitian receives the consultation order.
2. Dietitian collects anthropometric data from the EHR to include but not limited to the patient’s height, usual and current weight, weight loss history, and body mass index (BMI).
3. Dietitian collects biochemical data from the EHR system.
4. Dietitian collects client history to include medical diagnosis and medications from the EHR System.
5. Dietitian collects food history information from the patient, family, EHR and FNMS systems. These data include but are not limited to information on his diet order, usual eating pattern and food related behaviors, changes in appetite, amounts of food/fluids typically consumed, and amounts of foods/fluids consumed since being admitted.
6. Dietitian observes and collects nutrition-focused physical findings (observations) from the patient and EHR system such as the presence of mouth sores and muscle wasting.
7. Dietitian may use comparative standards such as calorie, protein calculations to determine nutritional needs.
8. Upon reviewing the nutritional assessment data, the dietitian may identify and document a nutrition diagnosis/problem in the EHR. The nutrition diagnosis statement includes three components: the (nutrition) problem, the etiology of the problem, and the signs and symptoms of the problem utilizing the standard International Dietetics and Nutrition Terminology (IDNT).
9. Based on the identified nutrition diagnosis, the dietitian develops a nutrition prescription, interventions and goals to promote the resolution of the nutrition diagnosis/problem. The nutrition prescription, interventions and goals are documented in the EHR.
10. The physician is alerted to review the nutrition recommendations which may require authorizing or changing of the patient’s diet order.
11. The dietitian, as indicated, ~~may also determine~~ monitoring criteria to assure resolution of the nutrition problem (e.g., weight monitoring, calorie count) and/or recommend discharge diet orders, outpatient follow up care, request referrals to other medical providers (e.g., speech therapy, pharmacy)

Proposed Revision to Replace the Use Case Steps above with the following

Use Case Sequence of Steps

1. Dietitian receives nutrition consultation order.
2. Dietitian collects assessment data to include the following:
	1. Anthropometric data are collected from the EHR to include but not limited to the patient’s height, weight (current, usual and history of weight change), weight change while in hospital (loss or gain), and body mass index (BMI).
	2. Biochemical data are collected from the EHR system.
	3. Client history is collected from the EHR system to include but not limited to medical diagnoses and medications.
	4. Food history is gathered by direct interviews with patient, family, and staff as well as data within the EHR and FNMS systems. These data include, but are not limited to, his diet order, usual eating pattern and food related behaviors, changes in appetite, amounts of food/fluids typically consumed, and amounts of foods/fluids consumed since being admitted.
	5. Nutrition-focused physical findings (observations) are collected from patient observation, staff interviews and/or the EHR system. This includes physical signs such as the presence of mouth sores and muscle wasting.
	6. Comparative standards such as calorie, protein calculations to determine nutritional needs may be calculated by the dietitian.
3. A nutrition diagnosis/problem may be identified by the dietitian and documented in the EHR based on the assessment data collected. The nutrition diagnosis/problem statement includes three components: the (nutrition) problem, the etiology of the problem, and the signs and symptoms of the problem utilizing the standard International Dietetics and Nutrition Terminology (IDNT).
4. A nutrition prescription would be developed which defines the actual nutrition needed to correct the nutrition problem. This may include the calories and protein needed by the patient, or supportive changes to the diet order.
5. Nutrition interventions would be stated. Nutrition interventions identify the actions of the dietitian to address the nutrition problem (such as education, modify diet).
6. Nutrition goals would be developed to promote the resolution of the nutrition diagnosis/problem.
7. The nutrition prescription, interventions and goals are documented in the EHR.
8. Nutrition monitoring criteria would be established to assure resolution of the nutrition problem (e.g., weight monitoring, calorie count) and/or recommend discharge diet orders, outpatient follow up care, request referrals to other medical providers (e.g., speech therapy, pharmacy)
9. The physician would be alerted to review the nutrition recommendations which may require authorizing or changing of the patient’s diet order.

Use Case Scenario:

Food & Nutrition Services contacts Connie Chow, the dietitian responsible for the oncology unit, and communicates the dietitian consultation order for Adam Everyman, a newly admitted cancer patient who has experienced significant weight loss since beginning chemotherapy. Connie collects important and relevant assessment data including current diet order, weight history and recent energy intake from the EHR and FNMS along with information from Adam and his family about his current and usual eating pattern and recent changes in appetite. Connie notes that Adam reports that he has a poor appetite and has lost 5 pounds in the past week. Adam also complains of mouth pain, and Connie observes that Adam has several mouth sores. Connie calculates Adam’s estimated calorie and protein needs based on his medical condition. She then documents that both at home and since being admitted to Good Health Hospital, Adam is consuming less than his current energy needs. Based on her analysis of the assessment data, Connie documents the following nutrition diagnoses (nutrition problems) in Adam’s record:

* *Inadequate energy intake related to decreased appetite as evidenced by energy consumption less than assessed needs and unintended weight loss of 5 pounds in one week.*
* *Chewing difficulty related to mouth pain from oral sores as evidenced by oral side effects of chemotherapy*

Connie recommends a nutrition intervention of a commercial beverage medical food supplement between meals (three times per day) for nutrition supplementation and a mechanical soft diet to address chewing difficulty. She enters the recommendations for a medical food supplement commercial beverage item available per the hospital’s formulary standards and for the diet change into the EHR, and flags it for Rachel Resident to review, approve and countersign as per the hospital’s protocol. The recommended diet prescription, nutrition interventions and nutrition care plan goals are documented along with monitoring and evaluation goals for the patient of: 1) Consume > 75% assessed energy needs in 3 days, and 2) Will not lose additional weight in the next two weeks. This information is all documented within the EHR with appropriate electronic signature, date and time stamps.

Rachel Resident is alerted that there are new nutrition intervention recommendations requiring her review. Rachel reviews the dietitian’s documentation in the EHR.

Rachel Resident concurs with the recommended nutritional interventions. She countersigns the order for a commercial beverage, medical food supplement (see Use Case 5: Order Medical Food Supplement) as prepared by Connie and proceeds to write a new diet order for the needed diet/texture modification (see Use Case 3: Order Food Texture/Consistency Modifications) into the ordering section of the electronic health record (EHR). The dietitian returns for follow-up monitoring as determined at the time of her initial assessment.